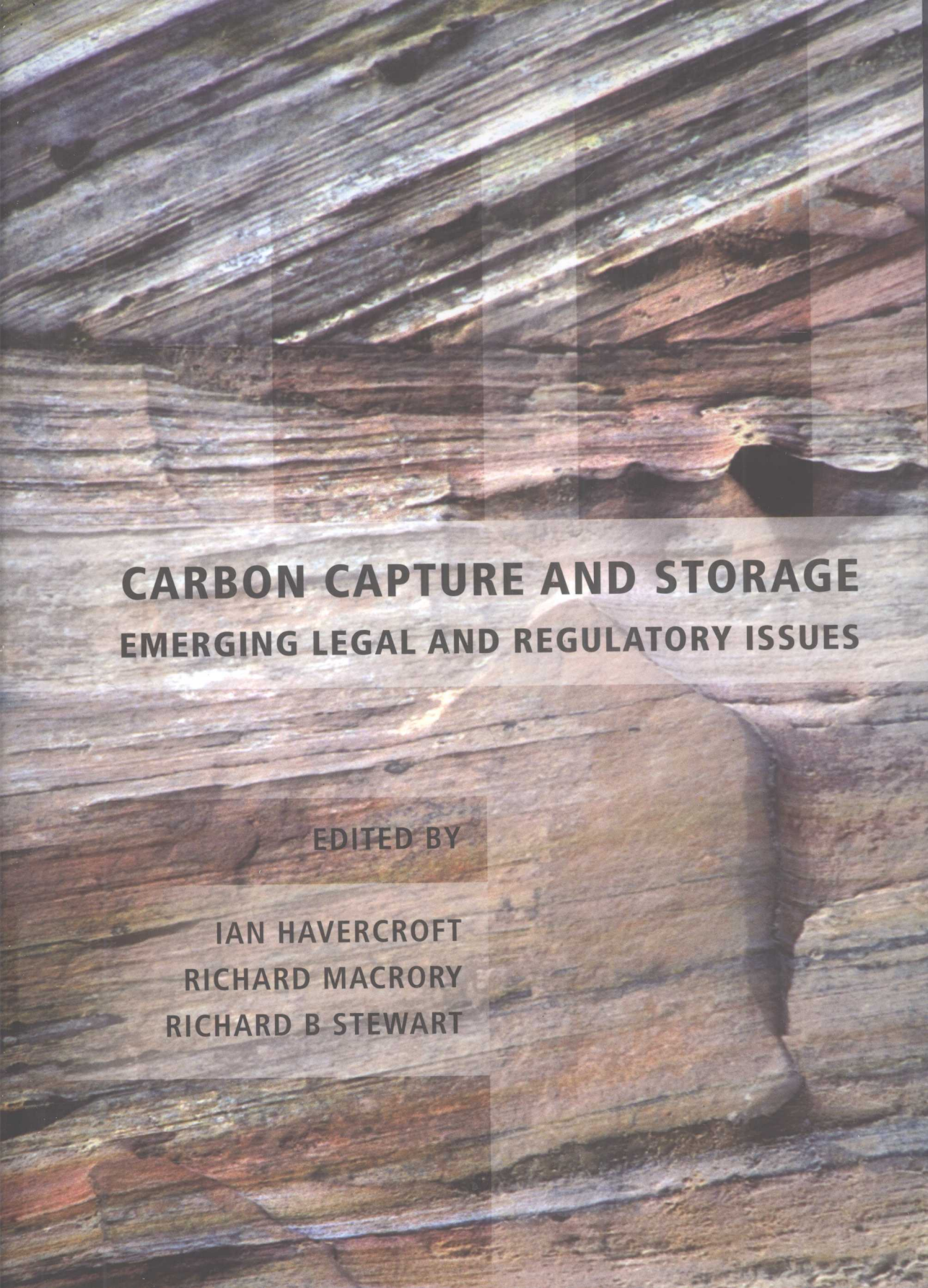




CARBON CAPTURE AND STORAGE

EMERGING LEGAL AND REGULATORY ISSUES

EDITED BY

**IAN HAVERCROFT
RICHARD MACRORY
RICHARD B STEWART**

Carbon Capture and Storage

Emerging Legal and Regulatory Issues

Edited by
Ian Havercroft
Richard Macrory
and
Richard B Stewart



• HART •
PUBLISHING

OXFORD AND PORTLAND, OREGON
2011

Published in the United Kingdom by Hart Publishing Ltd
16C Worcester Place, Oxford, OX1 2JW
Telephone: +44 (0)1865 517530
Fax: +44 (0)1865 510710
E-mail: mail@hartpub.co.uk
Website: <http://www.hartpub.co.uk>

Published in North America (US and Canada) by
Hart Publishing
c/o International Specialized Book Services
920 NE 58th Avenue, Suite 300
Portland, OR 97213-3786
USA
Tel: +1 503 287 3093 or toll-free: (1) 800 944 6190
Fax: +1 503 280 8832
E-mail: orders@isbs.com
Website: <http://www.isbs.com>

© The editors and contributors severally 2011

The editors and contributors have asserted their right under the Copyright, Designs and Patents Act 1988,
to be identified as the authors of this work.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior permission of Hart Publishing, or as expressly permitted by law or under the terms agreed with the appropriate reprographic rights organisation. Enquiries concerning reproduction which may not be covered by the above should be addressed to Hart Publishing Ltd at the address above.

British Library Cataloguing in Publication Data
Data Available

ISBN: 978-1-84113-268-6

Typeset by Compuscript Ltd, Shannon
Printed and bound in Great Britain by
TJ International Ltd, Padstow, Cornwall

Contributors' Biographies

Chiara Armeni is a Research Associate with the UCL Carbon Capture Legal Programme, Centre for Law and the Environment. She holds degrees in Comparative Law (LLB) and Public International Law (LLM) and Environmental Law and Policy (LLM). Chiara's main research interests lie in international and European environmental law, with special focus on Carbon Capture and Storage (CCS) and the law and policy of climate change. Further research interests include international energy law and the relationship between environmental law and human rights.

Francisco Almendra is an Associate in the Climate and Energy Program at the World Resources Institute. As a member of the International Technology Policy team, Francisco works on the Carbon Capture and Sequestration (CCS) initiative, where he focuses on CCS regulatory and deployment issues, both in the US and internationally. Before joining the WRI, Francisco worked as a consultant for the World Bank's Office of the Chief Economist (Africa Region), and for its Poverty Reduction and Economic Management unit. Prior to working with international development and climate, Francisco spent eight years working in the international trade of coal and steel in East Asia, the Middle East, Africa and Latin America.

Peta Ashworth is currently group leader of the Science into Society Group within CSIRO's Division of Earth Sciences and Resource Engineering, leading a team of social researchers examining stakeholder perceptions of areas of national significance to Australia. Her main research interest is how to deliver information to best effect. As part of her work Peta co-authored *The CSIRO Home Energy Saving Handbook—How to save energy, save money and reduce your carbon footprint*, which was released in 2009. Peta is currently Chair of the IEA GHG Social Research Network.

Hans Christian Bugge is Professor of Environmental Law at the Faculty of Law, University of Oslo. Before he became an academic lawyer in 1991, he held senior positions in Norway's Ministry of the Environment from 1972 to 1982. From 1982 to 1991 he was Secretary General of Norway's Save the Children organisation (Redd Barna). He served as State Secretary for Development Cooperation 1986–87, and as personal advisor to Norway's prime minister Mrs Gro Harlem Brundtland in her work as chair of the World Commission on Environment and Development.

Chris Clarke is an independent environment policy analyst, specialising in liability issues, and a Visiting Fellow in the Carbon Capture Legal Programme at University College London. In 1996–97, he was a member of the Legal Unit of DG Environment (then DG XI) of the European Commission, with special responsibility for the environmental liability directive. He was previously the founding Editor of the Financial Times newsletter, *Environmental Liability Report*, Deputy Editor of *FT Energy Economist*, and liability correspondent for *FT World Insurance Report*.

Martina Doppelhammer is legal adviser in Unit C.1 'Low Carbon Technologies' of the European Commission's Directorate-General for Climate Action. She is, inter alia, responsible for legal questions related to carbon dioxide capture and storage and has drafted the recently adopted Directive on the geological storage of carbon dioxide. Currently, she is working on the draft Decision establishing modalities for the co-financing of CCS and innovative renewables demonstration projects under the Emissions Trading Directive. Ms Doppelhammer joined the European Commission in 2002. She is a German lawyer and holds an LLM in European law from the College of Europe in Bruges.

Sarah M Forbes has led the World Resources Institute's (WRI) work on Carbon Dioxide Capture and Storage since May 2008, including the stakeholder process that resulted in the publication of the *Guidelines for Carbon Dioxide Capture, Transport and Storage*. Prior to joining WRI, Sarah worked at the National Energy Technology Laboratory (NETL), serving in a number of capacities. For the past 10 years Sarah has applied her ecological perspective to the regulatory, political and engineering challenges associated with demonstrating and deploying CCS technology.

Meredith Gibbs is a Senior Associate at the law firm Blake Dawson, specialising in environmental, water and climate law, and is listed in Australia's 'Best Lawyers' for her expertise in climate change law. She holds a PhD from the University of Otago, New Zealand and degrees in Law (Honours) and Arts from the Australian National University. She publishes in the areas of climate change law, environmental law, indigenous rights and reparative justice, and has a number of recent publications on Australia's regulatory framework for underground storage of greenhouse gases. Her recent article 'Greenhouse Gas Storage in Offshore Waters: Balancing Completing Interests' (2009) 28 *ARELJ* 52 won the Resources and Energy Law Association of Australia's 2009 journal article of the year award.

Ruth Greenspan Bell is a Senior Fellow and Acting Director of the US Climate Policy Objective in the Climate & Energy Program at World Resources Institute (WRI). Prior to joining WRI, Bell directed International Institutional Development and Environmental Assistance (IIDEA) at Resources for the Future, a programme that helped build more effective systems of environmental protection globally. In her last US Government assignment, Bell was Senior Advisor to the Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs, and before that, in various domestic management positions in the US EPA's Office of General Counsel. Bell is a graduate of UCLA and the School of Law of the University of California at Berkeley.

Dr Avelien Haan-Kamminga is post-doc researcher at the Groningen Centre for Energy Law within the law faculty of the University of Groningen. Dr Haan-Kamminga graduated with honours in 1999 in the Administrative Law and Administrative Sciences (University of Groningen), and obtained her doctorate in 2006. Since 2009 she has been conducting research into the legal aspects of Carbon Capture and Storage. Research questions involve the design of long-term (civil) liability, and governance. Haan-Kamminga participates in the CATO-2 programme, the national CCS research programme, funded by both government and industry.

Stuart Haszeldine is Professor of Geology at the University of Edinburgh, and his current research examines geological storage of CO₂, in the context of climate change and changing energy use. He is a topic leader for the Carbon Management theme of the UK Energy Research Centre (www.ukerc.ac.uk), leads the UK's largest university research group for CO₂ storage and capture (at Edinburgh, Heriot-Watt and the British Geological Survey at Edinburgh) (www.geos.ed.ac.uk/scs/) and is co-leader of the academic UK Carbon Capture and Storage Consortium (www.geos.ed.ac.uk/ccs/). He was a technical advisor to the House of Commons Science and Technology Committee on CCS in 2006 and is currently (2007–10) a member of the independent ACCAT committee advising UK Government (DECC) on Carbon Abatement Technologies.

Ian Havercroft is Senior Advisor on regulation to the Global CCS Institute in Canberra, Australia. He is also a Visiting Fellow to the Carbon Capture Legal Programme at the Faculty of Laws, UCL. Ian was formerly Senior Research Fellow in environmental law at UCL Law Faculty's Centre for Law and the Environment, which he joined in May 2004, following the completion of his Masters degree. As lead researcher for the Centre's Carbon Capture Legal Programme, Ian worked with the International Energy Agency (IEA) to set up the International CCS Regulators' Network and to draft the Agency's '*Carbon Capture and Storage Model Regulatory Framework*'.

Henry Krupa is counsel in the Environmental, Energy and Emissions Trading Group in the Toronto office of Macmillan LLP (Montreal, Ottawa, Toronto, Calgary, Vancouver, Hong Kong) specialising in Environmental and Energy law and Government Relations. Before returning to private practice, Henry was the Director of Legal Services for the Ontario Ministries of Environment and Energy and an Adjunct Professor in the Faculty of Laws at the University of Western Ontario. He received his legal education in Canada and the United Kingdom and has received a Master of Laws in Environment, Energy and Natural Resources Law and Policy with honours.

Meyric Lewis is a barrister practising in Environmental and Planning Law at the Chambers of Robin Purchas QC, Francis Taylor Building, Temple, London. His work involves close examination of the environmental implications of major infrastructure and development projects for promoters, public authorities and objectors. He appears in public inquiry and court proceedings at all levels including the Court of Appeal and House of Lords. He served as counsel for the Secretary of State defending challenges to planning decisions in the High Court from 1995–2001.

Les LoBaugh is a partner of with the law firm Brownstein Hyatt Farber Schreck, located in Los Angeles. He is a corporate lawyer, and his experience includes serving as general counsel, Chief Compliance Officer and Chief Environmental Officer for Fortune 500 companies, assisting governmental entities in developing environmental codes, legislation, regulations and policies, and representing non-profit organisations including the US Green Building Council. Prior to entering private practice, he served as a Legislative Aide working in Washington DC at the US Senate.

Richard Macrory is a barrister at Brick Court Chambers, London and Professor of environmental law at the Faculty of Laws, University College, London where

he is director of the Centre for Law and the Environment. He has been a member of the Royal Commission on Environmental Pollution, and a board member of the Environment Agency, England and Wales, the main environmental regulator. In 2005–06 Professor Macrory was appointed by the UK Cabinet Office to lead the Review on Regulatory Sanctions, covering some 61 national regulators as well as local government and almost every area of business regulation. All the recommendations in his final report *Regulatory Justice—Making Sanctions Effective*, published at the end of 2006, were accepted by Government.

Robert R Nordhaus specialises in federal energy and environmental regulation. He is a member of the Washington, DC law firm of Van Ness Feldman, PC, and teaches energy and environmental law at the George Washington University Law School, as a member of the adjunct faculty. Bob originally joined Van Ness Feldman in 1981, after serving three years as the Federal Energy Regulatory Commission's first General Counsel. He practised with the firm until 1993, when he was appointed General Counsel of the Department of Energy by President Clinton. He rejoined the firm in 1997.

Lavanya Rajamani is a Professor at the Centre for Policy Research, New Delhi, and was previously a University Lecturer in Environmental Law, and Fellow & Director of Studies in Law at Queens' College, Cambridge. Rajamani is the Rapporteur for the International Law Association's Committee on Legal Principles Relating to Climate Change. She has worked as a consultant to the UN Framework Convention on Climate Change (UNFCCC) Secretariat, the Danish Ministry of Climate Change, the UNDP, the World Bank, and the Alliance of Small Island States. She has worked on and followed the climate negotiations since 1997, in different capacities, including as a negotiator for the Alliance of Small Island States during the negotiations for the Marrakech Accords, and as legal advisor to the Chair of the Ad Hoc Working Group on Long-term Cooperative Action under the FCCC in the lead up to the Copenhagen Climate Conference.

Martha M Roggenkamp is Professor of Energy Law at the University of Groningen, Director of the Groningen Centre of Energy Law and Counsel at the law firm Brinkhof in Amsterdam. She has published widely on energy law issues since the early 1990s. Martha is the editor in chief of the series *Energy & Law* published by Intersentia (Antwerp), a member of the editorial board of the Dutch *Journal of Energy Law* and of the editorial committee of the *Journal of Energy and Natural Resources Law*, the *International Energy Law Review* and the *Renewable Energy Law and Policy Review*. She also holds the chair of the Dutch Association of Energy Lawyers and is a board member of the Groningen Energy and Sustainability Programme. She teaches energy law at the University of Groningen and is the coordinator of the North Sea Energy Law Programme.

Dr Norman Z Shilling is the Senior Product Manager – Policy for General Electric (GE) Energy's gasification product line, responsible for driving GE's policy and regulatory initiatives related to carbon capture and sequestration technologies. Norm's experience in environmental and utility power generation includes roles as Product Line Leader for IGCC power block and process power, programme manager for low-emissions Locomotive Diesel Development and as Environmental

Systems Engineering manager at GE's Research Center, collaborating with many GE businesses on pollution prevention and energy efficiency initiatives. Norm holds an SM degree from MIT and BSc and DSc degrees from New Jersey Institute of Technology. He has taught in the engineering school at Penn State and is a licensed Professional Engineer.

Jared Snyder is the Assistant Commissioner for Air Resources, Climate Change and Energy at the New York State Department of Environmental Conservation, overseeing the development and implementation of the Department's climate change and air pollution programmes, including the Regional Greenhouse Gas Initiative. He was also chair of New York's task force on climate change and sequestration and he is a co-chair of the power supply and delivery workgroup for the development of New York's climate action plan. From 1995 until May 2007, Jared was chief of the Affirmative Litigation Section in the Environmental Protection Bureau of the NY Attorney General's office, where he was responsible for litigation of a variety of air pollution and climate change lawsuits. From 1990–95, Jared handled environmental cases at the US Department of Justice. Jared is a graduate of Harvard Law School (1984) and Cornell University (1981).

Richard Stewart is recognised as one of the world's leading scholars in environmental and administrative law. Before joining the NYU faculty, he was Byrne Professor of Administrative Law at Harvard Law School. He also served from 1989–91 as Assistant Attorney General in charge of the Environment and Natural Resource Division of the US Department of Justice, where he formulated the US government's position on the Rio Climate Convention. Recently, Stewart launched, with Professor Benedict Kingsbury, a major new research initiative on Climate Finance, including an international conference in Abu Dhabi in May 2009 and recent publication of *Climate Finance: Regulatory and Funding Strategies for Climate Change and Global Development* (2009). He also co-directs the NYU project on Global Administrative Law, and Breaking the Logjam, a major environmental law reform project, which recently published a book, *Breaking the Logjam: Environmental Protection That Will Work* (2010), which presents a programme for major innovations in US environmental laws. Stewart is Advisory Trustee and former Chairman, Environmental Defense Fund.

Ned Westaway is a barrister specialising in planning and environmental law, based at Francis Taylor Building, Inner Temple, London. He took an LLM in environmental law at University College London (UCL); and between 2007 and 2008 he worked for UCL's Centre for Law and the Environment, where he is currently a visiting researcher. Ned was winner of the UK Environmental Law Association's 2010 Mooting Competition. He was awarded Lord Denning Scholarship for the Bar Vocational Course and won the prize for best results on the CPE (law conversion) course at the University of Sussex. Prior to law Ned studied classics, when not working he likes to climb rocks. He is a member of UKELA and ALBA.

Lawrence J Wolfe is a partner in the Rocky Mountain regional law firm of Holland & Hart LLP, practising energy, natural resources, water, and state tax law, including representing coal, oil, natural gas and mining interests, as well as pipeline, wind and electric transmission clients. From 2001–06 he chaired Holland & Hart's Natural

Resources practice, which is the largest natural resources and energy law practice in the Rockies. Larry is included in the most recent editions of *Best Lawyers*, *Super Lawyers*, and *Who's Who of Business Lawyers in International Mining*. He is a graduate of the University of California, Davis and the University of Wyoming College of Law.

Paul Zakkour is a Director of Carbon Counts, and independent energy and climate change consultancy. Paul specialises in international climate change policy, focused on technology development, deployment, financing and regulation thereof. He has advised the UN, World Bank, European Commission, UK government, Thai Government, and many private sector organisations including several FTSE25 companies. He has particular expertise in the fields of carbon capture and storage, clean development mechanism, flare gas reduction strategies, biofuels technology, wastewater treatment, and biogas/biodigestion. Email: paul.zakkour@carbon-counts.com.

Qiuyan Zhao is an associate professor and Assistant Dean at the School of Economics and Business Administration at Beijing Normal University, and a council member of Beijing Economic Law Society. She has been working on 'Global Climate Change and Energy Law for Sustainable Development' at the Center for Climate Change Law of Columbia Law School as the first and only Chinese visiting scholar (2009–10). Qiuyan is also a part-time lawyer at the JINGSHI law firm in Beijing, which is one of the oldest partnership law firms in China and is known as China's leading energy and environment law firm. She has assisted many of China's major oil and petrochemical enterprises, as well as foreign investors engaging in cross-border mergers and acquisitions. Qiuyan holds a Bachelor's Degree (1998), Master's Degree (2001), and PhD (2005) from the Law School of Renmin University of China.

Micah S Ziegler is a research assistant in the Climate and Energy Program at the World Resources Institute (WRI). He explores how to incorporate mutual trust and confidence among parties engaged in developing international climate change policy and also works on carbon dioxide capture and storage and international technology policy. Prior to joining WRI, Micah was a Luce Scholar assigned to the Business Environment Council in Hong Kong. Micah has studied environmental issues in Ecuador and interned for the Natural Resources Defense Council, Sierra Club, and The Nature Conservancy. He graduated from Yale College in 2008 with a BSc in chemistry.

Table of Cases

Abraham v Region Wallonia (C-2/07) [2008] ECR I-1197, [2008] Env LR 32, ECJ	292
Acadia California Ltd v Herbert, 54 Cal 2d 328 (1960).....	74
Ashton v Secretary of State for Communities and Local Government [2010] EWCA Civ 600, [2011] 1 P & CR 5, [2010] JPL 1645, [2010] ACD 80, [2010] NPC 60, [2011] Env LR D7, [2011] PTSR D1	293
Australia v MMC Resources Ltd [1998] HCA 8	177
Beck Development Co v Southern Pacific transport Co, 44 Cal App 4th 1160 (1996)	73
Berkeley v Secretary of State for the Environment, transport and the Regions (No 1) [2001] 2 AC 603, [2000] 3 WLR 420, [2000] 3 All ER 897, [2001] 2 CMLR 38, [2001] Env LR 16, (2001) 81 P & CR 35, [2000] 3 PLR 111, [2001] JPL 58, [2000] EG 86 (CS), [2000] N.P.C. 77.....	289
Bisson v Brunette Holdings Ltd [1993] OJ No 3378, 15 CELR (NS) 201 (OntCJ GD).....	59
Cassinovs v Union Oil Co of California, 14 Cal App 4th 1770 (1993)	72, 73, 74, 76
Chance v BP Chemicals Inc, 670 NE2d 985, 77 Ohio St 3d 17 (1996)	76, 169
Commission of the European Communities v Ireland (C-392/96) [2000] QB 636, [2000] 2 WLR 958, [1999] ECR I-5901, [1999] 3 CMLR 727, [1999] 4 PLR 107, [2000] Env LR D15, ECJ.....	292
Commission of the European Communities v Spain (C-227/01) [2004] ECR I-8253, [2005] Env LR 20, ECJ.....	292
Commune de Mesquer v Total France SA (C-188/07) [2009] PTSR 588, [2009] All ER (EC) 525, [2008] 2 Lloyd's Rep 672, [2008] ECR I-4501, [2008] 3 CMLR 16, [2009] Env LR 9, ECJ	195
Geothermal Kinetics Inc v Union Oil Co of California, 75 Cal App 3d 56 (1977)	71
Goodwin v Reilley, 176 Cal App 3d 86 (1985).....	75
Hutcherson v Alexander, 264 Cal App 2d 126 (1968).....	74
Ingram v City of Gridley, 100 Cal App 2d 815 (1950)	74
Interprovincial Coop Ltd v Manitoba [1976] 1 SCR 477, 53 DLR (3d) 321.....	58
Just v British Columbia [1989] 2 SCR 1228	60
Mangini v Aerojet-General Corp, 230 Cal App 3d 1125 (1991)	74
Mann v Saulnier [1959] NBJ No 12, 19 DLR (2d) 130 (NBCA).....	58
Miller v National Broadcasting Co, 187 Cal App 3d 1463 (1986)	73
Mongrue v Monsanto Co, 249 F3d 422 (5th Cir 2001)	169
Morgan v Hinton Organics (Wessex) Ltd [2009] EWCA Civ 107, [2009] CP Rep 26, [2010] 1 Costs LR 1, [2009] Env LR 30, [2009] 2 P & CR 4, [2009] JPL 1335	284
Multiple Access Ltd v McCutcheon [1982] 2 SCR 161	40
Parsons v Crown Disposal Co, 15 Cal 4th 4567 (1997).....	75
Phillips v City of Pasadena, 27 Cal 2d 104 (1945)	74
R v Latouche [2010] AJ No 631.....	40
R (Baker) v Bath and North East Somerset DC [2009] EWHC 595 (Admin), [2009] Env LR 27, [2010] 1 P & CR 4, [2009] JPL 1498, [2009] ACD 37.....	292
R (Beebee) v Poole BC [1991] 2 PLR 27, [1991] JPL 643, [1991] COD 264, [1990] EG 160 (CS), QBD	289

R (Greenpeace Ltd) v Secretary of State for Trade and Industry [2007]	
EWHC 311 (Admin), [2007] Env LR 29, [2007] JPL 1314, [2007] NPC 21	283, 284
R (Hardy) v Pembrokeshire CC [2005] EWHC 1872 (Admin), [2006] Env LR 16	291
R (Hillingdon LBC) v Secretary of State for Transport [2010]	
EWHC 626 (Admin), [2010] JPL 976, [2010] ACD 64, (2010)	
107(15) LSG 17.....	285, 286
R (Little) v Secretary of State for Trade and Industry [2002] EWHC 3001 (Admin)	279
R (Medway Council) v Secretary of State for Transport,	
Local Government and the Regions [2002] EWHC 2516 (Admin),	
[2003] JPL 583, [2002] 49 EG 123 (CS), [2002] NPC 152.....	283
R (Rankin) v Rotherham MBC [1990] 1 PLR 93, [1990] JPL 503,	
[1990] COD 212, [1989] EG 147 (CS), QBD	289
R (Redcar and Cleveland BC) v Secretary of State for Business	
Enterprise and Regulatory Reform [2008] EWHC 1847 (Admin).....	291
Rankin v De Bare, 205 Cal 639 (1928)	74
Rowland v Christian, 69 Cal 2d 108 (1968).....	75
Rylands v Fletcher (1868) LR 3 HL 330, HL	58
SKF Farms v Superior Ct, 153 Cal App 3d 902 (1984)	75
Seaport Investments Ltd's Application for Judicial Review,	
Re [2007] NIQB 62, [2008] Env LR 23, QBD	285
Spaulding v Cameron, 38 Cal 2d 265 (1952)	75
Starrh v Aera Energy LLC, 153 Cal App 4th 583 (2007)	73
Stoiber v Honeychuck, 101 Cal App 3d 903 (1980)	74
Sunray Oil Co v Cortez Oil Co, 188 Okla 690 (1941)	76
Tock v St John's Metropolitan Area Board [1989] 2 SCR 1181.....	58
Travelers Indem Co v City of Redondo Beach, 28 Cal App 4th 1432 (1994)	75
West Edmond Salt Water Disposal Association v Rosecrans, 204 Okla 9 (1950)	76
Wychavon DC v Secretary of State for the Environment [1994] Env LR 239,	
[1994] COD 205, QBD.....	289

Table of Legislation

[References in bold type denote where text of a provision is printed]

DOMESTIC LEGISLATION

Australia

Aboriginal Heritage Act 2006 (Vic)	166
Barrow Island Act 2003 (WA).....	161, 162
Coastal Management Act 1995 (Vic)	166
Constitution	177
Dangerous Goods Act 1985 (Vic)	166
Environment Protection Act 1970 (Vic)	166
Environment Protection and Biodiversity Conservation Act 1999 (Cth)	166
Environment Protection (Sea Dumping) Act 1981 (Cth)	166
Flora and Fauna Guarantee Act 1998 (Vic)	166
Greenhouse Gas Geological Sequestration Act 2008 (Vic)	161–65, 167–70, 172–76, 178, 261–63
s 14.....	168
s 16.....	168
s 18.....	163
s 40.....	163
s 41.....	166
ss 48–49	176
ss 94–95	175
s 96.....	163, 175
s 97.....	166
s 98.....	175
s 99.....	176
s 136.....	166
s 152.....	262
ss 152–56	262
s 153.....	262
s 168(3)	164
ss 168–78	164
s 174.....	164
s 187.....	169
s 189.....	165
s 190.....	165
s 224.....	165
Greenhouse Gas Geological Sequestration Regulations 2009 (Vic)	163
Greenhouse Gas Geological Storage Regulations 2010 (Vic).....	161
Greenhouse Gas Storage Act 2009 (Qld)	161, 162, 164, 165, 167–70, 173, 174–76, 178
s 27.....	168
s 40.....	165
s 86.....	165
s 168.....	165

ss 176–79	164
s 177.....	164
s 181.....	168
ss 183–84	173
ss 186–94	175
s 187(3).....	175
s 189.....	175
s 193.....	175
s 196.....	175
s 197.....	175
s 202.....	175
s 203.....	175
s 212.....	175
s 220.....	175
s 221.....	175
s 386.....	163
(2).....	163
s 395(1)	164
Greenhouse Gas Storage Regulations 2010 (Qld)	161
Sch 1.....	165
Land Act 1958 (Vic)	
s 399A(1).....	169
National Parks Act 1975 (Vic).....	166
Offshore Petroleum and Greenhouse Gas Storage Act 2006 (Cth)....	161, 162, 164, 166–68, 170, 171, 173, 174, 176, 178
s 7.....	163
ss 25–29	174
s 289.....	163
s 291.....	164
(3).....	163
s 292.....	163
s 316.....	164
s 317.....	164
s 320.....	164
s 338.....	164
s 351.....	164
s 352.....	164
s 356.....	163
s 358.....	164
(10).....	164
(11).....	164
(12).....	164
s 376.....	164
s 383.....	164
(8).....	164
s 385	164
s 386–98.....	168
s 391	164
s 400	168
s 401	168
s 442	164
(4).....	164

s 446	164
ss 624–36	165
Offshore Petroleum and Greenhouse Gas Storage Act 2010 (Vic).....	161, 166, 167, 168, 169, 170–74, 176, 178
ss 27–31	174
s 65.....	168
s 67.....	168
ss 420–22	164
s 474.....	164
(4)	164
s 694.....	165
Offshore Petroleum and Greenhouse Gas Storage (Annual Fees) Act 2006.....	165
Offshore Petroleum and Greenhouse Gas Storage (Annual Fees) Regulations 1994.....	165
Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009	161, 166
Offshore Petroleum and Greenhouse Gas Storage (Greenhouse Gas Datum) Regulations 2010	161
Offshore Petroleum and Greenhouse Gas Storage (Greenhouse Gas Injection and Storage) Regulations 2010	
reg 1.4	174
reg 1.5	174
Offshore Petroleum and Greenhouse Gas Storage (Management of Greenhouse Gas Well Operations) Regulations 2010.....	161
Offshore Petroleum and Greenhouse Gas Storage Regulations 1985	161
Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009	166
Offshore Petroleum (Royalty) Act 2006.....	165
Offshore Petroleum (Safety) Regulations 2009	166
Petroleum Act 2000 (SA)	161, 162, 178
Petroleum and Geothermal Energy Resources Act 1967 (WA).....	162
Petroleum Pipelines Act 1969 (WA).....	162
Petroleum (Submerged Lands) Act 1982 (WA).....	162
Water Act 1989 (Vic)	166

Canada

Airborne Contaminant Discharge–Monitoring and Reporting (Ontario), O Reg 127/01 ...	45
Canada-Saskatchewan Agreement for Environmental Assessment Cooperation 1999	56
Carbon Capture and Storage Amendment Act 2010.....	188
Carbon Capture and Storage Funding Act (Alberta), SA 2009, c C-2.5	46
ss 21–22	56
ss 152–99	52
Carbon Neutral Government Regulation (British Columbia), BC Reg 392/2008.....	44
Climate Change and Emissions Management Act (Alberta), SA 2003, c C-16.7	44
Climate Change and Emissions Reductions Act (Manitoba), CCSM c C135	44
Constitution	40
Crown Minerals Act (Saskatchewan), RSS, 1978, c 50.2	51
Crown Minerals Amendment Act (Saskatchewan) 1992, SS 1992, c 25	
s 272.....	51
Emission Offsets Regulation (British Columbia), BC Reg 393/2008	44
s 3(2)(r)	45
(s)	45
Emission Reduction Incentives Agency Act 2005, SC 2005, c 30.....	42

xx *Table of Legislation*

Energy Board Act (Ontario) 1998, SO 1998, c 15	51
s 38(1)	51
Environment Act (Manitoba), CCSM c E125	45
s 45.....	45
Environment Act (Nova Scotia), SNS 1994-95, c 1	44, 54
Environment Quality Act (Quebec), RSC c Q-2	44
s 42.2.....	44
s 46.5–46.17.....	45
Environmental Assessment Act, SC 1992, c 37	56
s 5.....	56
Environmental Assessment Act (Ontario), RSO 1990, c E18	54
s 3.....	54
s 3.1.....	56
Environmental Assessment Act (Saskatchewan), SS 1979-80, c E-10.1	54
s 8.....	54
Environmental Management and Protection Act (Saskatchewan) 2002, c E-10.21	62
s 4.....	61
s 7.....	61
Environmental Protection Act 1999, SC 1999, c 33	42
s 46.....	42
Sch 1.....	42
Environmental Protection Act (Ontario) 1990, c E19	44
s 9.....	44
s 176.1.....	45
Environmental Protection and Enhancement Act (Alberta), RSA 2000, c E-12	55
ss 40–59	55
ss 108–9	61
Exploration Licences, Production and Storage Leases for Oil and Gas in Ontario (Ontario), O Reg 263/02	51
Geothermal Resources Act (British Columbia).....	52
Greenhouse Gas Emissions Reporting Regulation (Ontario), O Reg 452/09	44
s 5.....	44
Greenhouse Gas Reduction (Cap and Trade) Act (British Columbia), SBC 2008, c 32.....	45
s 4.....	44
Greenhouse Gas Reduction (Cap and Trade) Act Reporting Regulation (British Columbia), BC Reg 272/2009.....	44, 57
Greenhouse Gas Reduction Targets Act (British Columbia), SBC 2007, c 42	44
s 2(1)	44
s 10.....	45
Health Act	41
Lakeview Generation Station Regulation (Ontario), Reg 396/01	47
Land Act (British Columbia), RSBC 996, c 245	52
s 50(1)(b).....	52
Mineral Resources Act (Nova Scotia), SNS 1990, c 37	50
s 4.....	50
Mineral Tenure Act (British Columbia).....	52
Mines and Minerals Act (Alberta), RSA 2000, c M-17.....	52
s 9(a)(iii).....	51
s 56(2)	62
s 57(1)	51
(2).....	51
s 102.....	51

Mining Act (Ontario), RSO 1990, c M-14.....	51
Mining Act (Quebec), RSQ, c M-13.1	
s 3.....	51
Negligence Act, RSO 1990, c N.1	
s 1.....	59
Oil and Gas Act (Manitoba), CCSM c O-34	51
Oil and Gas Activities Act (British Columbia), SBC 2008, c 36.....	45, 62
s 37.....	61
ss 44-47	62
Oil and Gas Commission Act (British Columbia), SBC 1998, c 39	
s 3.....	56
Oil and Gas Conservation Act (Alberta), RSA 2000, c O-6.....	61, 62
s 28.....	62
s 29.....	61, 62
ss 68-77	62
Oil and Gas Conservation Act (Saskatchewan), RSS 1978, c O-2.....	61
s 2(1)	61
s 7(11)	61
s 9(2)	61
ss 20.91-20.98	62
Oil and Gas Conservation Regulations (Saskatchewan) 1985, c O-2 Reg 1.....	61
s 10.5.....	61
Oil and Gas Operations Act, RSC 1985, c O-7	61
Petroleum and Natural Gas Act (British Columbia), RSBC 1996, c 361.....	52
Pt 14.....	52
s 61.1.....	62
s 88.....	62
ss 127-29	52
Petroleum and Natural Storage Reservoir Regulation (British Columbia), BC Reg 350/97	52
Petroleum Resources Act (Nova Scotia), RSNS 1989, c 342.....	50
Pipeline Act (Alberta), RSA 2000, c P-15.....	61
Pipeline Act (British Columbia), RSBC 1996, c 364	
ss 38-39	61
Pipelines Act (Saskatchewan), 1998, SS, c P-12.1	61
Regulation Respecting Mandatory Reporting of Certain Emissions of Contaminants into the Atmosphere (Quebec), RQ c Q-2, r 3.3	45
s 4.....	44
Specified Gas Emitters Regulation (Alberta), Alta Reg 139/2007.....	57
s 4.....	44
s 7.....	45
s 9.....	45
Underground Hydrocarbons Storage Act (Nova Scotia), SNS 2001, c 37	50
Underground Storage Act (New Brunswick), SNB 1978, c U-1.1	51
Water Act (Alberta), RSA 2000, c W-3	
s 3(2)	52

China

Administrative License Law 2004

Art 12.....	225
Art 22.....	225
Art 23.....	225

xxii *Table of Legislation*

Art 24.....	225
Art 61.....	225
Art 62.....	225
Administrative Regulations on Levy and Use Pollutant Discharge Fee 2003.....	229
Constitution Amendment 2004	
Art 10.....	227
Evaluation of Environmental Effects Law 2002.....	230
Land Administration Law 2004	
Art 2.....	227
Art 8.....	227
Art 10.....	227
Patent Law 2009	
Ch 5	229
Art 8.....	229
Art 10.....	229
Art 15.....	229
Art 18.....	229
Art 19.....	229
Prevention and Control of Radioactive Pollution Law 2003.....	229
Real Property Right Law 2007	
Art 45.....	227
Art 46.....	228
Art 47.....	227
Art 48.....	228
Art 49.....	228
Art 52.....	228
Art 58.....	227
Art 59.....	227
Art 60.....	227
Netherlands	
Mining Decree and Mining Regulations 2003	112
Soil Clean-up (Interim) Act 1983	185
Spatial Planning Act	
para 3.6.3	113
United Kingdom	
<i>Acts</i>	
Climate Change Act 2008 (c 27)	
s 1.....	277
Constitution Act 1867 (30 & 31 Vict, c 3)	39
s 91.....	40
s 92.....	40
s 92A	40
Electricity Act 1989 (c 29)	279
s 36.....	278–280
Sch 8 para 2(2)(a)	279
para 3(2)	279
Energy Act 2008 (c 32)	277, 278, 280
s 18(2)	280
s 112.....	278