

Contents

<i>List of Figures</i>	<i>page</i> ix
<i>List of Tables</i>	xi
<i>Preface</i>	xiii
<i>Acknowledgements</i>	xv
<i>List of Abbreviations</i>	xvii
1 Introduction	1
1.1 Research Context	1
1.2 Structure of the Book	5
PART I DECARBONISING POWER GENERATION	
2 Electricity Sector Regulation	11
2.1 Introduction	11
2.2 Institutions and Governing Authority	14
2.2.1 Central Government Agencies	15
2.2.2 Local Governments and SOEs	17
2.3 Pricing Regulation	18
2.3.1 Legal Basis for Regulated Tariff and Investment Recovery in China’s Power Sector	19
2.3.2 Rise of Environmental On-Grid Tariffs	20
2.3.3 Latest Reform towards Pricing Deregulation	22
2.4 Investment Approval for New Coal Power Plants in China	24
2.4.1 From Partial Decentralisation to Centralisation of Permitting Authority	24
2.4.2 The Trend of Decentralisation of Permitting Authority	28
2.5 Conclusion	32

3	Integration of Renewable Energy	34
3.1	Introduction	34
3.2	Supporting Mechanisms under the Renewable Energy Law	36
3.2.1	Renewable Energy Target and Planning Systems	37
3.2.2	Priority Access and Full Purchase Obligations	39
3.2.3	Feed-in Tariffs	40
3.2.4	Cost-Sharing Mechanism	42
3.3	Challenges to Implement Priority Access and Full Purchase Obligations	44
3.3.1	Administrative Dispatch and Green Dispatch	45
3.3.2	Challenges to Amend Access Rules	46
3.4	Administrative Mandates	48
3.5	Conclusion	52
	PART II ACCELERATING FUEL SWITCHING	
4	Coal Sector Regulation	57
4.1	Introduction	57
4.2	Regulatory Measures Related to Coal Pricing	60
4.2.1	Dual-Track Coal Pricing	61
4.2.2	Price Co-movement Mechanism	62
4.3	Coal Capacity Cut Policy	65
4.3.1	Capacity Restructuring and Regulation	65
4.3.2	Re-centralisation and Concentration of Production Capacity	67
4.4	Regulatory Measures	70
4.4.1	Early Warning Mechanism for Coal Power	71
4.4.2	Coal-to-Gas Conversion Policy	72
4.4.3	Implementation Challenges	75
4.5	Conclusion	77
5	Gas Sector Regulation	78
5.1	Introduction	78
5.2	Institutions and Governing Authority	81
5.2.1	Government Agencies Regulating China's Gas Sector	82
5.2.2	Law and Regulations	83
5.2.3	Diversification of Market Players and the Rise of City Gas Companies	85
5.3	Tariff Regulation and TPA	86
5.3.1	Regulation on Transmission Tariff	87
5.3.2	Introduction of the TPA Rules	90

5.4	Regulatory Barriers and Uncertainty in Relation to the Independent Operation of PipeChina	92
5.4.1	Enforcement of the TPA Rules	93
5.4.2	A Truly Independent Pipeline Operator?	95
5.5	Conclusion	97
 PART III ELECTRIFYING END-USE		
6	Regulations for Energy Efficiency and Energy Storage	101
6.1	Introduction	101
6.2	Energy Conservation Law	103
6.2.1	Data Reporting and Collection	105
6.2.2	Alternative Financing	107
6.3	Energy Efficiency Regulation	110
6.3.1	From Experimentation to Sector-Wide Standards	111
6.3.2	Energy Efficiency Standards for Coal Power	112
6.3.3	Relationship with Other Regulatory Instruments	114
6.4	Energy Storage	115
6.4.1	Technological and Regulatory Policy Constraints	116
6.4.2	Policy Recommendations	118
6.5	Conclusion	120
7	Lithium and Electric Vehicles	122
7.1	Introduction	122
7.2	China's Policy Imperative in Support of Lithium Supply Chain Strategies	124
7.2.1	Policy Support for EVs	126
7.2.2	Policy Support to Enhance the Lithium Supply Chain	129
7.2.3	Diversification of Lithium Supply	133
7.3	Challenges to the Sustainable Development of the Lithium Supply Chain	137
7.4	Conclusion	142
 PART IV ADOPTING CARBON REMOVAL MECHANISMS		
8	Domestic Carbon Offset Scheme	145
8.1	Introduction	145
8.2	Regulatory Framework for the Carbon Offset Scheme	149
8.2.1	Translating the CDM Framework into the Domestic Context	149
8.2.2	CCER-Related Framework and Processes	151
8.3	Challenges for Forestry Carbon Sequestration Projects	155

8.3.1 Methodologies	156
8.3.2 Implementation Challenges	161
8.4 Conclusion	164
9 Carbon Capture and Storage	165
9.1 Introduction	165
9.2 Policy Imperative and Current Status of CCS	
Regulatory Framework	168
9.2.1 CCS in National Climate Policy Agenda	169
9.2.2 Environmental Standards and Risk Assessment	171
9.3 Compliance with International Law	174
9.4 Importance of Developing a Regulatory Framework for CCS	176
9.5 Recommendations for Policymaking	178
9.5.1 Legal Authority and Regulatory Responsibilities	178
9.5.2 Technical Standards and Guidelines	179
9.5.3 Licensing and Permitting System	180
9.5.4 Monitoring, Reporting, and Liability	181
9.5.5 Stakeholder Engagement and Public Awareness	183
9.6 Conclusion	184
10 Concluding Remarks	185
<i>Bibliography</i>	195
<i>Index</i>	217