

MINING AND ENERGY LAW

SECOND EDITION

Mining and Energy Law provides students with a comprehensive overview of the national electricity, resources and energy markets and how they are regulated. It explores the law governing the current mix of sources utilised in the Australian energy sector, from petroleum and natural gas to renewable energy sources including wind and solar power.

The second edition has been comprehensively updated to include new content on the *United Nations Convention on the Law of the Sea (UNCLOS)*, the Australian Energy Market Commission (AEMC), the gas export market, resource royalties and environmental impact assessments. It also discusses the impacts of climate change and environmental regulation on energy policies in Australia, including climate legislation, the regulation of renewable energy sources, initiatives such as carbon capture and storage (CCS), and the transition away from fossil fuels.

Each chapter includes review questions and suggested further readings to engage students with the various aspects of the energy and resources sectors. Updated case and legislation extracts articulate the nature of the regulatory and statutory obligations that impact Australia's mining, offshore and onshore petroleum, natural gas and resources companies.

Mining and Energy Law is a thorough examination of the contemporary mining and energy sectors in Australia.

Samantha Hepburn is a Professor in the School of Law at Deakin University who teaches mining, energy, environmental and natural resource law.



Cambridge University Press acknowledges the Australian Aboriginal and Torres Strait Islander peoples of this nation. We acknowledge the traditional custodians of the lands on which our company is located and where we conduct our business. We pay our respects to ancestors and Elders, past and present. Cambridge University Press is committed to honouring Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to the land, waters and seas and their rich contribution to society.



MINING AND ENERGY LAW

SECOND EDITION

SAMANTHA HEPBURN







Shaftesbury Road, Cambridge CB2 8EA, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314-321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi - 110025, India

103 Penang Road, #05-06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

We share the University's mission to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/highereducation/isbn/9781009233859

© Cambridge University Press & Assessment 2015, 2023

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press & Assessment.

First published 2015 Second edition 2023 First paperback edition 2023

Cover designed by Sardine Design

A catalogue record for this book is available from the National Library of Australia

ISBN 978-1-009-23385-9 Paperback

 ${\it Additional\ resources}\ for\ this\ publication\ at\ www.cambridge.org/highereducation/isbn/9781009233859/resources$

Reproduction and communication for educational purposes

The Australian *Copyright Act 1968* (the Act) allows a maximum of one chapter or 10% of the pages of this work, whichever is the greater, to be reproduced and/or communicated by any educational institution for its educational purposes provided that the educational institution (or the body that administers it) has given a remuneration notice to Copyright Agency Limited (CAL) under the Act.

For details of the CAL licence for educational institutions contact:

Copyright Agency Limited Level 12, 66 Goulburn Street Sydney NSW 2000 Telephone: (02) 9394 7600

Facsimile: (02) 9394 7600

E-mail: memberservices@copyright.com.au

Cambridge University Press & Assessment has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Please be aware that this publication may contain several variations of Aboriginal and Torres Strait Islander terms and spellings; no disrespect is intended. Please note that the terms 'Indigenous Australians', 'Aboriginal and Torres Strait Islander peoples' and 'First Nations peoples' may be used interchangeably in this publication.



FOREWORD

Mining and energy law ranges across many issues and has always been complex everywhere. Australia's federal constitution makes it especially complex, with laws in the six states and two territories being different from each other and sometimes in conflict with Commonwealth law. It has become even more complex over recent years, with new technologies and concern for climate change generating new policy, law and regulation – and with conflicts over policy leading to major changes over short periods.

Hepburn manages to provide an intelligible, comprehensive account of Australian minerals and energy policy and law without losing the reader in the detail. The greatest strength of the book is to make a bewildering reality comprehensible to the reader who comes new to the subject.

This book takes the reader through the major issues, explains how these have led to the adoption of laws, reviews comprehensively the more difficult issues to ensure that the reader has not been left behind, presents detail from important laws, discusses cases to demonstrate how the law has worked in practice, and suggests many avenues for further reading for those who want to dig deeper into the subject.

It is an excellent book for those seeking to understand the broader context of her or his subject. It is just as useful for those who are seeking to understand minerals and energy from other disciplines and wanting to see how their subject is affected by law.

The treatment of the conventional resources issues is thorough and reliable. The early chapters, 2 to 4, deal authoritatively with old and familiar minerals and energy issues. Resource titles differentiated at the exploration and mining stages of resources development have their own history in Australia, with the history and surviving law varying across states and territories. The resource production leases may be old, but have new overlays of complexity with the recent introduction of international legal issues – with the globally unique joint development zone with Timor, with the law of the sea, with world heritage listing of some prospective areas, and with new international obligations of varying kinds under the *United Nations Framework Convention on Climate Change*. Natural gas operations introduce new areas of complexity related to pipeline access. Chapter 10 discusses the important question of taxation of minerals rents and manages to make comprehensive treatment of a complex subject readable.

The most impressive and exciting innovation in the book is the treatment of the issues arising out of new technologies and products (unconventional gas) and new policy objectives (notably, climate change, leading into policy on renewable energy and carbon capture and storage). The discussion of unconventional gas introduces us to new issues arising out of new technologies and to the polarised political response to them – varying across Australia – and to the interaction of new laws covering the new issues with laws on biodiversity and conservation that themselves have been subject to recent change.

Renewable energy has become much more important in Australia over the past decade as a result of federal and state governments' interest in having Australia contribute to the global effort to reduce the impact of climate change. Renewable energy raises

٧



vi FOREWORD

different issues in respect of access to land and resources than the exploitation of fossil fuel resources, and has generated new law and regulations. Chapter 6 manages to relate the evolution of regulation designed to promote growth in renewable energy to the international discussion and negotiation of emissions reduction targets. Chapter 7 takes us into deep exploration of another set of laws and regulations that have their origins in mitigation of climate change: the capture and storage of carbon emissions from fossil fuel combustion, and then the many ways in which climate change concerns have interacted with energy policy. The discussion of international climate change mitigation notes the discordance today between Australian and other countries' approaches.

The first edition of this book, published in 2015, was widely acclaimed. It met an important gap in the literature available for teachers and students and for practitioners in law, business and government needing to comprehend quickly a complex legal reality. The world of laws related to resource development, renewable energy and climate change has evolved rapidly over recent years. This second edition is a welcome update of discussion of many aspects of the changing reality. Especially welcome is the new content on the *United Nations Convention on the Law of the Sea* (UNCLOS), the Australian Energy Market Commission (AEMC), the gas export market, resource royalties and environmental impact assessments.

Climate change mitigation and regulation of carbon emissions has accelerated at both state and Commonwealth levels. That change continues with the more ambitious emissions reductions targets of the Albanese Commonwealth Government elected in May 2022. This second edition is especially welcome for its discussion of the impacts of climate change and environmental regulation on energy policies in Australia, including climate legislation, the regulation of renewable energy sources, regulation of carbon capture and storage (CCS) in geological structures, and the transition away from fossil fuels.

The reality in which Australian minerals and energy law operates in the years immediately ahead will continue to change rapidly, forcing more change in policy, law and regulation. Better understanding of the realities, including the realities of other countries' action on climate change, will also be a source of pressure for change. Readers who have established a strong and intelligible foundation of Australian minerals and energy policy and law through reading this comprehensive and insightful book will be at an advantage in understanding complex new realities as they reveal themselves to us.

Ross Garnaut

Emeritus Professor of Economics, The University of Melbourne Emeritus Professor of Economics, The Australian National University



CONTENTS

Foreword by Ross Garnaut

About the author x			xiii	
Acknowledgements			xiv	
List of acronyms				
Table of cases				
Tai	ble of s	tatutes		xxiii
1	Owne	ership	of minerals and natural resources	1
	1.1	Introd	luction	2
	1.2	Owne	rship of the subsurface strata at common law	3
	1.3	Public	resource ownership	7
	1.4	The p	roprietary status of mining tenements	11
	1.5	Royal	minerals: gold and silver	14
	1.6	Owne	rship of renewable energy resources	17
		1.6.1	Hydro-electrical power	18
		1.6.2	Geothermal energy	18
		1.6.3	Ownership of water in Australia	19
		1.6.4	Access entitlements for wind and sunlight	23
		1.6.5	Market progression	24
	1.7	Divisi	on of land and resources: overlapping tenures	25
	1.8 Land access and compensation			
	1.9	Native	e title, cultural heritage and mining rights	33
	1.10	Reviev	w questions	37
	1.11	Furth	er reading	38
2 Resource titles: permits, licences and leases			tles: nermits, licences and leases	39
_	2.1 Introduction		40	
	2.2 Mining approval process: exploration, assessment and			
			tion phases	41
	2.3		ration licences and permits	42
		_	Approval process	42
			The character of an exploration licence/permit	45
		2.3.3	Relevant legislative provisions	47
			2.3.3.1 New South Wales	47
			2.3.3.2 Western Australia	50
			2.3.3.3 Queensland	50
		2.3.4	Proprietary status of the exploration licence	53
		2.3.5	Legal status of offshore exploration permits: s 51(xxxi)	
			of the Commonwealth Constitution	54
	2.4	Reten	tion licences and assessment leases	58

vii

v



viii CONTENTS

	2.5	Mining and production leases	62
		2.5.1 Statutory character of a mining lease	62
		2.5.2 General terms and conditions of a mining lease	65
		2.5.3 State agreements	70
	2.6	Review questions	70
	2.7	Further reading	71
3	Aust	ralian offshore petroleum and minerals regulation	73
	3.1	Introduction	74
	3.2	United Nations Convention on the Law of the Sea	76
		3.2.1 Background to <i>UNCLOS</i>	76
		3.2.2 Maritime zones: baselines, the contiguous and exclusive	
		economic zones, and the continental shelf	77
		3.2.3 The high seas	83
		3.2.4 The right of innocent passage	84
	3.3	State and Commonwealth constitutional arrangements	
		for offshore regulation	86
	3.4	Offshore Petroleum and Greenhouse Gas Storage Act 2006 (Cth)	91
	3.5	NOPTA and NOPSEMA	93
	3.6	OPGGSA (Cth) titles	95
		3.6.1 Petroleum exploration permit	95
		3.6.2 Petroleum retention lease	96
		3.6.3 Petroleum production licence	97
		3.6.4 Infrastructure licence	98
		3.6.5 Pipeline licence	99
	3.7	Sea installations	100
	3.8	Joint petroleum area and Greater Sunrise: Australia and Timor-Leste	100
	3.9	Offshore Minerals Act 1994 (Cth)	103
	3.10	Offshore Electricity Infrastructure Act 2021 (Cth)	104
	3.11	Review questions	107
	3.12	Further reading	107
4		national energy market: focus on gas	110
	4.1	Introduction	111
	4.2	National Electricity Market and the National Electricity Law	111
	4.3	What is natural gas?	112
	4.4	The gas export market	114
	4.5	National Gas Law	117
	4.6	The Australian Energy Regulator and the Economic	100
	4 7	Regulation Authority	120
	4.7	Australian Energy Market Commission	124
	4.8	Australian Energy Market Operator	127
	4.9	Australian gas pipelines and the NGL	129
	4.10	Review questions	138
	4.11	Further reading	139



CONTENTS ix

5	Unc	onven	tional ga	as regulation	141		
	5.1	Introd	uction	_	142		
	5.2	What	is unconv	ventional gas?	145		
		5.2.1	Shale ga	as	145		
		5.2.2	Tight ga	ns .	145		
		5.2.3	Coal sea	am gas	146		
	5.3	How is unconventional gas extracted?					
		5.3.1	Hydrau	lic fracturing and horizontal drilling	147		
		5.3.2	Water p	numping for CSG extraction	149		
	5.4	Enviro	nmental	and social issues associated with unconventional			
		gas ex	gas extraction				
	5.5	Regula	atory frai	neworks for unconventional gas: focus on Queensland			
		and New South Wales					
		5.5.1	Queens	land: Petroleum and Gas (Production and Safety) Act 2004	158		
			5.5.1.1	Regulatory requirements	158		
			5.5.1.2	Access, entry and conduct and compensation			
				agreements	164		
		5.5.2	New So	uth Wales: the regulatory framework	168		
			5.5.2.1	Petroleum (Onshore) Act 1991	169		
			5.5.2.2	Land access, compensation and access disputes	172		
			5.5.2.3	Codes of practice for CSG: fracture stimulation and well			
				integrity	174		
			5.5.2.4	Strategic Regional Land Use Policy and the			
				gateway process	176		
			5.5.2.5	Environmental Planning and Assessment Act 1979	178		
			5.5.2.6	Water Management Act 2000 and the Aquifer			
				Interference Policy	181		
	5.6	Regulatory framework: Environment Protection and Biodiversity					
		Conser	vation Ac	et 1999 (Cth)	184		
	5.7		w questio		185		
	5.8	Further reading					
6	Ron	owahla	anarav	: regulation, the Renewable Energy Target			
U				rgy and the market framework	189		
	6.1		uction	agy and the market framework	190		
	6.2			able energy?	191		
	6.3			energy market	194		
	6.4			ation: the Renewable Energy Target	195		
	0.7	6.4.1		nwealth and state development of renewable	1/3		
		0.7.1	energy	-	195		
		6.4.2		nic justification for the RET	199		
		0.7.4		Outline of the federal RET	199		
	6.5	Racka			201		
	6.6						
					202		
	and Clean Energy Finance Corporation 203						



x CONTENTS

	6.7	The Large-scale Renewable Energy Target			
	6.8	6.8 The Small-scale Renewable Energy Scheme and Solar Credits Schem			
6.9 The economic			onomics of renewable energy	208	
	6.10	The Na	tional Electricity Market	210	
	6.11	Onshor	re wind energy	212	
		6.11.1	Best Practice Guidelines for Implementation of Wind		
			Energy Projects in Australia	216	
		6.11.2	Onshore wind farm cases: Bald Hills Wind Farm Pty Ltd v		
			South Gippsland Shire Council and SPIC Pacific Hydro Pty Ltd		
			ν Chief Commissioner of State Revenue	220	
	6.12	Offshor	re wind energy: Offshore Electricity Infrastructure Act 2021 (Cth)	223	
	6.13	Review	questions	227	
	6.14	Furthe	r reading	227	
7	Carb	on capt	ure and storage	230	
	7.1	Introdu	action	231	
	7.2	What is	s carbon capture and storage?	232	
	7.3	Why do	o we need CCS?	235	
	7.4	Captur	ing carbon dioxide	237	
		7.4.1	Pre-combustion technology	238	
		7.4.2	Post-combustion technology	238	
		7.4.3	Oxyfuel combustion	238	
		7.4.4	Applications of pre-combustion, post-combustion and oxyfuel		
			combustion	239	
			7.4.4.1 Enhanced oil recovery operations	239	
			7.4.4.2 CCS operations in the cement sector	239	
	7.5	Transp	orting carbon dioxide	240	
	7.6	Storing	carbon dioxide	242	
	7.7	Interna	ational CCS projects	242	
	7.8	Regula	ting carbon capture in Australia	243	
		7.8.1	Commonwealth laws	243	
		7.8.2	State and territory laws	247	
	7.9	CCS sta	te frameworks: focused review	248	
		7.9.1	Victoria: Greenhouse Gas Geological Sequestration Act 2008	248	
		7.9.2	Queensland: Greenhouse Gas Storage Act 2009	252	
		7.9.3	Victoria: Offshore Petroleum and Greenhouse		
			Gas Storage Act 2010	254	
	7.10	Legal li	ability for carbon capture in Australia	255	
		7.10.1	Environmental concerns	255	
		7.10.2	Tortious actions	255	
		7.10.3	Regulatory standards	256	
	7.11	Review	questions	257	
	7.12	Further reading 2			



CONTENTS xi

8	Climate change and energy policy				261	
	8.1	Introduction				
	8.2	Chang	ges in the	climate system: atmosphere, ocean, cryosphere		
		and se	ea level		264	
	8.3	International and domestic legal frameworks			267	
		8.3.1	8.3.1 United Nations Framework Convention on Climate Change			
		8.3.2	Intergo	vernmental Panel on Climate Change	271	
		8.3.3	Kyoto Pı	rotocol	271	
		8.3.4	Paris Ag	greement	273	
			8.3.4.1	Nationally determined contributions	275	
			8.3.4.2	Critical analysis of the Paris Agreement	277	
		8.3.5	The Ene	ergy Charter Treaty	277	
		8.3.6	Australi	an climate regulation	280	
			8.3.6.1	Emissions Reduction Fund	281	
			8.3.6.2	The safeguard mechanism	281	
			8.3.6.3	Climate legislation: legislating emission		
				reduction targets	284	
			8.3.6.4	Climate litigation	286	
	8.4	Pricing carbon				
	8.5	The energy transition			293	
	8.6	Review questions			296	
	8.7	Furth	er readin	g	296	
9	Env	Environmental regulation				
	9.1	Introduction				
		9.1.1	Cost-be	enefit analysis versus precautionary		
			principl	le approach	302	
		9.1.2	Environ	imental rights	304	
	9.2	Jurisdictional framework				
		9.2.1	Commo	nwealth environmental legislation: Environment		
			Protectio	on and Biodiversity Conservation Act 1999	308	
				l agreements	312	
		9.2.3	Principl	les of ecologically sustainable development	313	
	9.3		Environmental impact assessment			
	9.4	Environmental assessment of energy and mining projects in				
		Western Australia				
	9.5			assessment of energy and mining projects		
		in Queensland				
	9.6	6, 61,				
			w South V		328	
	9.7	1				
	9.8	8 Further reading			335	



xii CONTENTS

10 Min	Mining agreements and revenue frameworks		
10.1	Introduction		
10.2	Form a	and scope of resource mining agreements	344
	10.2.1	Fossil fuels: concession agreements	344
	10.2.2	Fossil fuels: profit-sharing contracts	345
	10.2.3	Fossil fuels: risk service contracts	347
	10.2.4	Fossil fuels: joint venture agreements	348
	10.2.5	Renewable energy: power purchase, engineering,	
		procurement, connection and operation agreements	349
10.3	Resour	ce royalties in Australia	351
	10.3.1	Royalty frameworks	351
	10.3.2	Coal royalty rates	353
	10.3.3	Petroleum royalty rates	354
	10.3.4	Royalties payable on private minerals	355
	10.3.5	Meaning of 'well-head' for calculation of royalties	356
	10.3.6	Public benefit of royalties	358
10.4	Resour	Resource taxation in Australia	
	10.4.1	Carbon tax	361
	10.4.2	Minerals resource rent tax	361
	10.4.3	Petroleum resource rent tax	362
	10.4.4	Public benefit of resource taxes	364
10.5	Review	Review questions	
10.6	Furthe	r reading	366
Index			370



ABOUT THE AUTHOR

Professor Samantha Hepburn has made significant contributions to energy, mining, climate and environmental narratives. Her research and public profiles are extensive. She has published in Australia, the United States and other countries, and is the author of numerous highly regarded legal texts and journal articles. She is a prolific public academic, contributing to print, electronic and broadcast media on energy, climate and environmental governance discussions. Samantha teaches mining, energy, environmental and natural resource law at Deakin Law School.



ACKNOWLEDGEMENTS

The second edition of this book has been a few years in the making and seeks to incorporate the many developments that have occurred in this area over the past eight years. As with the first edition, this edition has been the product of a great deal of encouragement, hard work and enthusiasm. I would like to thank my family for their enduring support. I thank the amazing team at Cambridge University Press, particularly Helena Melton and Lucy Russell, who have been so patient and helpful. A very special thank you to Professor Ross Garnaut for everything he has done to help with this new edition. Finally, I would like to thank my students, past and present, for their interest and inspiration.

The author and Cambridge University Press would like to thank the following for permission to reproduce material in this book.

Figure 4.1: © Commonwealth of Australia (Geoscience Australia) 2021. Reproduced under a CC BY 4.0 licence: https://creativecommons.org/licenses/by/4.0/>.

Figure 7.1: © IEA 2013. Reproduced under a CC BY 4.0 licence: https://creativecommons.org/licenses/by/4.0/.

Extracts from Australian Energy Market Commission (AEMC), *National Gas Rules* ('NGR'): © AEMC 2022. Reproduced with permission from the Australian Electricity Market Commission (AEMC) 2022.

Extract from Clean Energy Council, Best Practice Guidelines for Implementation of Wind Energy Projects in Australia (2018) https://assets.cleanenergycouncil.org.au/documents/advocacy-initiatives/community-engagement/wind-best-practice-implementation-guidelines.pdf: reproduced with permission.

Extracts from Clean Energy Regulator (CER), Carbon Capture and Storage Method 2021 – Simple Method Guide: User Guide for Carbon Capture and Storage Projects (V1, September 2021) https://www.cleanenergyregulator.gov.au: © Clean Energy Regulator, Commonwealth of Australia. Reproduced under a CC BY 3.0 licence: https://creativecommons.org/licenses/by/3.0/.

Extract from the *Energy Charter Treaty* (*'ECT'*): © European Energy Charter [1991–1994]. © Energy Charter Secretariat [1995–2016].

Extracts from Intergovernmental Panel on Climate Change (IPCC), 'Summary for Policy Makers', *Climate Change 2022: Impacts, Adaptation and Vulnerability*, (Working Group II contribution to the IPCC Sixth Assessment Report, 2022) https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_SummaryForPolicymakers.pdf: reproduced with permission from the Intergovernmental Panel on Climate Change (IPCC).

Extract from the *Paris Agreement*, by COP21: © 2016 United Nations. Reprinted with the permission of the United Nations

Extracts from the *United Nations Convention on the Law of the Sea* ('*UNCLOS*'), by Third United Nations Conference on the Law of the Sea: © 1982 United Nations. Reprinted with the permission of the United Nations.

xiv



ACKNOWLEDGEMENTS xv

Extract from the *United Nations Framework Convention on Climate Change* ('UNFCCC'), by the General Assembly: © 1992 United Nations. Reprinted with the permission of the United Nations.

Extracts from Commonwealth Law Reports (CLR): reproduced with permission of Thomson Reuters (Professional) Australia Limited, legal.thomsonreuters.com.au.

Extracts from Federal Court of Australia – Full Court (FCAFC): Reproduced under a CC BY 3.0 licence: https://creativecommons.org/licenses/by/3.0/>.

Extracts from Commonwealth legislation: sourced from the Federal Register of Legislation and reproduced under Creative Commons Attribution 4.0 International (CC BY 4.0). For the latest information on Australian Government law please go to https://www.legislation.gov.au.

Extracts from New South Wales legislation: sourced from the New South Wales Legislation website at 21 November 2022. For the latest information on New South Wales Government legislation please go to https://www.legislation.nsw.gov.au. Reproduced under a CC BY 4.0 licence: https://creativecommons.org/licenses/by/4.0/.

Extracts from Queensland legislation: sourced from the Queensland Legislation website at 21 November 2022. For the latest information on Queensland Government legislation please go to https://www.legislation.qld.gov.au. Reproduced under a CC BY 4.0 licence: https://creativecommons.org/licenses/by/4.0/.

Extracts from South Australian legislation: sourced from the South Australian Legislation website at 22 November 2022. For the latest information on South Australian Government legislation, please go to <www.legislation.sa.gov.au/>. Reproduced under a CC BY 4.0 licence: https://creativecommons.org/licenses/by/4.0/>.

Extracts from Victorian legislation: © State of Victoria, Australia. Copyright in all legislation of the Parliament of the State of Victoria, Australia, is owned by the Crown in right of the State of Victoria, Australia. DISCLAIMER: This product or service contains an unofficial version of the legislation of the Parliament of State of Victoria. The State of Victoria accepts no responsibility for the accuracy and completeness of any legislation contained in this product or provided through this service.

Extracts from Western Australian legislation: sourced from the Western Australian Legislation website at 21 November 2022. For the latest information on Western Australian legislation, visit <www.legislation.wa.gov.au>. Reproduced under a CC BY 4.0 licence: https://creativecommons.org/licenses/by/4.0/>.

Every effort has been made to trace and acknowledge copyright. The publisher apologises for any accidental infringement and welcomes information that would redress this situation.



ACRONYMS

ABARE Australian Bureau of Agriculture and Resource Economics

ACCC Australian Competition and Consumer Commission

ACCU Australian carbon credit units

ADGSM Australian Domestic Gas Security Mechanism

AEMC Australian Energy Market Commission
AEMO Australian Energy Market Operator

AER Australian Energy Regulator
AIP Aquifer Interference Policy
ANP Autoridade Nacional do Petróleo

APPEA Australian Petroleum Production Exploration Association

ARENA Australian Renewable Energy Agency
BSAL biophysical, strategic agricultural land

CBA cost-benefit approach

CBAM European Carbon Border Adjustment Mechanism
CBM coal bed methane (used internationally to describe CSG)

CCS carbon capture and storage
CDM clean development mechanism
CEFC Clean Energy Finance Corporation

CER Clean Energy Regulator

CLCS United Nations Committee on the Limits of the Continental Shelf

CMATS Treaty on Certain Maritime Arrangements in the Timor Sea

COAG Council of Australian Governments

CSG coal seam gas

DEHP Department of Environment and Heritage Protection

DMP Department of Mines and Petroleum (WA)

DWGM Declared Wholesale Gas Market

EA environmental authority

ECHR European Convention on Human Rights

ECT Energy Charter Treaty

EEA Environment Effects Act 1978 (Vic)
EES environmental effects statement

EEZ exclusive economic zone

EIA environmental impact assessment
EIS environmental impact statement
EM environmental management

EMPC Environmental Management and Pollution Control Act 1994 (Tas)

EOR enhanced oil recovery

EOW end of waste

EPA Environmental Protection Authority

EPAA Environmental Planning and Assessment Act 1979 (NSW)

EPBCA Environment Protection and Biodiversity Conservation Act 1999 (Cth)

xvi



ACRONYMS xvii

EPC engineering, procurement and construction agreement

EPHC Environment Protection and Heritage Council

EPL environmental protection licence
ERA Economic Regulation Authority (WA)

ERF Emissions Reduction Fund

ESD ecologically sustainable development

ESG2 Environmental Impact Assessment Guidelines for NSW

FSMP fracture stimulation management plan

GGGSA Greenhouse Gas Geological Sequestration Act 2008 (Vic)

GGSA Greenhouse Gas Storage Act 2009 (Qld)

GHG greenhouse gas

GS Greater Sunrise oilfield

HRA Human Rights Act 2019 (Qld)

ICCPR International Covenant on Civil and Political Rights

ICESCCR International Covenant on Economic, Social and Cultural Rights

IEA International Energy Agency
IEC International Energy Charter

IESC Independent Expert Scientific Committee on CSG and Large Coal

Mining Development

ILUA Indigenous Land Use Agreement

IPCC Intergovernmental Panel on Climate Change

ISA International Seabed Authority
IUA International Unitisation Agreement

JORC Code Australasian Code for Exploration Results, Mineral Resources and

Ore Resources

JPDA Joint Petroleum Development Area

LEP local environmental plan

LGC Large-scale Generation Certificate

LNG liquid natural gas
LPG liquid petroleum gas

LREC Large-scale Renewable Energy Certificate
LRET Large-scale Renewable Energy Target

MBT Maritime Boundary Treaty

MNES matters of national environmental importance

MREMP Mining, Rehabilitation and Environmental Management Process

MRET Mandatory Renewable Energy Target

MRRT Minerals resource rent tax

MRSDA Mineral Resources (Sustainable Development) Act 1990 (Vic)

MTOFSA Maritime Transport and Offshore Facilities Security Act 2003 (Cth)

NCC National Competition Council NDC nationally determined contributions

NELNational Electricity LawNEMNational Electricity MarketNEONational Electricity Objective



xviii ACRONYMS

NERO National Energy Retail Objective

NGERA National Greenhouse and Energy Reporting Act 2007 (Cth)

NGL National Gas Law
NGO National Gas Objective
NGR National Gas Rules

NNTT National Native Title Tribunal

NOPSEMA National Offshore Petroleum Safety and Environmental

Management Authority

NOPTA National Offshore Petroleum Titles Administrator NPACSG National Partnership Agreement on Coal Seam Gas

NTA Native Title Act 1993 (Cth)

NTESMO Northern Territory Electricity System and Network Operator

NTPC Native Title Protection Conditions

NWI National Water Initiative

OECD Organisation for Economic Cooperation and Development

OEIA Offshore Electricity Infrastructure Act 2021 (Cth)

OMA Offshore Minerals Act 1994 (Cth)

OPA Offshore Petroleum Agreement 1967 (Cth)

OPGGSA (Cth) Offshore Petroleum and Greenhouse Gas Storage Act 2006 (Cth)
OPGGSA (Vic) Offshore Petroleum and Greenhouse Gas Storage Act 2010 (Vic)
OSPAR Convention Convention of the Marine Environment of the

North-East Atlantic

PEC partial exemption certificate

PEERA Protocol on Energy Efficiency and Related Environmental Aspects

(under Energy Charter)

PEOA Protection of the Environment Operations Act 1997 (NSW)
PGERA Petroleum and Geothermal Energy Resources Act 1967 (WA)
PGPSA Petroleum and Gas (Production and Safety) Act 2004 (Qld)

PLAC Petroleum Land Access Code (NSW)
POA Petroleum (Onshore) Act 1991 (NSW)

PPA power purchase agreement

PPSA Personal Property Securities Act 2009 (Cth)

PRRT petroleum resource rent tax
PSC profit sharing contract

PSLA Petroleum (Submerged Lands) Act 1967 (Cth)

REC renewable energy certificate

REEA Renewable Energy (Electricity) Act 2000 (Cth)

REF review of environmental factors
RET Renewable Energy Target
RFC reasons for concern

RPP Renewable Power Percentage

SDPWOA State Development and Public Works Organisation Act 1971 (Qld)

SEPP state environmental planning policy



ACRONYMS xix

SGC Small-scale Generation Certificates
SMC safeguard mechanism credits

SRES Small-scale Renewable Energy Scheme
SRLUP Strategic Regional Land Use Policy
SSD state significant development
SSI state significant infrastructure

SSLA Seas and Submerged Lands Act 1973 (Cth)
STC Small-scale Technology Certificates

STTM short term trading market

TCF trillion cubic feet
TST Timor Sea Treaty 2003

UNCED United Nations Conference on Environmental Development 1992

UNCLOS United Nations Convention on the Law of the Sea

UNFCCC United Nations Framework Convention on Climate Change

VTS Victorian Transmission System

WAL water access licence

WEM Wholesale Electricity Market
WMA Water Management Act 2000 (NSW)



TABLE OF CASES

Adamson v Hayes (1973) 130 CLR 276, 12

Akiba (on behalf of the Torres Strait Regional Sea Claims Group) v Commonwealth (2013) 250 CLR 209, 87

Akiba v Queensland (No 2) (2010) 204 FCR 1, 87

Anaconda Nickel Ltd v Tarmoola Australia Pty Ltd (2000) 22 WAR 101, 54

Attorney-General for British Columbia v Attorney-General for Canada [1914] AC 153, 84

Australian Conservation Foundation Inc v Minister for the Environment (2021) 174 ALD 286, 185, 311–12

Bald Hills Wind Farm Pty Ltd v South Gippsland Shire Council [2020] VSC 512, 220-1

Bernstein v Skyviews & General Ltd [1978] QB 479, 481, 6

BHP Billiton Iron Ore Pty Ltd v National Competition Council (2007) ATPR 42-141, 132-3

BHP Petroleum Pty Ltd v Balfour (1987) 180 CLR 474, 357

Bocardo Ltd v Star Energy UK Onshore Ltd [2010] 1 Ch 100, 5, 13-14

Bocardo SA v Star Energy UK Onshore Ltd [2011] 1 AC 380, 5

Bonsa v La Macchia (1970) 122 CLR 177, 86

Brown (on behalf of the Ngarla People) v Western Australia (2012) 208 FCR 505, 69-70

Brown (on behalf of the Ngarla People) v Western Australia (No 2) (2010) 268 ALR 149, $_{60}$

Bursill Enterprises Pty Ltd v Berger Brothers Trading Pty Ltd (1971) 124 CLR 73, 7 Bury v Pope (1586) 78 ER 375, 5

Cadia Holdings Pty Ltd v New South Wales (2010) 242 CLR 195, 14-16

Case of Mines (1568) 75 ER 472, 14, 15

ChongHerr Investments Ltd v Titan Sandstone Pty Ltd (2007) Q ConvR 54-669, 63

Commissioner for Railways v Valuer General [1974] 1 AC 382, 5

Commissioner of State Revenue v OZ Minerals Ltd (2013) 46 WAR 156, 12

Commissioner of State Revenue (WA) v Placer Dome Inc (2018) 265 CLR 585, 12, 27

Commissioner of Taxation v Sharpcan Pty Ltd (2019) 269 CLR 370, 56-7

Commissioners of Crown Lands v Page [1960] 2 QB 274, 253

Commonwealth v WMC Resources Ltd (1998) 194 CLR 1, 54-8

Commonwealth v Yarmirr (1999) 101 FCR 171, 84

Commonwealth v Yarmirr (2001) 208 CLR 1, 245

Connected IO Ltd v Paterson [2019] WASCA 70, 45

Connell v Santos NSW Pty Ltd [2014] NSWLEC 1, 171-2

Cudgen Rutile (No 2) Pty Ltd v Chalk [1975] AC 520, 344

Doe d Douglas v Lock (1835) 111 ER 271, 7

Duke of Sutherland v Heathcote [1892] 1 Ch 475, 54

Edwards v Sims (1929) Ky 24 SW (2d) 619, 255

Embrey v Owen (1851) 155 ER 579, 20

хx



TABLE OF CASES xxi

Finlay Stonemasonry Pty Ltd v JD & Sons Nominees Pty Ltd (2011) 28 NTLR 183, 6
Foreman v Free Fishers and Dredgers of Whitstable (1869) LR 4 HL 266, 84
Forrest & Forrest Pty Ltd v The Honourable William Richard Marmion, Minister for Mines
and Petroleum (2017) 51 WAR 425, 45

Fortescue Metals Group Ltd v Commonwealth (2013) 250 CLR 548, 360 Friends of Leadbeater's Possum Inc v VicForests (No 4) [2020] FCA 704, 303–4 Fullerton Cove Residents Action Group Inc v Dart Energy Ltd (No 2) [2013] NSWLEC 38, 179–80

Gloucester Resources Ltd v Minister for Planning [2019] NSWLEC 7, 316–7
Golden Pig Enterprises v O'Sullivan [2021] WASC 396, 13
Goldus Pty Ltd (Subject to a Deed of Co Arrangement) v Cummins (No 4) (2021) 157 ACSR 118, 54
Gowan v Christie (1873) LR 2 Sc & Div 273, 58, 63
Grant Pastoral Co Pty Ltd v Thorpes Ltd (1954) 54 SR (NSW) 129, 19
Gray v Minister for Planning (2006) 152 LGERA 258, 316
Grimaldi v Chameleon Mining NL (No 2) (2012) 200 FCR 296, 349
Gullen Range Wind Farm Pty Ltd v Minister for Planning [2009] NSWLEC 1444, 221

Hancock Prospecting Pty Ltd v Wright Prospecting Pty Ltd (2012) 45 WAR 29, 13 Harper v Minister for Sea Fisheries (1989) 168 CLR 314, 84 Hijazi v Georges River Council [2020] NSWLEC 36, 172 Hinkley v Star City Pty Ltd (2010) 15 BPR 28,983, 5, 14 Hospital Products v United States Surgical Corporation (1986) 156 CLR 41, 349

ICM Agriculture Pty Ltd v Commonwealth (2009) 240 CLR 140, 56, 58

Jacob v Save Beeliar Wetlands (Inc) (2016) 50 WAR 313, 320 Juliana v United States of America, 947 F 3d 1159 (9th Cir, 2020), 287

King v Minister for Planning [2010] NSWLEC 1102, 221

Lord v Commissioners of Sydney (1859) 2 Legge 912, 19

Mabo v Queensland (No 2) (1992) 175 CLR 1, 253

Martin v Hume Coal Pty Ltd [2016] NSWLEC 51, 174

Millar v Wildish (1863) 2 W & W (E) 37, 15

Minerology v Western Australia (2021) 393 ALR 551, 70

Minister for the Environment v Sharma (2022) 291 FCR 311, 287–9, 309–10

Ministry of the State for the Army v Dalziel (1944) 68 CLR 261, 9

New South Wales v Commonwealth (1975) 135 CLR 337, 87–9 Newcrest Mining (WA) Ltd v Commonwealth (1997) 190 CLR 513, 57–8 North Ganalanja Aboriginal Corporation v Commonwealth (1996) 185 CLR 595, 35 O'Connor v Arrow (Daandine) Pty Ltd [2009] QSC 432, 165 O'Keefe v Williams (1910) 11 CLR 171, 253

Peabody West Burton Pty Ltd v Mason [2012] QLC 23, 167 Pilmer v The Duke Group Ltd (2001) 207 CLR 165, 349 PJ Magennis Pty Ltd v Commonwealth (1949) 80 CLR 382, 9



xxii TABLE OF CASES

R v Keyn (1876) 2 Ex D 63, 84, 86

R v Wilson (1874) 12 SCR (L) (NSW) 258, 15

Re Epic Energy (WA) One Pty Ltd v Commissioner of State Revenue (2011) 43 WAR 186, 26–7 Re Minister for Resources; Ex parte Cazaly Iron Pty Ltd (2007) 34 WAR 403, 44–5, 59, 64 Re Racal Communications Ltd [1981] AC 374, 357

Re Williams v De Biasi (Federal Court of Australia, Drummond J, 18 August 1992), 54 Red Hill Iron Ltd v API Management Pty Ltd [2012] WASC 323, 27, 348–9

Rossmar Park Pastoral Co Pty Ltd v Coal Mines Australia Pty Ltd [2008] NSWSC 1385, 54

Sharma (by her litigation representative Sister Marie Brigid Arthur) v Minister for the Environment (2021) 391 ALR 1, 288

Southern Properties (WA) Pty Ltd v Executive Director of the Department of Conservation and Land Management (2012) 42 WAR 287, 221

Spencer v Commonwealth (2010) 241 CLR 118, 57

SPIC Pacific Hydro Pty Ltd v Chief Commissioner of State Revenue (2021) 20 BPR 41,275, 222

Star Energy Weald Basin Ltd v Bocardo SA [2011] 1 AC 380, 5-6

State of the Netherlands v Urgenda Foundation, Supreme Court of the Netherlands, 20 December 2019, case 19/00135, 340–1

Stow v Mineral Holdings (Australia) Pty Ltd (1977) 180 CLR 295, 54, 64

Straits Exploration (Australia) Pty Ltd v Kokatha Uwankara Native Title Claimants (2012) 114 SASR 516, 34

Tate v Lyle Industries v Greater London Council [1983] 2 AC 509, 19

TEC Desert Pty Ltd v Commissioner of State Revenue (2010) 241 CLR 576, 12

The Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal (2012) 246 CLR 379, 132

The Uniting Church in Australia Property Trust (NSW) v Parramatta City Council [2018] NSWLEC 158, 193

Ulan Coal Mines Ltd v Minister for Mineral Resources [2007] NSWSC 1299, 65 Ulan Coal Mines v Minister for Mineral Resources (2008) 161 LGERA 391, 65 United Dominion Corporation v Brian (1985) 157 CLR 1, 348 Urgenda v State of the Netherlands [2015] HAZA C/09/00456689 (24 June 2015), 287

Valuer-General v Perilya Broken Hill Ltd (2013) 195 LGERA 416, 63, 65 Valuer-General Victoria v AWF Prop Co 2 Pty Ltd (2021) 65 VR 327, 223

Wade v New South Wales Rutile Mining Co Pty Ltd (1969) 121 CLR 177, 12, 15, 54, 63–5 Walker Superannuation Fund v Clough Property Fairmont Pty Ltd [2010] WASCA 232, 7

Waratah Coal Pty Ltd v Youth Verdict Ltd [2020] QLC 33, 341

Waratah Coal Pty Ltd v Youth Verdict Ltd (No 5) [2022] QLC 4, 342

Western Australia v Manado (2020) 270 CLR 81, 64, 87

Westmoreland and Cambria Natural Gas Co v DeWitt, 130 Pa 235 (1889), 10

Wik Peoples v Queensland (1996) 187 CLR 1, 64, 253

Woolley v Attorney-General of Victoria (1877) 2 App Cas 163, 14-15

Wurridjal v Commonwealth (2009) 237 CLR 309, 56



TABLE OF STATUTES

COMMONWEALTH Constitution, 308 s 51(i), 306 Aboriginal and Torres Strait Islander s 51(xx), 306 Heritage Protection Act 1984, 36 s 51(xxix), 87, 88, 306, 308 Australian Consumer Law, 350 s 51(xxxi), 9, 54-8, 245 Australian Energy Market Act 2004, 117 s 52, 308 Australian National Registry of Emissions s 90, 308 Units Act 2011 s 96, 57 pt 2, 202 Customs (Prohibited Exports) Regulations Australian Renewable Energy Agency Act 1958 div 6, 116 s 7, 202 Environment Protection and Biodiversity s 8, 202 Conservation Act 1999, 36, 100, 106, Carbon Credits (Carbon Farming Initiative) 144, 184-5, 214, 215, 224, 225, 288, Act 2011, 281 301, 306, 308-12 s 23, 243 ch 3 pt 5, 185 s 308, 281 div 1 sub-div F, 100 Carbon Credits (Carbon Farming Initiative) pt 3, 226 Regulations 2011, 281 pt 3 div 1, 184 Clean Energy Act 2011, 361 pt 3 div 1 sub-div AA, 36 pt 5, 202 pt 7 div 1, 184 Clean Energy Finance Corporation Act 2012 pt 8 div 3, 185, 309 s 3, 203 s 3(1)(b), 184 s 9, 203 s 3A, 314 Clean Energy Regulator Act 2011, 202 s 9, 184 Climate Change Act 2022, 195, 206, 231, s 10, 184 275, 284 s 22, 309 s 6, 285 s 24D, 184, 310-11 s 10, 198, 275-6, 280, 284 s 24D(1), 184 Coastal Waters (State Powers) Act 1980, 89 s 24E, 310-11 s 5, 89 s 44, 312 Coastal Waters (State Title) Act 1980, 89 s 45, 312-13 s 4,90-1s 46, 312 Competition and Consumer Act 2010, 117 s 47, 312 pt IIIA, 134 s 75, 318 s 86C, 124 s 130, 309 s 86D, 124 s 133, 309 Competition and Consumer (Gas Market s 136, 314-16 Emergency Price) Order 2022, 117

xxiii



xxiv TABLE OF STATUTES

Environment Protection (cont.)	s 34, 104, 105
s 136(1), 316	s 44, 105
s 136(2)(a), 316	s 53, 105
s 178(1), 308	s 62, 105
s 523, 309	s 116, 226–7
s 528, 184, 311	Offshore Electricity Infrastructure
Environmental Protection (Sea Dumping)	Regulations 2021, 104
Act 1981, 226	Offshore Minerals Act 1994, 103–4
Great Barrier Reef Marine Park Act 1975,	ss 29–32, 61
90, 226	ss 29–34, 104
Maritime Transport and Offshore Facilities	s 37, 103
Security Act 2003, 86	s 132, 61
National Greenhouse and Energy Reporting	ss 132–133, 61–2
Act 2007, 281, 282	s 134, 61
s 22XD, 282	s 137(1), 61
Native Title Act 1993, 33, 215	s 439A, 53
s 24MD(6B), 43	Offshore Petroleum Act 2006, 245
s 26(1A), 35	Offshore Petroleum (Royalty) Act 2006, 355
s 26A, 36	s 6, 355
s 29, 35	ss 6–10, 354
s 31(1)(a), 35	s 9, 355
s 31(1)(b), 35	s 10, 355
s 32, 34	s 11, 357
s 35, 35	Offshore Petroleum and Greenhouse Gas
s 38, 35	Storage Act 2006, 76, 91–2, 100, 103,
s 41, 35	244, 245–7, 355
s 42, 36	pt 1.3, 61
s 43, 35	pt 2.3, 61
s 43(2)(1), 35	pt 2.9, 92
s 139, 35	pt 3.3, 246
s 223, 33	pt 3.4, 246
s 237, 34	pt 6.8, 92
Navigation Act 1912, 92	pt 6.9, 94
Navigation Act 2012, 85	pt 6.10, 93
Northern Territory (Self-Government)	s 5, 91–2
Act 1978	s 7, 92
s 69(4), 7	s 8, 92
Offshore Constitutional Settlement 1979, 89	s 19, 106
Offshore Electricity Infrastructure Act 2021,	s 21(1), 246
104–6, 191, 213, 223, 225, 350	s 24A, 251
s 4, 223	s 56, 93
s 15, 223	s 59(2), 94
s 17, 224	s 80, 91
s 28, 225	s 98, 95
s 33, 104–5	s 110, 97



TABLE OF STATUTES xxv

s 135, 96	Offshore Petroleum and Greenhouse Gas
s 141, 95–6	Storage Regulations 2011
s 142, 96–7	regs 157–161, 254
s 145, 96	Personal Property Securities Act 2009, 12
s 148, 96	s 8, 12
s 161, 97–8	s 10, 12
s 165, 97	Petroleum (Onshore) Act 1991
s 166, 97	s 69E, 172-3
s 168(2), 95	Petroleum (Submerged Lands) Act 1967, 55,
s 178, 97	88, 91
s 198, 98, 99	s 42, 356
s 211, 99	Petroleum (Submerged Lands) (Royalty) Act
s 215, 99	1967
s 217, 99	s 5, 356
s 226, 99	Petroleum (Timor Sea Treaty) Act 2003, 100
s 227, 99	Petroleum Resource Rent Tax Assessment Act
s 297, 247	1987
s 304, 247	s 32, 362-3
s 319, 246	Property Securities Act 2009, 169
s 357, 246	Protection of Movable Cultural Heritage Act
s 357(1)(c)-(h), 246	1986, 36
ss 359–360, 254	Racial Discrimination Act 1975, 34
s 379(1), 257	Rail (Dangerous Goods) Rules, 241
s 379(1)(b), 257	Renewable Energy (Electricity) Act 2000,
s 380(1)(g), 257	191, 193, 195, 199, 200
s 380(1)(h), 257	s 3, 201–2
s 383, 246	s 17, 204–5
s 458, 246	s 39, 201
ss 470–471, 94	Renewable Energy (Electricity) (Large-Scale
s 572, 95	Generation Shortfall Charge) Act 2000,
ss 616–623, 92	200-1
ss 631–635, 355	s 6, 201
s 638, 94	Renewable Energy (Electricity) (Small-Scale
sch 3, 92, 94	Technology Shortfall Charge) Act 2010,
Offshore Petroleum and Greenhouse Gas	200-1
Storage (Resource Management and	Renewable Energy (Electricity) Regulations
Administration) Regulations 2011	2001, 200
pt 5, 94	Road Transport Reform (Dangerous Goods)
pt 6, 247	Act 1995, 241
Offshore Petroleum and Greenhouse Gas	Road Transport Reform (Dangerous Goods)
Storage (Safety) Regulations 2009, 94	Regulations 1997, 241
Offshore Petroleum and Greenhouse Gas	Sea Installations Act 1987, 100
Storage Amendment (Compliance	s 4, 100
Measures) Act 2013, 95	s 14, 100
sch 2A, 95	s 15, 100