

TABLE OF CONTENTS

Chapter 1

Introduction.....	1
--------------------------	----------

Christopher Jones and Florian Ermacora

1. Climate change – need for action.....	1
2. A new electricity market design for Europe enabling secure and cost effective decarbonisation.....	2
3. An outlook	8

Chapter 2

Renewable energies in the electricity market.....	11
--	-----------

Jan Papsch

1. Decarbonisation of the electricity market: a political	11
and technological revolution.....	11
2. From emergent technology to backbone of the system	14
3. A market fit for renewable energies.....	16
3.1 Non-discrimination principles.....	18
3.1.1 Article 3 Electricity Regulation	19
3.1.2 Other non-discrimination principles	26
3.2 Flexible markets.....	27
3.4 Opening up the markets for system services	34
3.5 Smaller products and aggregation	38
3.6 Adapted tariff incentives	40
4. Renewables fit for the market.....	40
4.1 The recast Renewable Energies Directive	42
4.2 Dispatch, redispatch and compensation	44
4.2.1 Guaranteeing the capability of networks.....	45
4.2.2 Dispatch.....	47
4.2.3 Redispatch and compensation	52
4.3 Balance responsibility	57

Chapter 3**The role of consumers and innovation..... 61***Ivan Pearson*

1.	Introduction	61
2.	Competition, consumer protection, and consumer information	64
2.1	Market opening and retail price regulation	65
2.2	Vulnerable customers and energy poverty	75
2.3	Contractual conditions	79
2.4	Supplier switching	83
2.5	Comparison tools	86
2.6	Bills	90
2.7	Alternative Dispute Resolution	98
3.	Innovation	100
3.1	Demand response.....	102
3.2	Active customers	110
3.3	Citizen Energy Communities	114
3.4	Smart metering systems	119
3.5	Data management.....	126
3.6	Distribution System Operators.....	132
3.7	Energy storage	140
3.8	Electric vehicles	150

Chapter 4**Capacity mechanisms..... 155***András Hujber and Mathilde Carbonnelle*

1.	Introduction.....	155
2.	Why should the EU be concerned?	156
3.	Rules before the Market Design Initiative.....	158
3.1	Internal energy market rules.....	158
3.2	State aid rules.....	158
4.	New approach to Capacity Mechanisms.....	160
4.1	Market reforms alongside capacity mechanisms	160
4.2	New rules for capacity mechanisms	161

4.2.1	EU & national adequacy assessments	161
4.2.2	Setting of reliability standards.....	162
4.2.3	Cross-border participation.....	163
4.2.4	Design of capacity mechanism.....	166
4.2.5	CO ₂ emission limit.....	168
5.	Conclusion	170

Chapter 5

Making electricity flow in Europe – strengthening regional system operation	171
--	------------

Maria E. Leoz Martin-Casallo and Elaine O'Connell

1.	Introduction.....	171
2.	Regional cooperation of TSOs	173
2.1	The shift from a voluntary approach to a mandatory cooperation framework	173
2.2	The new rules on regional coordination centres.....	176
2.2.1	General framework.....	176
2.2.2	Geographical scope	177
2.2.3	Tasks	178
2.2.4	Competences and liability arrangements of RCCs ...	183
2.2.5	Governance	185
2.2.6	Transparency and reporting obligations	187
2.2.7	Timeline for implementation.....	188
3.	Regulatory oversight of RCCs	189
3.1	Joint regulatory oversight of RCCs at regional level.....	189
3.2	ACER's role regarding RCCs.....	190
3.3	Role of ENTSO-E and of Member States regarding RCCs	191
4.	Cross-border Electricity Trading	192
4.1	The shift from voluntary pilot projects to a mandatory approach	192
4.1.1	The development of the Target Model.....	192
4.1.2	Early challenges for the full implementation of the CACM Guideline.....	194
4.1.3	Electricity market design in the context of the legal treatment of electricity in Union legislation and relevant antitrust investigations	197

4.2	The new framework for addressing internal congestion	199
4.2.1	Bidding zones – Key principles.....	199
4.2.2	Options for addressing congestion.....	200
4.3	Rules for cross-border electricity trading	205
4.3.1	Principles of maximisation and non-discrimination.....	205
4.3.2	Maximising trade through a new target	205
4.3.3	Cost sharing principles	208
4.3.4	Transparency, operational security and reporting obligations	210

Chapter 6

Risk prepared electricity markets.....	213
---	------------

Olgerts Viksne and Yolanda Garcia Mezquita

1.	Introduction.....	213
2.	Background of the Regulation	213
3.	The negotiations that led to the agreement to set a new framework for risk preparedness.....	218
3.1	Proposal of the European Commission	218
3.2	Inter-institutional negotiations.....	218
4.	The new framework for risk preparedness.....	219
4.1	Common methods for assessing risks related to security of supply.....	219
4.1.1	Methodology for identifying electricity crisis scenarios at a regional level	219
4.1.2	Methodology for short-term and seasonal adequacy assessments	221
4.2	Common rules on crisis prevention.....	223
4.2.1	Regional approach.....	223
4.2.2	Designation of a competent authority	223
4.2.3	Identification of crisis scenarios at regional and at national level.....	224
4.2.4	Risk-preparedness plan	225
4.2.4.1	Establishment of risk-preparedness plans ..	225
4.2.4.2	Content of risk-preparedness plans as regards national measures	226

	4.2.4.3	Content of risk-preparedness plans as regards regional and bilateral measures	228
	4.2.4.4	Assessment of the risk-preparedness plans by the European Commission	229
4.3		Managing electricity crisis	231
	4.3.1	Cooperation and assistance	231
	4.3.2	Information sharing	232
	4.3.3	Observance of market rules	233
4.4		Evaluation and monitoring	234
	4.4.1	Ex-post evaluation of electricity crisis	234
	4.4.2	Monitoring security of electricity supply at EU level	235

Chapter 7

A reinforced governance of the European electricity market

237

Michael Schütz

1.		Introduction	237
2.		Associations of grid operators at EU level	240
	2.1	New European entity for distribution system operators	240
	2.2	ACER's powers to request information	246
	2.3	Reinforced oversight over ENTSO-E and other entities	248
3.		Developing, adopting and amending Network Codes and Guidelines	251
4.		ACER and its arbitration function	256
	4.1	Background	256
	4.2	Compulsory arbitration	257
	4.3	Voluntary arbitration	260
5.		ACER's role in implementing Network Codes and Guidelines	262
	5.1	Pan-EU terms and conditions or methodologies	262
	5.2	Regional EU terms and conditions or methodologies	263
	5.3	Terms and conditions or methodologies under new Delegated Acts	265
6.		Adoption of acts by ACER	267
	6.1	Procedural safeguards in case of individual decisions	267
	6.2	Extending the scope of the Board of Regulators	269
	6.3	Process for adopting acts	270