



# Taking back control of the energy sector?

A legal analysis of Brexit  
and the EU-UK trade and  
cooperation agreement

Silke Goldberg

University of Groningen Press



TAKING BACK CONTROL OF THE ENERGY SECTOR?



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Published by University of Groningen Press  
Broerstraat 4  
9712 CP Groningen  
The Netherlands

First published in the Netherlands © 2023 Silke Goldberg

Sections 3-9 of chapter 6 have been previously published as: “The impact of Brexit on EU Market Access” in:  
Stanič, A. and Goldberg, S. eds., 2023. *Brexit and Energy Law: Implications and Opportunities*.

Sections 3-8 of chapter 7 have been previously published as: “The Impact of Brexit on the EU’s Supply Security”, *ibid*.  
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Cover design: Bas Ekkers

Typesetting: LINE UP boek en media bv | Riëtte van Zwol

ISBN (print) 978-94-034-3052-2

ISBN (ePDF) 978-94-034-3051-5

DOI <https://doi.org/10.21827/653fc0746413f>



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Dieses Buch ist für meinen Vater  
und dem Andenken meiner Mutter gewidmet





# Table of contents

<b>Acknowledgements</b>	XV
<b>List of abbreviations</b>	XVII
<b>Table of cases</b>	XXI
<b>Table of legislation</b>	XXIII
<b>CHAPTER 1: INTRODUCTION</b>	1
1 INTRODUCTION	1
1.1 Topic and Structure	1
1.2 Brexit	3
2 AIM, SCOPE, AND RESEARCH QUESTIONS	6
2.1 Aim and Scope	6
2.2 Research Question(s) and Research Path	6
2.3 Normative Criteria in Exploring the Research Question	7
2.3.1 Brexit Objectives	7
A) Objectives expressed during the referendum campaign	8
B) Objectives during the Brexit negotiations	10
C) Energy-Specific Brexit Objectives of the UK Government	11
D) Brexit Objectives in this manuscript	13
2.3.2 Legal Certainty	13
A) Legal Certainty in English law	14
B) Legal Certainty in EU law	15
C) Legal Certainty in international law	16
D) Meaning of Legal Certainty in this manuscript	17
2.3.3 Effective Implementation	18
A) Effectiveness	18
B) The concept of Implementation	19
C) Effective Implementation in this dissertation	26
2.3.4 The normative criteria as intrinsically linked criteria	26
2.4 Market, Sector, and Industry	27
2.4.1 The energy sector	28
2.4.2 The energy market	28
2.4.3 The (energy) industry	30
3 METHODOLOGICAL FRAMEWORK	30

<b>4 RELEVANCE</b>	<b>33</b>
<b>4.1 Societal Relevance</b>	<b>34</b>
<b>4.2 Scientific Relevance</b>	<b>36</b>
4.2.1 The scientific debate on Brexit: State of the art	37
4.2.2 The scientific debate on Brexit and energy: State of the art	39
A) Policy	39
B) Economic perspectives	42
C) Legal aspects of energy and Brexit	43
D) Grey literature on Brexit	45
4.2.3 The scientific debate on EU energy law: State of the art	46
4.2.4 Adding to the scientific debate on Brexit and the energy sector	49
<b>5 THE NORMATIVE MATERIAL AND GEOGRAPHICAL SCOPE OF THIS DISSERTATION</b>	<b>50</b>
<b>5.1 Normative Background</b>	<b>50</b>
5.1.1 EU law	50
5.1.2 UK law	50
A) Legislation to implement the Brexit process and/or agreements	50
B) Consequential legislation	51
C) Repeal of European Communities Act	51
D) Retained EU law	51
E) EU law falling away	52
F) Constitutional and legislative consequences specific to Northern Ireland	52
5.1.3 Irish law	52
5.1.4 Policy notices	53
5.1.5 International agreements	54
A) Withdrawal Agreement	54
B) TCA	55
C) EU-UK Nuclear Agreement	56
<b>5.2 Geographical Scope</b>	<b>56</b>
<b>6 EUROPEAN INTEGRATION IN THE ENERGY MARKET</b>	<b>56</b>
6.1 The Early Liberalisation Directives	58
6.2 The TFEU and the Third Energy Package	60
6.3 The Clean Energy Package	63
6.4 The North Sea Energy Cooperation	64
6.5 UK Influence in the EU Energy Sector	65
6.6 Euratom	67
6.7 Interim conclusion to section 6	69
<b>7 TIMELINE OF BREXIT</b>	<b>69</b>
7.1 From Joining to the Referendum: An Uneasy Relationship	70
7.2 Article 50: The “Trigger” and the Extensions	71
7.3 Approval of the Withdrawal Agreement and TCA	72
7.4 The Post-TCA Phase	73

8	THE CONSTITUTING MANUSCRIPTS	74
8.1	Overview and Structure	74
8.2	Scope of the Constituting Manuscripts	74
<b>CHAPTER 2: BREXIT AND ITS IMPACT ON THE ENERGY SECTOR: PULLING THE PLUG?</b>		<b>77</b>
1	OVERVIEW	77
2	KEY ISSUES AND LITERATURE	79
2.1	Models of Brexit	79
2.1.1	Norway-based model	81
2.1.2	Switzerland-based model	82
2.1.3	Canada-based model	85
2.1.4	No deal, WTO, and Hard Brexit	86
2.2	The Impact of Brexit on the iSEM	87
3	INTRODUCTION TO THE CONSTITUTING MANUSCRIPT	90
4	WITHDRAWAL BILL	92
5	TARIFFS	94
5.1	Trade Tariffs as Key Issue	94
5.2	Tariffs within the EU	94
5.3	The WTO	95
5.4	Other Import and Export Restrictions	96
6	INTERCONNECTORS	97
6.1	A Brief Introduction	97
6.2	Potential Post-Brexit UK-EU Electricity Arrangements	98
6.3	The Immediate Impact of Brexit on Interconnectors	100
6.4	The Likely Impact of Brexit on the Regulatory Framework	101
6.4.1	The role of European bodies	101
6.4.2	Different rules for existing and future interconnectors	102
6.4.3	The applicability of the projects of common interest (PCI) regime to future UK interconnectors	103
6.4.4	The availability of European project funding sources	105
6.5	Possible Mitigants for Regulatory Risk	105
6.5.1	Intergovernmental agreements	105
6.5.2	Interconnector agreements	106
7	SUPPLY SECURITY	106
7.1	Electricity	107
7.2	Gas	108
8	IRELAND AND THE SINGLE ELECTRICITY MARKET	109
9	EURATOM	111
9.1	Euratom's institutional relationship with the European Union	111
9.2	The UK'S Withdrawal: Mandate, Challenges, and Consequences	113
9.3	The Road towards Brexatom	115

10	CLIMATE CHANGE	116
10.1	The EU's Emission Trading System	117
10.2	International Climate Commitments	118
11	OUTLOOK	118
<b>CHAPTER 3: BREXIT AND INTERCONNECTORS</b>		121
1	OVERVIEW	121
2	KEY ISSUES AND LITERATURE	123
2.1	Definition of interconnectors in EU legislation	124
2.2	Interconnectors in the IEM	125
2.3	Legal framework for interconnectors in the EU	128
2.3.1	Primary legislation	129
2.3.2	Secondary legislation	132
	A) Electricity Directive and Electricity Regulation	132
	B) TEN-E Regulation	133
	C) Network Codes	135
2.4	Role of Interconnectors in the UK	135
2.4.1	Gas interconnectors	135
2.4.2	Electricity interconnectors	136
2.5	Interconnectors and Brexit	137
3	INTRODUCTION TO THE CONSTITUTING MANUSCRIPT	138
3.1	Supply Crunch/Generation Gap	139
3.2	Policy Choices at the Outset	140
4	EUROPEAN BODIES (ACER, ENTSO-G, AND ENTSO-E)	141
5	IGAS	142
6	INTERCONNECTOR AGREEMENTS AND THEIR RELATIONSHIP TO INTERNATIONAL TRADE	143
7	DIFFERENCE BETWEEN EXISTING AND FUTURE INTERCONNECTORS?	144
7.1	Projects of Common Interest (PCIs)	144
7.2	European Project Funding	146
8	TARIFFS	146
8.1	Tariffs within the EU	147
8.2	World Trade Organisation Rules	147
8.3	Export duties	148
8.4	Other import and export restrictions	148
9	SUPPLY SECURITY	148
9.1	Electricity	148
9.2	Gas	149
10	IRELAND	150
11	TIME SPAN AND UNCERTAINTY	152
12	APPROACHES BY EUROPEAN REGULATORY AUTHORITIES	152
13	IMPACT ON PROJECTS	153

<b>CHAPTER 4: WITHDRAWAL OF THE UNITED KINGDOM FROM EURATOM</b>	<b>155</b>
1 OVERVIEW	155
2 KEY ISSUES AND LITERATURE	156
2.1 Institutional arrangements between EU and Euratom	157
2.2 Changes due to the Treaty of Lisbon	157
2.3 In the EU but not in Euratom? The Austrian debate	158
2.4 Brexatom	160
3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT	163
4 OVERVIEW OF THE EURATOM TREATY	164
5 RELATIONSHIP BETWEEN THE EUROPEAN UNION AND EURATOM AND THE MANDATE OF THE UNITED KINGDOM TO WITHDRAW FROM EURATOM	166
5.1 The Institutional Relationship between European Union and Euratom	166
5.2 Mandate of the United Kingdom to Withdraw from Euratom	167
6 POTENTIAL CONSEQUENCES IF THE GOVERNMENT DECIDES TO WITHDRAW FROM EURATOM	167
7 POTENTIAL CONSEQUENCES HAD THE UNITED KINGDOM DECIDED TO REMAIN IN EURATOM?	168
8 CONCLUSION	169
<b>CHAPTER 5: UK DE-COUPLED: BREXIT AND THE ENERGY MARKET</b>	<b>171</b>
1 OVERVIEW	171
2 KEY ISSUES AND LITERATURE	173
2.1 Implementation of the TCA	173
2.1 Ratification and transposition	174
2.2.1 In the EU	174
2.2.2 In the UK	176
2.3 (In-) Direct Effect of the TCA?	177
2.4 Breathing life into the TCA?	180
2.5 The UK ETS	181
3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT	184
4 EU-UK RELATIONSHIP	186
4.1 The deals that could have been	186
4.2 The Trade and Cooperation Agreement	188
4.2.1 Which deal model?	188
4.2.2 Structure of the TCA	188
4.2.3 Governance	189
4.2.4 The level playing field provisions	190
4.3 The Regulatory Scaffolding of the new UK–EU Energy cooperation	190
5 THE INTERNAL ENERGY MARKET	191
5.1 Regulatory and TSO Cooperation	192
5.2 Third-party access and unbundling	193

5.3 Interconnectors	193
5.3.1 Use of interconnectors	193
5.3.2 Exemptions	194
5.3.3 Congestion management and transmission costs	195
5.4 Electricity trading	196
5.5 The Single Electricity Market on the Island of Ireland (iSEM)	198
6 CLIMATE CHANGE, RENEWABLE ENERGY, AND CARBON PRICING	199
6.1 Climate Change	199
6.2 Renewable Energy	200
6.3 ETS and Carbon Pricing	201
7 NUCLEAR ENERGY SECTOR	202
7.1 New British Regulations	202
7.2 Nuclear Cooperation Agreements	203
8 DID BREXIT "GET DONE?" AN ATTEMPT OF AN OUTLOOK	204
<b>CHAPTER 6: THE IMPACT OF BREXIT ON EU MARKET ACCESS</b>	207
1 OVERVIEW	207
1.1 General Market Design	208
1.2 Specific Regulatory Regime	208
2 KEY ISSUES AND LITERATURE	209
3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT	212
4 GENERAL EU MARKET PRINCIPLES	213
4.1 Market Principles	213
4.1.1 Third-Party Access	214
4.1.2 Unbundling	214
5 REGULATORY AUTHORITIES	214
5.1 Cooperation between ACER and Ofgem	214
5.2 Cooperation between TSOs	215
6 NATIONAL-LEVEL ACCESS ISSUES	217
7 CROSS-BORDER INFRASTRUCTURE	218
7.1 PCIs	219
7.2 Exemptions for Interconnectors	221
7.2.1 New exemptions for interconnectors	221
7.2.2 Existing exemptions	222
8 MARKET COUPLING AND ELECTRICITY TRADING ARRANGEMENTS	222
8.1 EU Market Coupling	222
8.2 UK De-Coupled	223
8.3 Market Arrangement Mandate in the TCA	224
8.4 Volume Coupling	225
8.4.1 MRLVC at the GB-EU border	226
8.4.2 A single GB clearing price and two MRLVC options	227

8.5 Congestion Management and Transmission Costs	231
8.6 Capacity Markets	231
9 CONCLUSION	232
<b>CHAPTER 7: THE IMPACT OF BREXIT ON THE EU'S SUPPLY SECURITY</b>	<b>233</b>
1 OVERVIEW	233
2 KEY ISSUES AND LITERATURE	234
2.1 EU Supply Security	235
2.2 EU Supply Security and Brexit	238
2.3 The Impact of Brexit on the Supply Security on the Island of Ireland	239
2.4 The impact of Brexit on Supply Security – UK Perspectives	241
3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT	242
4 WHAT IS SUPPLY SECURITY?	243
5 THE PHYSICAL REALITY: IMPORT DEPENDENCY AND RENEWABLE EXPANSION	244
5.1 The EU's Fossil Fuel Import Dependency	244
5.2 Expansion of RES in the EU	245
6 AVAILABILITY IN EU LEGISLATION	246
6.1 Electricity	247
6.2 Gas	247
6.3 Oil	248
6.4 Non-Fuel-Specific Provisions	249
6.5 Availability in the TCA	250
6.6 Impact of the TCA on Availability of Energy in the EU	251
7 DELIVERABILITY	254
7.1 Deliverability in the EU Context	254
7.2 Energy Deliverability in the TCA	255
7.3 Impact of the TCA on Deliverability of Energy in the EU	258
7.3.1 Ireland	258
7.3.2 Deliverability of RES in the EU	259
8 CONCLUSIONS	261
<b>CHAPTER 8: CONCLUSION</b>	<b>263</b>
1 INTRODUCTION	263
1.1 Structure of this Chapter	263
2 CONCLUSIONS TO RESEARCH QUESTIONS	264
2.1 Recall of Research Questions	264
2.2 The TCA in Light of the Brexit Objectives for the Energy Sector	264
2.2.1 Take back control in relation to legislation and ending supremacy of EU law and jurisdiction of ECJ	265
2.2.2 Freest possible trade in goods and services	266

2.2.3	Certainty as to the application of laws	267
2.2.4	Failure to meet the general Brexit objectives in the energy sector	267
<b>2.3</b>	<b>Brexit Objectives in Relation to the Energy Sector</b>	<b>267</b>
2.3.1	Continued efficient trading over interconnectors	268
2.3.2	Limited technical cooperation between TSOs and organisations concerned with the planning energy infrastructure	269
2.3.3	Support for renewable energy projects in the North Sea	271
2.3.4	Continued operation of the iSEM	271
2.3.5	Partial achievement of the Brexit objectives in relation to the energy sector	273
<b>2.4</b>	<b>Post-Brexit Arrangements of the TCA and Legal Certainty</b>	<b>273</b>
2.4.1	Foreseeability/ predictability	274
2.4.2	Knowable/clear and precise	274
2.4.3	Not dependent on the exercise of discretion	275
2.4.4	Lack of certainty	275
<b>2.5</b>	<b>Effective Implementation of the TCA</b>	<b>276</b>
2.5.1	Ratification and transposition	276
2.5.2	Effect through acting in accordance with the TCA provisions	277
2.5.3	No sanction of non-compliance by a clear enforcement regime	278
2.5.4	Existing yet insufficient implementation	279
<b>2.6</b>	<b>The TCA as a non-adequate post-Brexit regime</b>	<b>280</b>
<b>3</b>	<b>THE OUTLIER: NUCLEAR ENERGY</b>	<b>280</b>
<b>4</b>	<b>BEYOND BREXIT: OUTLOOK AND RECOMMENDATIONS</b>	<b>281</b>
4.1	A Continuous Brexit?	281
4.2	Changing Geopolitical Parameters	284
4.3	Future Divergence as a Source for Further Uncertainty	285
4.4	Recommendations	287
4.4.1	Improvements and implementation	287
4.4.2	Recommendation regarding EU supply security	288
4.4.3	Beyond the TCA: Addressing energy challenges of the future	288

## **Bibliography 291**



# Acknowledgements

A dissertation project cannot be undertaken in isolation and without the support of others. This is especially true of this dissertation:

Firstly, I would like to thank Prof Lorenzo Squintani and Prof Edwin Woerdman, my promotores, for their unwavering encouragement, guidance, and inspiration. Without their support, this dissertation would not have seen the light of day.

I am also grateful to the PhD assessment committee composed of Prof Ramses Wessel, Prof Laurence Gormley and Prof Thomas Muinzer for taking the time to review and assess the dissertation and their constructive feedback.

Special thanks are due to Prof Dr Martha Roggenkamp for many years of academic collaboration, guidance, and mentorship. Martha also introduced me to NeVER, the Dutch energy law association, which in turn offered me an excellent forum to discuss developments in the Dutch and EU energy sector and to present my research at their European Energy Law Seminar.

Chatham House and its Brexit project led by Antony Froggatt provided many occasions to debate the impact of Brexit on the energy sector more widely, not just from a legal perspective, but also from a political and economic perspective. I am grateful for the debates in this forum which food for thought and also for the opportunity to present and develop my own thoughts on the impact of Brexit on the energy sector.

I would like to thank Shekar Sumit for kindly agreeing to delve down into the deep end of Euratom with me.

Debates about Brexit have been a constant in my professional and academic life ever since the Brexit referendum was announced – I would like to thank all of my discussion partners in Ireland, the UK, France, Norway, Germany, Brussels, and Groningen (you know who you are) who have enriched my understanding of Brexit and its implications.

Anna Happe deserves special thanks as she has diligently assisted with the formatting and proof reading of several versions of this dissertation. It goes without saying that all remaining errors are mine alone.

Thank you also to intersentia, Routledge and OGEL who granted permission to reprint the Constitutive Manuscripts as part of this dissertation.

Special thanks are due to the team at University Press Groningen for all their fabulous expertise in designing the layout and cover, and taking care of all things connected with the publication of this dissertation.

I would like to acknowledge the debt of gratitude I owe to Prof Jay Chatterjee FRCOG, FICP, DFSRH, PhD, Mr Andrea Scala PhD, FRCS (Eng) and Prof Agnieszka Michael PhD MRCP as well as the entire oncology team at the Royal Surrey Hospital and the Nuffield Hospital Guildford for their treatment of my ovarian cancer in 2021 and without whom I would not be here.

I would also like to express my thanks to my paranymphs, Prof Dr Ulrike Babusiaux and Miriam Nolting, two of my oldest friends for their support, humour, and willingness to travel from Switzerland and Germany to support me during the public defence of this dissertation.

Acharon, acharon haviv: Thank you to my husband Alexander, and our children Hannah and Yoel: all three of you were subjected to and patiently endured many discussions on Brexit and the energy sector more widely, and accepted graciously that I would disappear on many a Sunday and evening to work on this dissertation.

I am grateful for all the support lent to me – and mindful of the words of Kohelet:

וְיִתֵּר מִהֶמָּה, בְּנֵי הַזֵּהָרָה: עֲשׂוֹת סִפְרִים הַרְבֵּה אֵין קוֹץ, וְלִהְיוֹת הַרְבֵּה יִגְעַת בְּשָׂר׃

# List of abbreviations

<b>ACER</b>	Agency for the Cooperation of Energy Regulators
<b>AFCO</b>	
<b>Committee</b>	European Parliament Committee on Constitutional Affairs
<b>BBC</b>	British Broadcasting Company
<b>BBL</b>	Bacton Balgzand Line
<b>BEIS</b>	Business, Energy, and Industrial Strategy
<b>BMJ</b>	British Medical Journal
<b>CACM</b>	Capacity Allocation and Congestion Management
<b>CBA</b>	Cost Benefit Analysis
<b>CCUS</b>	Carbon Capture, Usage, and Storage
<b>CEF</b>	Connecting Europe Facility
<b>CEP</b>	Clean Energy Package
<b>CER</b>	Commission for Energy Regulation
<b>CETA</b>	Comprehensive Economic and Trade Agreement between the EU and Canada
<b>CJEU</b>	Court of Justice of the European Union
<b>CFSP</b>	Common Foreign and Security Policy
<b>CMLR</b>	Common Market Law Review
<b>CRE</b>	Commission de Régulation de l'Énergie
<b>CFSP</b>	Common Foreign and Security Policy
<b>DC</b>	Direct Current
<b>DSO</b>	Distribution System Operator
<b>EAEC</b>	European Atomic Energy Community (see Euratom)
<b>EC</b>	European Community
<b>ECA 1972</b>	European Communities Act 1972
<b>ECJ</b>	European Court of Justice
<b>ECSC</b>	European Coal and Steel Community
<b>ECR</b>	Electronic Case Reporting
<b>EEA</b>	European Economic Area
<b>EEC</b>	European Economic Community
<b>EELR</b>	European Energy Law Report
<b>EFET</b>	European Federation of Energy Traders
<b>EFTA</b>	European Free Trade Association
<b>EHRR</b>	European Human Rights Reports
<b>EIB</b>	European Investment Bank

<b>ENTSO- E</b>	European Network of Transmission System Operators for Electricity
<b>ENTSO-G</b>	European Network of Transmission System Operators for Gas
<b>EPC</b>	European Price Coupling
<b>EPRS</b>	European Parliamentary Research Service.
<b>ESDP</b>	European Security and Defence Policy
<b>ETS</b>	Emission Trading Scheme
<b>EU</b>	European Union
<b>EU ETS</b>	EU Emissions Trading System
<b>EU27</b>	European Union of 27 Member States
<b>EUFRA</b>	European Union (Future Relationship) Act 2020
<b>Euratom</b>	European Atomic Energy Community
<b>EUWA</b>	European Union (Withdrawal) Act 2018
<b>EWIC</b>	East-West Interconnector
<b>FDI</b>	Foreign Direct Investment
<b>FID</b>	Final Investment Decision
<b>FOU</b>	Full Ownership Unbundling
<b>FTA</b>	Free Trade Agreement
<b>GATT</b>	General Agreement on Tariffs and Trade
<b>GB</b>	Great Britain
<b>GDP</b>	Gross Domestic Product
<b>GNI</b>	Gas Networks Ireland
<b>GW</b>	Gigawatt
<b>HVDC</b>	High Voltage Direct Current
<b>IAEA</b>	International Atomic Energy Agency
<b>IFA (1)</b>	Interconnexion France Angleterre (1)
<b>IFA (2)</b>	Interconnexion France Angleterre (2)
<b>IFA</b>	institutional framework agreement
<b>IGA</b>	Intergovernmental Agreement
<b>IEM</b>	Internal Energy Market
<b>iSEM</b>	Integrated Single Electricity Market
<b>ISO</b>	Independent System Operator
<b>ITO</b>	Independent Transmission Operator
<b>IUK</b>	Interconnector UK
<b>JCMS</b>	Journal of Common Market Studies
<b>LJ</b>	Lord Justice
<b>LPF</b>	Level Playing Field
<b>LNG</b>	Liquefied Natural Gas
<b>MCO</b>	Market Coupling Operator
<b>MFN</b>	Most Favoured Nation
<b>MPI</b>	Multi-Purpose Interconnectors

<b>MPEPIL</b>	Max Planck Encyclopedia of Public International Law
<b>MSCI</b>	Morgan Stanley Capital International
<b>MRLVC</b>	Multi-Region Loose Volume Coupling
<b>MW</b>	Megawatt
<b>NATO</b>	North Atlantic Treaty Organisation
<b>NBP</b>	National Balancing Point
<b>NCA</b>	EU-UK Agreement for Cooperation on the Safe and Peaceful Uses of Nuclear Energy / Nuclear Cooperation Agreement
<b>NEMOs</b>	Nominated Electricity Market Operators
<b>NeVER</b>	Nederlandse Vereniging Energierecht
<b>NGESO</b>	National Grid Electricity System Operator
<b>NGG</b>	National Grid Gas
<b>NGO</b>	Non-Governmental Organisation
<b>NHS</b>	National Health Service
<b>NI</b>	Northern Ireland
<b>NIAUR</b>	Northern Ireland Authority for Utility Regulation
<b>N Ir Legal Q</b>	Northern Ireland Legal Quarterly
<b>NJW</b>	Neue Juristische Wochenschrift
<b>NRA</b>	National Regulatory Authority
<b>NSN</b>	North Sea Network interconnector
<b>NSEC</b>	North Seas Energy Cooperation
<b>OCT</b>	Overseas Country or Territory
<b>OJ</b>	Official Journal
<b>OJEU</b>	Official Journal of the European Union
<b>OGEL</b>	Oil Gas & Energy Law journal
<b>ONR</b>	Office of Nuclear Regulation
<b>OUP</b>	Oxford University Press
<b>PCI</b>	Project of Common Interest
<b>PIL</b>	Public International Law
<b>PJCCM</b>	Police and Judicial Co-operation in Criminal Matters
<b>PMI</b>	Project of Mutual Interest
<b>REMA</b>	Review of the GB Electricity Market Arrangements
<b>REMIT</b>	Regulation on Wholesale Energy Market Integrity and Transparency
<b>RES</b>	Renewable Energy Sources
<b>RoW</b>	Rest of the World
<b>RTE</b>	Réseau de Transport d'Electricité
<b>S&amp;P</b>	Standard & Poor
<b>SCE</b>	Specialised Committee on Energy
<b>SDAC</b>	Single Day Ahead Coupling
<b>SEAI</b>	Sustainable Energy Authority Ireland

<b>SEM</b>	Single Electricity Market
<b>SPA</b>	Strategic Partnership Agreement
<b>SONI</b>	System Operator Northern Ireland
<b>TCA</b>	Trade and Cooperation Agreement
<b>TD</b>	Teachta Dála, member of Irish Parliament
<b>TEN</b>	Trans-European networks
<b>TEN-E</b>	Trans-European networks for energy
<b>TEP</b>	Third Energy Package
<b>TEU</b>	Treaty on European Union
<b>TFEU</b>	Treaty on the Functioning of the European Union
<b>TPA</b>	Third Party Access
<b>TSO</b>	Transmission System Operator
<b>TTF</b>	Title Transfer Facility
<b>TWh</b>	Terra-Watt Hour
<b>UCL</b>	University College London
<b>UK</b>	United Kingdom of Great Britain and Northern Ireland
<b>UNCLOS</b>	United Nations Convention of the Law of the Sea
<b>UNDRDS</b>	United Nations Declaration on the Rights and Duties of States
<b>UNFCCC</b>	United Nation Framework Convention on Climate Change
<b>UP</b>	University Press
<b>VCLT</b>	Vienna Convention on the Law of Treaties
<b>WTO</b>	World Trade Organization
<b>YB Int'l L</b>	Yearbook of International Law

# Table of cases

## EU Case Law

Case	Page
Case 26-62 <i>NV Algemene Transport- en Expeditie Onderneming van Gend &amp; Loos v Netherlands Inland Revenue Administration</i> [1963] ECLI:EU:C:1963:1	177
Joined Cases 21 to 24-72 <i>International Fruit Company NV and others v Produktschap voor Groenten en Fruit</i> [1972] ECR 1219	174
Case 181-73 <i>R &amp; V Haegeman v Belgian State</i> [1974] ECR 449	174
Case 33-76 <i>Rewe v Landwirtschaftskammer für das Saarland</i> [1976] ECR 1989	23
Case 45-76 <i>Comet v Produktschap voor Siergewassen</i> [1976] ECR 2043	23
Joined Cases 205 to 215/82 <i>Deutsche Milchkontor GmbH v Germany</i> [1983] ECR 2633	15
Case 14/83 <i>Sabine von Colson and Elisabeth Kamann v Land Nordrhein-Westfalen</i> [1984] ECR 1891	23
Case 30/88 <i>Hellenic Republic v Commission of the European Communities</i> [1989] ECR 3711	174
Case C-188/89 <i>A Foster and others v British Gas plc</i> [1990] ECR I-3313	178
Case C-213/89 <i>The Queen v Secretary of State for Transport, ex parte: Factortame Ltd and others</i> [1990] ECR I-2433	23
Case C-208/90 <i>Theresa Emmott v Minister for Social Welfare and Attorney General</i> [1991] ECR I-4269	23
Case C-162/96 <i>A Racke GmbH &amp; Co v Hauptzollamt Mainz</i> [1998] ECR I-3655	174
Case C-201/08 <i>Plantanol GmbH v Hauptzollamt Darmstadt</i> [2009] ECR I-8343	16
Case C-345/06 <i>Heinrich</i> [2009] ECR I-1659	16
Joined Cases C-72/10 and C-77/10 <i>Criminal proceedings against Marcello Costa and Ugo Cifone</i> [2012] ECLI:EU:C:2012:80	16
Joined Cases T-50/06 RENV II and T-69/96 RENV II <i>Ireland and Auginish Alumina Ltd v European Commission</i>	16
Case T-295/20 <i>Aquind Ltd and Others v European Commission</i>	130-131, 133
Case T-295/20 <i>Aquind Ltd and Others v European Commission</i>	156-157, 159

## **European Court of Human Rights**

<b>Case</b>	<b>Page</b>
The Sunday Times v The United Kingdom (1979) 2 EHRR 245	15

## **UK Case Law**

<b>Case</b>	<b>Page</b>
<i>Black-Clawson International Ltd v Papierwerke Waldhof-Aschaffenberg AG</i> [1975] UKHL 2, [1975] AC 591	15
<i>R (Nadarajah and Abdi) v Secretary of State for the Home Department</i> [2005] EWCA Civ 1363	14
<i>Golden Straight Corporation v Nippon YKK (The "Golden Victory")</i> [2007] UKHL 12, [2007] 2 AC 353	14
<i>R (on the application of Miller and another) v Secretary of State for Exiting the European Union</i> [2007] UKSC 5	177



# Table of legislation

## International Agreements, Protocols, and Declarations

Agreement / Declaration	Page
Agreed Record of Fisheries Consultations between the European Union and Norway for 2023 (17 March 2023)	81
Agreed Record of Conclusions of Fisheries Consultations between Norway and the European Union on the Regulation of Fisheries in Skagerrak and Kattegat for 2023 (17 March 2023)	81
Agreement between the Government of Japan and the European Atomic Energy Community for Co-Operation in the Peaceful Uses of Nuclear Energy [2021] OJ L150/1	204
Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the European Atomic Energy Community for Cooperation on the Safe and Peaceful Uses of Nuclear Energy	54, 56, 68, 73, 163, 175, 204, 265, 281
Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (United Nations [UN]) 2167 UNTS 3, UNTS Reg No I-37924, UN Doc A/CONF.164/37	24
Agreement on Illicit Traffic by Sea, implementing Article 17 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (Council of Europe, European Treaty Series No 156)	25
Agreement on the European Economic Area	78, 82
Agreement on the Withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community [2019] OJ C1384/1	5, 54, 73, 185
Belfast Agreement	55, 87-88
Comprehensive and Economic Trade Agreement (CETA)	85-86, 186-187
Convention establishing the European Free Trade Association	82, 84
Convention of the Law of the Sea (United Nations [UN]) 1883 UNTS 3, UNTS Reg No I-31363, UKTS 81 (1999), UN Doc A/CONF.62/122	25
Draft Declaration on Rights and Duties of States	23

General Agreement on Tariffs and Trade 1994	95-96, 147-148
Memorandum of Understanding between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of Ireland in relation to the Single Electricity Market Arrangements	1
Protocol of Fisheries Consultations between Norway and the European Union, on behalf of Sweden, for 2023 (17 March 2023)	81
Protocol on Ireland/Northern Ireland [2020] OJ L29/102	12, 52, 54, 172, 181, 199, 229, 271, 273, 282-283
Schuman Declaration May 1950	57
Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland, of the other part [2021] OJ L149/10	5*
Treaty of Almelo, 4 March 1970	114
UK/IAEA: Agreement for Application of Safeguards in Connection with Treaty on the Non-Proliferation of Nuclear Weapons	203
Vienna Convention on the Law of Treaties 1969	23-24, 159-160

## EU Treaties

Treaty	Page
Consolidated Version of the Treaty establishing the European Atomic Energy Community [2012] OJ C327/1	2, 68
Consolidated Version of the Treaty on European Union [2012] OJ C326/13	2
Consolidated Version of the Treaty on the Functioning of the European Union [2012] OJ C326/47	1, 246
Protocol No 2 amending the Treaty establishing the Treaty establishing the European Atomic Energy Community [2007] OJ C306/199	157
Treaty amending, with regard to Greenland, the Treaties establishing the European Communities [1985] OJ L29/1	4
Treaty establishing the European Coal and Steel Community	1, 56-57
Treaty establishing the European Economic Community	1, 164
Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community [2007] OJ C306/1	1, 46, 62, 105, 112, 143, 157-158, 160

\* This indicates the first reference to the TCA. This dissertation contains over 500 references to the TCA, a list of cross references on the 356 pages of this dissertation would therefore not be meaningful.

**EU Secondary Law**

<b>Act</b>	<b>Page</b>
Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity [1996] OJ L27/20	58-59
Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998 concerning common rules for the internal market in natural gas [1998] OJ L204/1	58-59
Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity from renewable energy sources in the internal electricity market [2001] OJ L283/33	63, 245
Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC [2003] OJ L176/37	59-60, 102, 235
Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC [2003] OJ L176/57	59
Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC [2003] OJ L275/32	52
Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC [2009] OJ L140/39	63, 245
Directive 2009/72/EC of the European Union and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC [2009] OJ L211/55	60, 62, 102, 122, 144
Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC [2009] OJ L211/94	61, 102, 122, 126, 144, 219, 244, 249, 254, 268
Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators [2009] OJ L211/1	61, 62, 103, 133
Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 [2009] OJ L211/15	61, 102-103, 124, 133, 135, 144, 215

Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 [2009] OJ L211/36	60, 103, 126, 133, 135, 215, 249, 268
Council Directive 2009/119/EC of 14 September 2009 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products [2009] OJ L265/9	126, 248-249
Commission Regulation (EU) No 838/2010 of 23 September 2010 on laying down guidelines relating to the inter-transmission system operator compensating mechanism and a common regulatory approach to transmission charging [2010] OJ L250/5	196, 215
Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste [2011] OJ L199/48	114
Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency [2011] OJ L326/1	52, 197
Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009 [2013] OJ L115/39	103, 133, 144, 145, 216, 219, 220, 268
Annex to Commission Delegated Regulation (EU) .../... amending Regulation (EU) No 347/2013 of the European Parliament and of the Council as regards the union list of projects of common interest, C(2021) 8409 final	220
Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC [2013] OJ L176/338	217
Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU [2014] OJ L173/349	217
Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (Text with EEA relevance) [2015] OJ L197/24	63, 209, 226, 229
Commission Delegated Regulation (EU) 2016/89 of 18 November 2015 amending Regulation (EU) No 347/2013 of the European Parliament and of the Council as regards the Union list of projects of common interest [2016] OJ L19/1	145

Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010 [2017] OJ L280/1	236, 243, 247
Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing [2017] OJ L312/6	196
Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 and the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council [2018] OJ L328/1	126, 132, 246, 249
Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources [2018] OJ L328/82	63, 246
Directive (EU) 2019/692 of the European Parliament and of the Council of 17 April 2019 amending Directive 2009/73/EC concerning common rules for the internal market in natural gas [2019] OJ L117/1	122, 254
Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC [2019] OJ L158/1	235, 243
Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (Text with EEA relevance) [2019] OJ L158/54	52, 194, 213, 255, 219, 226, 268
Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU [2019] OJ L158/125	29, 124, 193-194, 214, 254-255
Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022 on guidelines for trans-European energy infrastructure, amending Regulations (EC) No 715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944, and repealing Regulation (EU) No 347/2013 [2022] OJ L152/45	133-134, 219, 268

## UK Legislation

<b>Acts</b>	<b>Page</b>
EU Electricity Regulation 2019 (Regulation (EU) 2019/943)	52
European Communities Act 1972	10, 51, 93
European Union (Future Relationship) Act 2020	177, 179, 276
European Union (Notification of Withdrawal) Act 2017	161
European Union (Withdrawal) Act 2018	50
European Union (Withdrawal) (No. 2) Act 2019	72
European Union (Withdrawal Agreement) Act 2020	50
Nuclear Safeguards Act 2018	202

<b>Statutory Instruments</b>	<b>Page</b>
Climate Change Act 2008 (2050 Amendment) Order 2019	183
The Electricity and Gas (Market Integrity and Transparency) (Amendment) (EU Exit) Regulations 2019	52, 197
The Electricity (Single Wholesale Market) (Northern Ireland) Order 2007, SI 2007/913	1
The Electricity Trading (Development of Technical Procedures) (Day-Ahead Market Timeframe) Regulations 2021	227
The Greenhouse Gas Emissions Trading Scheme Order 2020, SI 2020/1265	51, 183
The Greenhouse Gas Emissions Trading Scheme (Amendment) Order 2020, SI 2020/1557	183
The Nuclear Safeguards (EU Exit) Regulations 2019	203
Renewables Obligation Order 2009 as amended by the Renewables Obligation (Amendment) Order 2014, SI 2009/785	1
Nuclear Safeguards (Fissionable Material and Relevant International Agreements) (EU Exit) Regulations 2019	203
Shipments of Radioactive Substances (EU Exit) Regulations 2019	203
Transfrontier Shipment of Radioactive Waste and Spent Fuel (EU Exit) Regulation 2019	203

## Other Legislation

Legislation	Page
<b>Austria</b>	
Bundesverfassungsgesetz für ein atomfreies Österreich, Bundesgesetzblatt für die Republik Österreich of 13 August 1999, BGBl I Nr 149/199	158
<b>Denmark</b>	
Lov om Grønlands hjemmestyre (lov nr. 577, 29 November 1978)	4
<b>France</b>	
Code de l'énergie	98, 100, 139, 140, 217
Décret n° 55-1148 of 28 August 1955 on the creation of nine arrondissements in the new départements of Alger, Oran and Constantine (Décret portant création de neuf arrondissements nouveaux dans les départements d'Alger, d'Oran et de Constantine)	4
<b>Ireland</b>	
Electricity Regulation (Amendment) (Single Electricity Market) Act 2007, SI 2007/5	1





# CHAPTER 1:

## INTRODUCTION

### 1 INTRODUCTION

#### 1.1 Topic and Structure

This dissertation focuses on the consequences of Brexit for the energy sector in the United Kingdom (UK)<sup>1</sup> and the European Union (EU)<sup>2</sup>.

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1 The United Kingdom comprises Scotland, England and Wales and Northern Ireland. In turn, Scotland, England and Wales constitute Great Britain (“GB”). When used as an adjective, “UK” or “British” are used as synonyms in this dissertation. In relation to electricity, Energy is a policy area that has been devolved to the administrations of Northern Ireland and, to a lesser extent the administration of Scotland, in relation to planning and the administration of the Renewables Obligation, a support mechanism for renewable energy pursuant to the Renewables Obligation Order 2009 as amended by the Renewables Obligation (Amendment) Order 2014, available here: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/340721/ro\\_order\\_2009\\_amended\\_by\\_ro\\_amendment\\_order\\_2014.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/340721/ro_order_2009_amended_by_ro_amendment_order_2014.pdf)>

The electricity market in Northern Ireland is integrated with the electricity sector of the Republic of Ireland to *constitute* the Single Electricity Market (“SEM”, created in 2007 by (a) The Electricity (Single Wholesale Market) (Northern Ireland) Order 2007 (Statutory Instrument 917 2007, N.I.7) in the UK, available here: <<https://www.legislation.gov.uk/nisi/2007/913/article/1>>; and (b) Electricity Regulation (Amendment) (Single Electricity Market) Act 2007 (Statutory Instrument No.5 of 2007) available here <[https://www.irishstatutebook.ie/eli/isbc/2007\\_5.html](https://www.irishstatutebook.ie/eli/isbc/2007_5.html)> in Ireland on the basis of the 2006 Memorandum of Understanding between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of Ireland in relation to the Single Electricity Market Arrangements available here: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/272399/7002.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/272399/7002.pdf)>. For this reason, when referring to the electricity sector in the UK it is important to distinguish between the (i)SEM and the electricity sector in GB. The SEM became officially known as the integrated single electricity market (“iSEM”) in October 2018.

For a European perspective on the early years of the SEM, see Gorecki Paul, *The Internal EU Electricity Market: Implications for Ireland* (Dublin, ESRI, 2011), available here: <<http://www.tara.tcd.ie/handle/2262/63862>>; for an economic perspective of the early years of the SEM– see Nepal Rabintra and Tooraj Jamasb, ‘Interconnections and Market Integration in the Irish Single Electricity Market’ (2012) 51 *Energy Policy* 425 <<https://www.sciencedirect.com/science/article/pii/S030142151200729X>>

2 For ease of reference, in this dissertation, references to the EU include references to the legal prede-

Following these introductory remarks, section 1.2 will provide a brief introduc-

cessors of the same, i.e. the European Economic Community (“EEC”) and the European Community (“EC”) where the context so requires, unless specifically stated differently.

Whilst a history of the EU or the treaties establishing the same is out of scope of this dissertation, it is useful, for ease of reference, to provide a high-level overview of the main treaties. There are many detailed histories of the EU from a variety of perspectives, including legal and economic available, for instance: Patel Kiran Klaus, *Project Europe: A History* (CUP 2020); Urwin, Derek W, *The community of Europe: A history of European integration since 1945* (Routledge 2014)

In 1951, the European Coal and Steel Community (“ECSC”) was established. The relevant Treaty is available here: <<https://eur-lex.europa.eu/legal-content/NL/TXT/PDF/?uri=CELEX:11951K/TXT&from=EN>> The ECSC was followed by the Treaty of Rome establishing the European Economic Community (“EEC”) followed on 25 March 1957 (available here: <<https://eur-lex.europa.eu/legal-content/NL/TXT/PDF/?uri=CELEX:11957E/TXT&from=EN>> widening the areas of European cooperation. At the same time, the founding members of the EEC also entered into the treaty founding the European Atomic Energy Community (“EAEC” or “EURATOM”). The consolidated version of the Treaty establishing the European Atomic Energy Community can be found here: [2012] OJ C327/1.

In 1993, following the entry into force of the Treaty on European Union (also referred to as the Maastricht Treaty) Official Journal C 191, 29/07/1992 P. 0001 – 0110 in 1993, the EEC was renamed the EC. The Maastricht Treaty established the European Union on the basis of three distinct pillars. The EC pillar concerned economic, social and environmental policies. In addition to the EC itself, it comprised the ECSC (until the expiry of the same in 2002), as well as the European Atomic Energy Community (“EAEC” or “EURATOM” – see: version of the Treaty establishing the European Atomic Energy Community [2012] OJ C327/1. For more details on Euratom, see section 1.5 of this chapter).

The *other* two pillars comprised (1) the Common Foreign and Security Policy (CFSP) and (2) the Police and Judicial Co-operation in Criminal Matters (“PJCCM”) brought together co-operation in the fight against crime. For details on pillars 1, see: Gisela Müller-Brandeck-Bocquet, *The New CFSP and ESDP Decision-Making System of the European Union* (7<sup>th</sup> edn, 2002)

Wessel, Ramses A, ‘Fragmentation in the governance of EU external relations: Legal institutional dilemmas and the new constitution for Europe’ in Mortensen, J., et al. (eds), *The European Union: An Ongoing Process of Integration* (TMC Asser Press 2004) 371. Pillar 2 is considered in e.g. Peers Steve, ‘Mission accomplished? EU Justice and Home Affairs law after the Treaty of Lisbon. *Common Market Law Review*’ (2011) 48 (3)

<<https://kluwerlawonline.com/journalarticle/Common+Market+Law+Review/48.3/ COLA2011029>> On the process of “de-pillarisation”, i.e. the restructuring of the three pillars into a unitary policy framework, see Ott, Andrea, ‘Depillarisation: The Entrance of Intergovernmentalism through the Backdoor?’ (2007 15 (1) *Maastricht Journal of European and Comparative Law* <<https://doi.org/10.1177/1023263X0701500104>>

The EC continued to exist until 1 December 2009 when it was abolished by the Treaty of Lisbon which in turn (1) incorporated the EC’s institutions into the legal framework of the EU and (2) bestowed a consolidated legal personality on the EU. The Treaty of Lisbon resulted, amongst other things, in a reorganisation of the European treaties. The consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union can be found here Consolidated Versions of the Treaty on European Union and the Treaty on the Functioning of the European Union [2016] OJ C 202/01)

tion to Brexit. Section 2 of this chapter will set out the overall aim, scope, and relevant research questions explored in this dissertation, followed by an explanation of the normative criteria applied in the exploration of the research questions.

Section 3 will set out the societal and scientific relevance of this dissertation and contextualise it within the existing academic literature. Section 4 sketches out the normative legal background by reference to EU, UK, Irish and international law as well as the geographical scope of this dissertation. Section 5 contains the methodological framework.

Section 6 provides a brief history of the integration of the EU energy market and the UK's influence in the creation of the same to provide the substantive energy law background for the analysis in this dissertation. With a similar intention, section 7 sets out a timeline of the main events leading to Brexit for ease of reference and background to the manuscripts included in chapters 2–7 of this dissertation (the “Constituting Manuscripts”).

Section 8 provides an overview of the Constituting Manuscripts. All of the Constituting Manuscripts have been published, with their relevant bibliographical details set out in the introduction to each Constituting Manuscript.

The reason for choosing to conceptualise this dissertation as a dissertation composed of the Constituting Manuscripts is that this approach lends itself particularly well to the—at the time of writing—unfolding process of Brexit and the evolving legal issues it raises.

## 1.2 Brexit

The UK's exit from the EU has come to be referred to as “Brexit,” a portmanteau created from the words **Britain** and **exit**.

In the UK, the years since the referendum of 23 June 2016 on whether or not the UK should remain in the EU (the “Referendum”) have been dominated by multiple debates. First, this debate focused on whether or not the UK should leave the EU, and then, following the Referendum and the UK's notice to the EU regarding its exit pursuant to Article 50 of the TEU (the “Article 50 Notice”)<sup>3</sup>, on 29 March

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3 Article 50(1) of the TEU provides that “[a]ny Member State may decide to withdraw from the Union in accordance with its own constitutional requirements”. Article 50(2) goes on to specify that “[a] Member State which decides to withdraw shall notify the European Council of its intention.” Pursuant to Article 50(3), “[i]n the light of the guidelines provided by the European Council, the Union shall negotiate and conclude an agreement with that State, setting out the arrangements for its withdrawal, taking account of the framework for its future relationship with the Union.” For a discussion of the legal framework for exiting the EU, see eg: Larik, J, Peter van Elsuwege, P. and Van Vooren, B: “The External Dimension of Joining and Leaving the EU”, in:

2017, when it might leave<sup>4</sup>, and on what terms.

The process leading to Brexit caused significant political uncertainty throughout the UK and beyond, not least because (1) UK politicians, including Members of the British Parliament in Westminster, appeared, more often than not, to be negotiating among themselves rather than with the EU<sup>5</sup>; and (2) the UK was the first Member State to invoke Article 50, thereby making Brexit and the process leading to it uncharted territory.

Prior to Brexit, other territories have left the EU; however, these exits generally followed a change in status of the relevant territory, for instance, in the wake of independence of a colony from its European colonising state<sup>6</sup> or as result of a change in governance<sup>7</sup>.

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Wessel, RA and Laris J: “EU External Relations Law: Text, Cases and Materials” Bloomsbury 2020 (2<sup>nd</sup> edition, 2022), p. 482 ff

4 The UK triggered Article 50 on 29 March 2017, which means that pursuant to the timeframe stipulated in Article 50(3), the UK would have been due to leave the EU at 11:00pm on 29 March 2019. However, this deadline was extended three times (see also the timeline in section 7 of this chapter), which resulted in the UK leaving the EU on 31 January 2020.

5 Transcripts of parliamentary debates in Westminster are published in Hansard and can be found here <<https://hansard.parliament.uk/search/Debates?house=commons>> and here <[https://hansard.parliament.uk/search/Debates?house=lords\(HouseofLords\)](https://hansard.parliament.uk/search/Debates?house=lords(HouseofLords))>. An example of Brexit debates can be found here <<https://hansard.parliament.uk/search/Debates?endDate=2020-04-12&house=Commons&partial=False&searchTerm=Brexit&startDate=1800-01-01>>.

6 For instance, Algeria (then under French rule) technically joined the European Communities when France joined the same (technically, the status of Algeria was that of a French overseas territory with three departments and arrondissements). For more detail on the legal organisation of Algeria, see Décret n° 55-1148 of 28 August 1955 on the creation of nine arrondissements in the new departments of Alger, Oran and Constantine (“*Décret portant création de neuf arrondissements nouveaux dans les départements d’Alger, d’Oran et de Constantine*”) <[www.legifrance.gouv.fr/jorf/id/JORFTEXT000000299714](http://www.legifrance.gouv.fr/jorf/id/JORFTEXT000000299714)>. Upon gaining independence, Algeria left France and therewith also the EEC.

In 2012, the French island of Saint Barthélemy requested to have its status changed to that of a territory “associated with the European Union” which was granted by the European Council on 20 October 2010, the relevant Council decision is available here: <<https://data.consilium.europa.eu/doc/document/ST-15224-2010-INIT/en/pdf>> () and took effect on 1 January 2012.

7 As a county of Denmark, Greenland automatically became a part of the EEC when Denmark joined the same in 1973. However, in the referendum concerning Denmark’s joining of the EEC, the majority of voters in Greenland had voted against the accession. After the introduction of home rule in Greenland (the relevant law is available here: <<https://ina.gl/media/2529984/hjemmestyreloven-dkpluskal.pdf>>), Greenlanders voted in a consultative referendum in 1982 to leave the EEC. For more details on the referendum, see also: Hans R Kramer, ‘Greenland’s European Community (EC)-Referendum, Background and Consequences’ (1982) 25 German YB Int’l L 273

The relationship between Greenland and the EU is regulated in the “Greenland Treaty” which bestows upon Greenland the status of an OCT associated with the EU. The relevant treaty is avail-

Brexit naturally became a topic for bilateral negotiations between the EU and the UK—in a first step, these negotiations concerned the terms of the exit of the UK from the EU and culminated in the Withdrawal Agreement<sup>8</sup> in 2019.

As part of the Withdrawal Agreement negotiations, the parties agreed that the UK would leave the EU on 1 January 2020 and that a transition period until 31 December 2020 (the “Transition Period”) would apply, in which EU law would continue applying in the UK (save for any voting rights in the EU institutions).<sup>9</sup>

In a second step, the EU and the UK negotiated the terms of their future, post-Brexit relationship. These negotiations culminated in the adoption of the EU-UK Trade and Cooperation Agreement (TCA).<sup>10</sup>

During the, at times rather fraught, Brexit negotiations,<sup>11</sup> the public debate in the UK often referred to several possible models of negotiation outcomes and of the future EU-UK relationship. These usually referenced free trade agreements which the EU had in place with other third countries (i.e., non-EU Member States), variations of association agreements, or EFTA and the EEA.<sup>12</sup>

One model which was perhaps most often referred to was that of a “Hard Brexit,” i.e., an exit from the EU without any kind of agreement as to the future relationship between the EU and the UK and trade between the two parties occurring on the terms of the World Trade Organisation only.<sup>13</sup>

A Hard Brexit has been avoided as the TCA, which governs the relationship between the two parties post-Brexit, was entered into at the end of 2020.

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able here: <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:1985:029:FULL&from=EL>>.

8 Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community [2019] OJ C1384/1, in this dissertation referred to as the “Withdrawal Agreement”.

9 Withdrawal Agreement, Art 4(1).

10 Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland, of the other part, OJ L 149, 30.4.2021, p. 10–2539, available at <[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L\\_.2021.149.01.0010.01.ENG&toc=OJ%3AL%3A2021%3A149%3ATOC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.149.01.0010.01.ENG&toc=OJ%3AL%3A2021%3A149%3ATOC)>

11 A detailed account of the negotiations is given by Michel Barnier in “*La grande illusion: Journal secret du Brexit (2016-2020)*” (Gallimard 2021) from an EU perspective; Emily Jones, ‘The Negotiations’ in Federico Fabbrini (ed), *The Withdrawal Agreement* (OUP 2020).

12 See, for instance: BBC News, ‘Five models for post-Brexit UK trade’ (27 June 2016) <[www.bbc.co.uk/news/uk-politics-eu-referendum-36639261](http://www.bbc.co.uk/news/uk-politics-eu-referendum-36639261)> or Institute for Government, ‘The options for the UK’s trading relationship the EU’ (16 January 2017) <[www.instituteforgovernment.org.uk/article/explainer/options-uks-trading-relationship-eu](http://www.instituteforgovernment.org.uk/article/explainer/options-uks-trading-relationship-eu)>.

13 An overview of the varying degrees of hard vs soft Brexit can be found here: André Sapir, ‘Beyond hard, soft and no Brexit’ (Bruegel Think Tank, 21 October 2016) <[www.bruegel.org/blog-post/beyond-hard-soft-and-no-brexit](http://www.bruegel.org/blog-post/beyond-hard-soft-and-no-brexit)>.

## 2 AIM, SCOPE, AND RESEARCH QUESTIONS

### 2.1 Aim and Scope

This dissertation contributes to the legal debate as to the impact of Brexit on the UK and EU energy sector. It focuses on the law pertaining to the governance, regulation, and design of the energy market and the Brexit-related consequences for the same; adjacent areas of law, such as environmental law or state aid, are out of scope as they have wider application beyond the energy sector and the IEM with a limited impact on the electricity and gas trading arrangements between the EU and the UK.

### 2.2 Research Question(s) and Research Path

The overarching research question driving the Constituting Manuscripts is:

“To what extent is the TCA an adequate post-Brexit regime for the energy sector in the UK and the EU?”

In this context, adequate means that the TCA (a) delivers legal certainty, (b) has been effectively implemented, and (c) meets the Brexit objectives (as further explained in section 2.3 below) in relation to the energy sector (as further defined in section 2.4 below). In turn, this implies the following subsidiary research questions:

- Do the post-Brexit arrangements of the TCA deliver legal certainty for the UK and EU energy sector and specifically to UK-EU relations in the energy sector?
- To what extent has the TCA been effectively implemented?
- Does the TCA meet the Brexit objectives in relation to the energy sector?

These questions have a number of layers, and the answers to the overarching research question and its subsidiary research questions depend, to some extent, on the time at which they are answered—which is reflected in the Constituting Manuscripts.

Prior to the adoption of the TCA, the research questions could only be answered from a prospective standpoint, extrapolating lines of arguments as to what would happen if, or rather when, the UK left the EU (and on which terms) on the basis of the EU *acquis communautaire* and the disapplication of the same in the UK.

Chapters 2–4 discuss the overarching research question from a prospective viewpoint, as the relevant Constituting Manuscripts were written prior to the adoption of the TCA.

Chapter 2 addresses the overarching research question in a general way, whereas Chapter 3 considers the more specific questions of the legal (un)certainities arising for the nuclear sector as a result of the debate on the scope of Brexit, i.e., whether an exit from the EU requires an exit from Euratom. Chapter 4 considers the legal impact

of Brexit on UK-EU interconnectors and, in particular, what the effects of the uncertainty connected with the Brexit process might have on current and future interconnector projects.

Chapters 5–7 consider the overarching research question from the perspective of the impact of the TCA following its adoption.

Chapter 6 goes on to consider to what extent the TCA delivers legal certainty for UK companies wishing to access and participate in the IEM. Chapter 7 explores the research questions from the perspective of EU supply security.

The conclusion in chapter 8 picks up the findings of chapters 2-7 and provides an overall answer to the research questions.

The analysis in relation to the research questions will apply the normative criteria of “legal certainty,” “effective implementation,” and “Brexit objectives,” which are expounded in further detail in section 2.3 below.

## 2.3 Normative Criteria in Exploring the Research Question

For the analysis of the research questions, it is useful to clarify and contextualise the key normative criteria which are of particular importance in that analysis. In this section, I will therefore define and contextualise some key conceptual parameters used in the analysis in the Constituting Manuscripts. The normative parameters are “Brexit Objectives” (section 2.3.1), “Legal Certainty” (section 2.3.2), and “Effective Implementation” (section 2.3.3).

### 2.3.1 Brexit Objectives

The motivations and objectives of the Brexit campaign have been analysed from a variety of political or other academic perspectives.<sup>14</sup> For the purposes of this dissertation, and in particular, for the analysis of the research questions pertaining to the certainty of the post-Brexit arrangements and the question as to the adequacy of the TCA regime, it is useful to recall the objectives of Brexit as articulated by the pro-leave campaign and the British government during the Brexit negotiations, with particular attention to those objectives formulated in the context of energy policy specifically.

The research question and subsequent analysis in this dissertation focuses on the British Brexit objectives as further expounded below. This is chiefly so as Brexit was

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<sup>14</sup> See, e.g. Swales, Kirby, ‘Understanding the Leave vote’ (*NatCen Social Research*, July 2016), <[https://www.bl.uk/britishlibrary/~media/bl/global/social-welfare/pdfs/non-secure/u/n/d/understanding-the-leave-vote.pdf](https://www.bl.uk/britishlibrary/~/media/bl/global/social-welfare/pdfs/non-secure/u/n/d/understanding-the-leave-vote.pdf)>; or Gamble Andrew, ‘Taking back control: the political implications of Brexit’ (2018) *European public policy*



initiated and driven by British political desires rather than any “joint endeavour” with the European Union.

Once the UK had submitted the Article 50 Notice, the UK and the EU became counterparties in the ensuing negotiations for the Withdrawal Agreement and the TCA. In these negotiations, the EU therefore also had Brexit-related objectives. As Oliver Patel has pointed out,<sup>15</sup> the EU’s objectives can be categorised into policy objectives regarding the “model” of Brexit and institutional negotiation objectives.

At a policy level, whilst the EU’s position was that the result of the Referendum should be respected, EU representatives, such as Donald Tusk, have made clear that there can be no winners from Brexit, only losers.<sup>16</sup> Throughout the negotiations for the Withdrawal Agreement, a key objective of the EU was that the UK’s withdrawal from the EU be undertaken in an orderly fashion. The EU did therefore not favour a Brexit without a Withdrawal Agreement, nor did it see a “No Deal” model of Brexit as desirable.<sup>17</sup> At the same time, the EU did not wish for Brexit to serve as inspiration for anti-EU groups elsewhere in the EU or as a motivation for other EU Member States to request opt-outs from the *acquis communautaire*. In view of the EU, there had to be a “cost to leaving”<sup>18</sup> to demonstrate that is not possible to maintain the advantages of EU membership whilst choosing to leave the EU. Therefore, Brexit meant that the UK had to be treated as any other third country in as far as its future relationship with the EU was concerned.

In relation to the institutional strategy, the EU shaped the negotiations by “ensuring that all negotiations are conducted through a single, inflexible channel, and by trying to control public narratives through the use of transparency.”<sup>19</sup>

#### A) Objectives expressed during the referendum campaign

During the campaign in the run-up to the Referendum, the objectives of the group campaigning for the UK to leave the EU (“Vote Leave”)<sup>20</sup> expressed the following objectives in leaving the EU:

15 Patel, Oliver, *The EU and the Brexit Negotiations: Institutions, Strategies and Objectives* (October 18, 2018). UCL European Institute, 2018, Available at SSRN: <https://ssrn.com/abstract=326955>

16 Press declaration by Donald Tusk on behalf of the Council of the EU on 31 March 2017, available here: <https://www.consilium.europa.eu/en/press/press-releases/2017/03/31/tusk-remarks-meeting-muscat-malta/pdf>

17 For a summary of the EU’s position regarding a “No Deal” Brexit and the possible financial consequences, see e.g. Wolff, Guntram B. (2019) : *The implications of a no-deal Brexit: Is the European Union prepared?* Bruegel Policy Contribution, No. 2019/2, Bruegel, Brussels

18 Patel, *ibid.*

19 Patel, *ibid.*

20 Vote Leave Take Control, ‘Why Vote Leave’ <[http://www.voteleavetakecontrol.org/why\\_vote\\_leave.html](http://www.voteleavetakecontrol.org/why_vote_leave.html)>



“We should negotiate a new UK-EU deal based on free trade and friendly cooperation. We end the supremacy of EU law. We regain control. [...] A vote to ‘leave’ and a better, friendlier relationship with the EU is much safer than giving Brussels more power and money every year.”<sup>21</sup>

This dissertation is not the place for a detailed analysis of the underlying motives for these campaign objectives or to what extent these aims are rooted in political or legal reality or veracity.<sup>22</sup> Here, these objectives, as expressed by Vote Leave, are taken as just that: the *prima facie* articulation of the Brexit objectives to serve as a backdrop for the later comparison of the outcome of the Brexit negotiations as manifested in the TCA against the original Brexit objectives.

On the basis of the campaign statement, the key Brexit objectives can be summarised as (1) ending the supremacy of EU law and (2) the UK taking control in relation to (a) its legislation and (b) international relations with international institutions and the EU itself.

Whilst energy as a policy area was used as an example of unwanted EU influence by Vote Leave during the campaign,<sup>23</sup> no specific policy aims were formulated for the energy sector other than to state: “The UK is connected to several countries via large interconnector pipelines—these are a good thing for both the UK and for the countries who link up to us, including Norway and EU member states. These are commercial vehicles and will not be closed if Britain decides to Vote Leave.”<sup>24</sup>

During the Referendum campaign, the overall objectives of the Brexit campaign were distilled into the slogan “Take back control”<sup>25</sup> which was later reflected in official policy documents of the British government (see below).

21 Vote Leave Take Control, ‘About The Campaign’ <<http://www.voteleavetakecontrol.org/campaign.html>>

22 The motivations for voting to leave the EU have been analysed in manifold academic publications from different disciplines; see, e.g. Kenealy Daniel, ‘The Vote to Leave the EU: Why Did It Happen and What Has Happened Since?’ 15 (3) *Studying EU Law*; or Clarke Harold. D, Matthew Goodwin and Paul Whiteley, ‘Why Britain voted for Brexit: An individual-level analysis of the 2016 referendum vote’ (2017) 70 (3) *Parliamentary Affairs*.

23 Vote Leave Briefing “Energy”, <[http://www.voteleavetakecontrol.org/briefing\\_energy.html](http://www.voteleavetakecontrol.org/briefing_energy.html)>

24 Ibid.

25 On the slogan ‘Take Back Control’, see for, instance, Kehinde Andrews, ‘Take back control: Behind every political slogan is a political history- how colonial nostalgia still informs political discourse’ (23 February 2021) <<https://www.penguin.co.uk/articles/2021/02/kehinde-andrews-brexite-uk-colonial-history-racism-politics>>; On the motivations behind the slogan, see: Baldini Gianfranco, Edoardo Bressanelli and Stella Gianfreda, ‘Taking back control? Brexit, sovereignty and populism in Westminster (2015–17)’ (2020) 21(2) *European Politics and Society*. Nicolaïdis has considered the vagueness and shortcomings of the “Taking Back Control” narrative, see Nicolaïdis, Kalypso, ‘The Political Mantra: Brexit, Control and the Transformation of the European Order’ in: Fabbrini, Federico (ed): ‘The Law & Politics of Brexit’ (2017, Oxford).

**B) Objectives during the Brexit negotiations**

The Brexit objectives as far as the negotiations of the UK Government with the EU are concerned were expressed by Teresa May, the then Prime Minister, in her speech at Lancaster House on 17 January 2017 (the “Lancaster House Speech”).<sup>26</sup> In that speech, the Prime Minister articulated twelve separate objectives for the negotiations, which can be briefly summarised below.<sup>27</sup>

The first objective is related to certainty. The prime minister committed to “certainty wherever we can [...] I recognise how important it is to provide business, the public sector, and everybody with as much certainty as possible as we move through the process.” Under the same heading, there was a commitment to repeal the European Communities Act 1972 (ECA 1972)<sup>28</sup> and transpose EU laws into British law to provide certainty such that “[t]he same rules and laws will apply on the day after Brexit as they did before.”<sup>29</sup>

The second objective related to “control of UK laws,” in particular, the “end to the jurisdiction of the European Court of Justice in Britain. [...] Because we will not have truly left the European Union if we are not in control of our own laws.”<sup>30</sup>

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26 Theresa May: The government’s negotiating objectives for exiting the EU: Speech of 17 January 2017, UK <<https://www.gov.uk/government/speeches/the-governments-negotiating-objectives-for-exiting-the-eu-pm-speech>>. For an overview of the EU’s objectives in the Brexit negotiations, see e.g. Patel Oliver, ‘The EU and the Brexit Negotiations: Institutions, Strategies and Objectives’ (UCL European Institute, 18 October 2018) <<https://ssrn.com/abstract=3269554>>

27 Some of the objectives listed related to specific areas of policy (see below). As these areas are not relevant in the context of this dissertation, they are listed for completeness only. Objectives 3 – 8 related to the strengthening of the Union (of the UK) (3), maintenance of the Common Travel Area\* with Ireland (4), control of immigration (5), rights for EU nationals in Britain, and British nationals in the EU (6), the protection of workers’ rights (7). Objectives 9 -12 related to new trade agreements with other countries (9), the UK as “best place for science and innovation” (10), cooperation in the fight against crime and terrorism (11) and the need for a transition phase following the UK’s exit from the EU to enable a “smooth, orderly Brexit” and [...] “to allow businesses enough time to plan and prepare for those new arrangements” (12).

\*The Common Travel Area is “a long-standing arrangement between Ireland and the United Kingdom which enables Irish and UK citizens to travel and reside in either jurisdiction without restriction and provides for associated rights and entitlements in both jurisdictions. The Common Travel Area predates membership of the EU by both Ireland and the UK and is not dependent on it.” Common Travel Area Information Note from Ireland to the Article 50 Working Group, <<https://www.dfa.ie/media/dfa/eu/brexit/keydocuments/Info-Note-CTA-FINAL.pdf>>.

28 European Communities Act 1972 (repealed), c 68.

The ECA gave formal effect to the UK joining the EU in 1973 and granted EU law supremacy over UK law.

29 Teresa May, *ibid*:

30 Teresa May, *ibid*.

A further objective related to the “free trade with European markets,” i.e., the conclusion of a “bold and ambitious Free Trade Agreement with the European Union [... which...] should allow for the freest possible trade in goods and services between Britain and the EU’s member states.”<sup>31</sup>

The aims expressed in the Lancaster House Speech were echoed in a later document issued by the UK Government presenting the Brexit deal, which the May government had negotiated with a view of exiting the EU on 29 March 2019, which again emphasised the narrative of taking back control by stating: “The Brexit deal will give the people of the United Kingdom back control of their borders, their money and their laws. The referendum was a call to reclaim the UK’s sovereignty, ensuring the decisions that affect us are made by those we elect.”<sup>32</sup>

Finally, in the December 2019 electoral campaign, the attention shifted from “Take Back Control” to “Get Brexit Done,”<sup>33</sup> expressing the desire to “finish” Brexit after months of dissent in the Westminster Parliament, which had led to several delays in the agreement of a “deal,” an agreement with the EU on the terms of the UK’s exit from the EU.

In summary, it can be argued that the main Brexit objectives were (1) the UK taking control in relation to its legislation, ending the supremacy of EU law and the jurisdiction of the European Court of Justice (ECJ); (2) the freest possible trade in goods and service between the UK and the EU; and (3) certainty as to the application of laws.

The third element of the Brexit objectives links to the normative criterion of legal certainty (see Section 2.3.1 above), as further explained in Section 2.3.4 below.

### C) Energy-Specific Brexit Objectives of the UK Government

For the most part of the Brexit negotiations, there appeared to be no specific goals in relation to the energy sector. Energy as an area of policy did not feature in the Lancaster House Speech.

<sup>31</sup> Teresa May, *ibid.*

<sup>32</sup> “Taking back control of our borders, money and laws while protecting our economy, security and Union” CM 9741, (the “November 2018 Policy Document”) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/759792/28\\_November\\_EU\\_Exit\\_-\\_Taking\\_back\\_control\\_of\\_our\\_borders\\_\\_money\\_and\\_laws\\_while\\_protecting\\_our\\_economy\\_\\_security\\_and\\_Union\\_\\_1\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/759792/28_November_EU_Exit_-_Taking_back_control_of_our_borders__money_and_laws_while_protecting_our_economy__security_and_Union__1_.pdf)>

<sup>33</sup> “Getting Brexit Done” was a central pledge of the manifesto of the Conservative party for the 2019 General Election – see <<https://www.conservatives.com/our-plan>>. For an assessment as to whether Brexit was “getting done”, see Owen, Joe, Maddy Thimont Jack, Georgina Wright, Jess Sargeant, Alex Stojanovic, and Haydon Etherington. “Getting Brexit done.” <<https://www.instituteforgovernment.org.uk/sites/default/files/publications/getting-brexit-done-WEB.pdf>>

The November 2018 Policy Document references energy in two lines stating that the (intended) deal with the EU would provide for “a framework for electricity and gas cooperation with mechanisms covering security of supply and efficient trading; [and ensure] wide-ranging cooperation between the UK and Euratom on nuclear energy.”<sup>34</sup>

In February 2020, the UK Government published a document setting out its approach in relation to the negotiations with the EU in relation to the post-Brexit relationships with the same (the “Future Relationship Document”).<sup>35</sup>

In the Future Relationship Document, the UK Government’s negotiation aims in relation to Brexit are articulated as follows:

The UK is open to considering an agreement on energy if it reflects its interests, and as long as it respects the fact that the UK will make independent decisions on its energy policies. An agreement could cover energy trading over the interconnectors between the UK and the EU, carbon pricing, and climate change.<sup>36</sup>

After this rather general statement, the Future Relationship Document acknowledge that “[i]n Northern Ireland, the Ireland/Northern Ireland Protocol to the Withdrawal Agreement provides the basis for the continued operation of the Single Electricity Market.”

The above points are referred to as the “baseline arrangements.” It seems that the Future Relationship Document had envisaged a separate energy agreement with the EU which would deal with the facilitation of “efficient cross-border electricity and gas trade;” and “[...] the technical cooperation between electricity and gas” TSOs “and organisations in the planning and use of energy infrastructure connecting their systems;” and “support [ ... for...] the integration of renewable power and investment in decarbonisation projects in the North Seas.”<sup>37</sup>

Overall, it can be argued that the Brexit negotiation aims of the UK Government in relation to the energy sector were minimal and chiefly concerned with the continued efficient trading over interconnectors, limited technical cooperation between TSOs and organisations concerned with the planning of energy infrastructure, support for renewable energy projects in the North Sea, and the continued operation of the iSEM, the integrated single electricity market on the island of Ireland.<sup>38</sup>

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34 November 2018 Policy Document, page 7

35 The Future Relationship with the EU The UK’s Approach to Negotiations, Presented to Parliament by the Prime Minister By Command of Her Majesty February 2020 211, <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/868874/The\\_Future\\_Relationship\\_with\\_the\\_EU.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/868874/The_Future_Relationship_with_the_EU.pdf)>

36 Ibid., page 22.

37 All quotes in this section: Ibid, page 22.

38 For a more detailed explanation of iSEM, see footnote 1.

#### D) Brexit Objectives in this manuscript

For the purposes of this dissertation, it can be said that there are several general Brexit Objectives, depending on the phase of the Brexit process, as well as energy sector-specific Brexit objectives which emerged from November 2018 onwards.

If the overall Brexit objectives during the Referendum campaign can be summarised as “take back control,” this was further differentiated during the negotiations first for the Withdrawal Agreement and then the TCA.

During this negotiation phase, the overall objective of “take back control” was translated into the more nuanced objectives of the UK taking control in relation to its legislation, ending the supremacy of EU law and the jurisdiction of the European Court of Justice (ECJ). In addition, achieving the freest possible trade in goods and services between the UK and the EU and certainty as to the application of laws were key Brexit objectives during the negotiation phase. This latter element pertaining to certainty in the application of laws relates to the concept of legal certainty, which will be further discussed in Section 2.3.2.

The Energy Brexit objectives were the continued efficient trading over interconnectors, limited technical cooperation between TSOs and organisations concerned with the planning of energy infrastructure, support for renewable energy projects in the North Sea, and the continued operation of the iSEM, the integrated single electricity market on the island of Ireland.

### 2.3.2 Legal Certainty

Given the centrality of legal certainty to the overarching research question of this dissertation, it is appropriate to explore the concept of legal certainty in more detail.

The general principle of legal certainty is fundamental to any European and indeed, Western, legal system. As such, it has been analysed and interpreted in academic publications from legal historical,<sup>39</sup> anthropological,<sup>40</sup> philosophical,<sup>41</sup> and jurisprudential perspectives,<sup>42</sup> as well as in case law in different jurisdictions.

By way of a general introduction, it is helpful to note that legal certainty can be understood as a broad principle covering several other concepts and legal principles.

39 See, e.g. Mohnhaupt Heinz, “‘Lex certa’ and ‘ius certum’: The Search for Legal Certainty and Security.” *Natural Law and Laws of Nature in Early Modern Europe* (Routledge 2016)

40 See, e.g. Ogneviuk, Anthropological approaches in legal certainty research: in *Anthropological Dimensions of Philosophical Research/Антропологические измерения философских исследований/ Anthropological Measurements of Philosophical Research* (2018) (14)

41 Radbruch, Gustav: “Fünf Minuten Rechtsphilosophie”, first published in the *Rhein-Neckar-Zeitung* (Heidelberg), 12 September 1945, accessed in English translation via: Gustav Radbruch, ‘Five minutes of legal philosophy (1945)’ (2006) 26 (1) *Oxford Journal of Legal Studies*

42 Braithwaite John, ‘Rules and principles: A theory of legal certainty’ (2002) 27 *Australasian Journal of Legal Philosophy*

For instance, Groussot describes the principle of legal certainty as an “umbrella” principle,<sup>43</sup> as it extends to other principles, including the principles of legitimate expectations<sup>44</sup>, vested rights,<sup>45</sup> and non-retroactivity.<sup>46</sup>

A detailed discussion of the concept of legal certainty in Western legal systems goes beyond the scope of this dissertation. However, in order to place this criterion in the right perspective, it is appropriate to examine it briefly from both a UK, EU, and international law perspective to serve as a tool for the analysis of the TCA. In relation to the UK, for practical reasons, I shall confine my brief analysis to English law.<sup>47</sup>

#### A) Legal Certainty in English law

Legal certainty is an established principle in English law;<sup>48</sup> and it has been said that “the quality of certainty [is] a traditional strength and major selling point of English commercial law.”<sup>49</sup>

The principle of legal certainty, or, specifically, the concept of good administration, extends beyond commercial law. In public law, there is “a requirement of good administration, by which public bodies ought to deal straightforwardly and consistently with the public.”<sup>50</sup> In addition, certainty implies a timing element in that the

43 Groussot Xavier, *General principles of community law* (Europa Law Publishing 2006) <<https://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=365050>>

44 Lang, JT: “Legal Certainty and Legitimate Expectations as General Principles of Law” in: U. Bernitz and J. Nergelius (eds), ‘General Principles of European Community Law (Kluwer Law International’ (2000

45 On the concept of vested rights, see e.g. Dane Perry, ‘Vested Rights, Vestedness, and Choice of Law’ Yale LJ 96 (1986).

46 On non-retroactivity see e.g. Kryvoi, Yarik, and Shaun Matos. “Non-Retroactivity as a General Principle of Law.” *Utrecht Law Review* 17, no. 1 (2021).

47 There are three legal systems in the UK: the laws of England and Wales constitute one system, Scottish law a second, with Northern Irish law constituting the third. For an introduction to English law, see e.g. Partington Martin, *Introduction to the English legal system* (OUP 2021), for an introduction to Scottish law, see e.g. White Robin, Ian Willock and Hector MacQueen, *The Scottish legal system* (Bloomsbury 2013), for an introduction to Northern Irish law, see e.g. Dickson Brice, *Law in Northern Ireland* (Bloomsbury Publishing 2023). Bloomsbury Publishing. I have confined the considerations in this section to English law as an extension to Scottish and Northern Irish law would go beyond the scope of this dissertation; I should also state that I am not qualified in Scottish or Northern Irish law.

48 On legal certainty in English (common) law generally, see e.g. Linarelli, John, “Legal Certainty: A Common Law View and a Critique (September 1, 2017)” in: Mark Fenwick, Mathias M. Siems, & Stefan Wrba, eds., *The Shifting Meaning of Legal Certainty in Comparative and Transnational Law* (Oxford: Hart 2017), Available at SSRN: <<https://ssrn.com/abstract=3044422>>

49 *Golden Straight Corporation v Nippon YKK (The “Golden Victory”)* [2007] UKHL 12, para 1  
50 *R (Nadarajah and Abdi) v Secretary of State for the Home Department* [2005] EWCA Civ 1363, per Laws LJ

“principle of certainty also precludes retrospective changes in the law. The law must be certain at the time when the subject has to act by reference to it.”<sup>51</sup>

Lord Bingham argues that the essence of English law rules pertaining to the rule of law can be summarised in eight rules, the first two of which are of particular importance in relation to legal certainty.

He expresses the first rule as “[t]he law must be accessible and so far as possible intelligible, clear and predictable,”<sup>52</sup> with a reference to English case law authority to support this rule.<sup>53</sup>

The second rule is expressed as “questions of legal right should ordinarily be resolved by application of the exercise of discretion.”<sup>54</sup> In support of this rule, Bingham explicitly references a ruling of the European Court of Human Rights:

[T]he law must be adequately accessible: the citizen must be able to have an indication that is adequate in the circumstances of the legal rules applicable to a given case... a norm cannot be regarded as a ‘law’ unless it is formulated with sufficient precision to enable the citizen to regulate his conduct: he must be able—if need be with appropriate advice—to foresee, to the degree that is reasonable in the circumstances, the consequences which a given action may entail.<sup>55</sup>

By way of summary, it can be argued that for the purposes of English law, a law can be regarded as certain if it is intelligible, clear, precise, predictable, and not dependent on the exercise of discretion.

## B) Legal Certainty in EU law

As with English law, legal certainty is a defining and fundamental principle of EU law.<sup>56</sup> In the words of the Court of Justice, “the principles of legitimate expectation and assurance of legal certainty are part of the legal order of the Community.”<sup>57</sup>

51 Lord Mance “Should the law be certain? The Oxford Shrieval lecture given in the University Church of St Mary The Virgin, Oxford on 11th October 2011” available at <[https://www.supremecourt.uk/docs/speech\\_111011.pdf](https://www.supremecourt.uk/docs/speech_111011.pdf)>

52 Lord Bingham, “The Rule of Law” (2007) 66 (1) JSTOR The Cambridge Law Journal <<http://www.jstor.org/stable/4500873>>.

53 Black-Clawson International Ltd v. Papierwerke Waldhof-Aschaffenberg AG [1975] A.C. 591, 638;  
54 *ibid* 47.

55 Sunday Times v. United Kingdom (1979) 2 EHRR 245, 2

56 On legal certainty as a principle of EU jurisprudence, see also: J. van Meerbeeck, *La sécurité juridique: De la certitude à la confiance* (Bruxelles: Presses de l’Université Saint-Louis-Anthemis, 2014). An open access version of the book is available here: <<https://books.openedition.org/pu/sl/5043?lang=en>>

57 Deutsche Milchkontor GmbH v Germany (Joined Cases 205-215/82)



Whilst neither the principle of legal certainty nor the arguably related principle of legitimate expectations has been enshrined in primary EU law,<sup>58</sup> the right to good administration has been expressly included in the Charter of Fundamental Rights of the European Union.<sup>59</sup>

According to the Court of Justice, the “principle of legal certainty is a general principle of EU law, which aims to ensure that situations and legal relationships governed by EU law remain foreseeable.”<sup>60</sup> The Court of Justice has further held that the principle of legal certainty demands “that rules of law be clear, precise and predictable as regards their effects.”<sup>61</sup>

In relation to the predictability of the law, the Court of Justice has held that the application of the rules of law must “be foreseeable by those subject to them.”<sup>62</sup> This principle requires, in particular, “that Community rules enable those concerned to know precisely the extent of the obligations which are imposed on them. Individuals must be able to ascertain unequivocally what their rights and obligations are and take steps accordingly.”<sup>63</sup>

By way of summary, for the purposes of EU law, it can be argued that legal certainty requires that foreseeable, clear, precise, and predictable such that individuals can know their rights and obligations and act accordingly.

### C) Legal Certainty in international law

Maxeiner has submitted that “[l]egal certainty is a central tenet of the rule of law as understood around the world”<sup>64</sup> and, therefore, part and parcel of international law.

For example, the foreign ministers of the G8 declared in their meeting at Potsdam in 2007 their nations’ commitment to “the rule of law [as a] core principle on which we build our partnership and our efforts to promote lasting peace, security, democ-

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58 Jacqué, Jean Paul. “Droit Constitutionnel de l’Union Européenne” (2018)

59 Article 41 Right to good administration

60 Joined Cases T-50/06 RENV II and T-69/06 RENV II, Ireland and Aughinish Alumina Ltd v European Commission at paragraph 2

61 Criminal proceedings against Costa (C-72/10) EU:C:2012:80 at [74].

62 Plantanol GmbH & Co KG v Hauptzollamt Darmstadt (C-201/08) [2009] E.C.R. I-8343 at paragraph 46

63 Proceedings brought by Heinrich (C-345/06) [2009] E.C.R. I-1659; [2009] 3 C.M.L.R. 7 at paragraph 44

64 Maxeiner James R, ‘Some realism about legal certainty in the globalization of the rule of law’ Hous. J. Int’l L. 31 (2008) 27. Hous. J. Int’l L., 31; Danilo Zolo, The Rule of Law: A Critical Appraisal, in The Rule of Law: History, Theory and Criticism 3, 24 (Pietro Costa & Danilo Zolo eds., 2007).



racy and human rights as well as sustainable development worldwide.”<sup>65</sup> The declaration adds that it is “imperative to adhere to the principle [...] of legal certainty.”<sup>66</sup>

The Hague Institute for the Internationalisation of Law (the “institute”) links the concept of legal certainty to “Rechtsstaatlichkeit,” i.e., a rule of law-based governance regime by states. For the institute, this implies that “international law has to be generally known and accessible. It needs to be clear and unambiguous and not retroactive, with clear rules for the legislative process.”<sup>67</sup>

Oomen and Bedner have analysed Otto’s concept of “real legal certainty,”<sup>68</sup> which develops the idea of legal certainty as the result of the rule of law-based governance further and requires five separate requirements to be met:<sup>69</sup>

1. Clear, consistent, and accessible legal rules issued or acknowledged by or on behalf of the state;
2. Government institutions must apply these rules consistently and comply with them;
3. Most citizens, in principle, conform to such rules;
4. In dispute settlement, independent and impartial judges apply such rules consistently;
5. Judicial decisions are enforced.

#### D) Meaning of Legal Certainty in this manuscript

From the above, we can infer that legal certainty is a constitutive element of English, EU, and international law. All three systems approach the concept in a similar fashion. On this basis, for the purposes of this dissertation, a working definition of legal certainty which captures English, EU, and international law principles can be established as follows:

Legal certainty in relation to law means that the relevant law has to be foreseeable (predictable), knowable, clear, precise, consistently applied, and not dependent on the exercise of discretion.

65 G8 Foreign Ministers, Declaration of G8 Foreign Ministers on the Rule of Law (2007), <[www.mofa.go.jp/policy/economy/summit/2007/g8dec.pdf](http://www.mofa.go.jp/policy/economy/summit/2007/g8dec.pdf)>

66 Ibid.

67 Rechtsstaatlichkeit (The Rule of Law) Ein Leitfaden für Politikerinnen und Politiker, The Raoul Wallenberg Institute of Human Rights and Humanitarian Law and the Hague Institute for the Internationalisation of Law 2012 ISBN: 978-91-86910-82-2

68 Jan Michiel Otto has developed this concept in e.g. “Towards an Analytical Framework: Real Legal Certainty and Its Explanatory Factors.” In *Implementation of Law in the People’s Republic of China*, edited by J. Chen, Y. Li, and J.M. Otto. The Hague: Kluwer Law International (2002)

69 Bedner Adriaan and Barbara Oomen, *Real legal certainty and its relevance: essays in honour of Jan Michiel Otto* (Leiden UP 2018)

### 2.3.3 Effective Implementation

In order to define the normative criterion of “effective implementation,” I shall define the concept of “effectiveness” in Subsection (A) followed by the concept of “implementation” in Subsection (B) below.

#### A) Effectiveness

The Cambridge Dictionary defines “effectiveness” as “the ability to be successful and produce the intended results.”<sup>70</sup>

Effectiveness can refer to the effects of legal norms as well as the following legal norms. In relation to the latter meaning, the efficacy (i.e., the actual observance) of a norm can be “distinguished from the validity (binding force) of law.”<sup>71</sup> Kelsen expanded on this by noting in relation to effectiveness, “[t]he principle that a legal order, as a whole, must be by and largely effect in order to be valid is itself a norm, i.e., a norm of positive international law, the principle of effectiveness prevailing within this law.”<sup>72</sup>

As Teubner has argued, the concept of effectiveness also includes (without limitation) “enforcement, impact and compliance.”<sup>73</sup> The concepts of implementation and effectiveness can therefore be said to be linked to the enforcement of a norm, i.e., the action of compelling a party to “actually observe,” i.e., comply with a norm if the relevant party has not complied with the same on a voluntary basis. Snyder has argued that effectiveness can mean that a norm has certain effects beyond the relevant legal doctrine, for instance, on political, economic, and social life.<sup>74</sup>

Maljean Dubois has identified three separate layers to the meaning of effectiveness:

- 1) legal effectiveness, meaning that the law is respected;
- 2) behavioural effectiveness, which shows whether the situation is different from what it would have been without the treaty, obligation, rules [...; and]

<sup>70</sup> <<https://dictionary.cambridge.org/dictionary/english/effectiveness>>

<sup>71</sup> Hiroshi Taki, “Effectiveness”, in: Max Planck Encyclopedias of International Law [MPIL], last updated February 2013, available at <<https://opil.ouplaw.com/display/10.1093/law:epil/9780199231690/law-9780199231690-e698>>

<sup>72</sup> Kelsen, Hans: “*Principles of International Law*”, p.414, quoted as per 2003 edition published by Berkeley University.

<sup>73</sup> Snyder, *New Directions in European Community Law* (London: Weidenfeld & Nicolson, 1990) p.3 On the concept of effectiveness as referring to both the effects of legal norms and the following of legal norms, see also Teubner *Gunther Regulatory Law : Chronicle of a Death Foretold. Social & Legal Studies*, 1(4), (1992). 451–475. <https://doi.org/10.1177/096466399200100401>, n 2, citing Rottleuthner Hubert, ‘Introduction to the sociology of law. Scientific Book Society’ (1987)

<sup>74</sup> Snyder, *New Directions in European Community Law* (London: Weidenfeld & Nicolson, 1990) p.3

3) problem-solving effectiveness, focusing more on the goals, interested in the aim of the legal provisions (has it been set too low?) and to how action is spurred towards achieving these objectives.<sup>75</sup>

The elements in limb (2) and (3) of the definition offered by Maljean Dubois require a substantive assessment based on behavioural science (in relation to limb (2)) and natural sciences (in relation to limb (3)) and are therefore beyond the scope of this legal dissertation.

On the basis of the above, I am adopting the following definition of “effectiveness” for the purposes of this dissertation:

Effectiveness in relation to legal norms means that the relevant norm creates a result that meets their intended policy objective and that the relevant norm is complied with and enforced.

## B) The concept of Implementation

The Cambridge dictionary has defined implementation as “the act of starting to use a plan or system.”<sup>76</sup>

Implementation also refers to transposing a norm, e.g., from EU law into national Member State law or, in the case of states with a dualistic approach to international law,<sup>77</sup> international treaties.

75 Maljean-Dubois, Sandrine. “The effectiveness of environmental law: a key topic.” Intersentia 2017, p.4. For the third point in this list, see also: A. Rieu Clarke, J. Gooch, “Implementing international water agreements”, in *Implementing Environmental Law*, P. Martin, A. Kennedy ed., The IUCN Academy of Environmental Law, 2015

76 <<https://dictionary.cambridge.org/dictionary/english/implementation>>

77 Together with monism, dualism is one of approaches regarding the relationship between public international (“PIL”) and the law of states. Monism regards PIL and the law of states as a single legal system. By contrast, the dualist approach views PIL and state laws as entirely separate legal systems. States adopting the dualist approach typically need to adopt implementing legislation for international treaties to which they are a party in order to give them effect in their relevant legal regime. On the monist or dualist systems, see e.g. Starke, Joseph Gabriel. ‘Monism and dualism in the theory of international law’ *Brit. YB Int’l L.* 17 (1936) or Ferreira, Gerrit, and Anél Ferreira-Snyman. “The incorporation of public international law into municipal law and regional law against the background of the dichotomy between monism and dualism.” *Potchefstroom Electronic Law Journal/Potchefstroomse Elektroniese Regsblad* 17.4 (2014). Ferreira, G. and Ferreira-Snyman, A., 2014. The incorporation of public international law into municipal law and regional law against the background of the dichotomy between monism and See also: Hobe, Stephan: “Einführung in das Völkerrecht, Begründet von Otto Kimminich”, UTB 2014, pp 193-194. On new approaches to monism in the EU see e.g. Cannizzaro Enzo, ‘The neo-monism of the European legal order. In *International Law as Law of the European Union*’ (2012) Brill Nijhoff <[http://www.cannizzaro-sapienza.eu/sites/default/files/publicazione\\_allegato/2011%20-%20The%20Neo-Monism%20of%20the%20European%20Legal%20Order\\_o.pdf](http://www.cannizzaro-sapienza.eu/sites/default/files/publicazione_allegato/2011%20-%20The%20Neo-Monism%20of%20the%20European%20Legal%20Order_o.pdf)>

Implementation can also refer to the act of applying a norm in practice, i.e., to implement a norm by applying it in practice, that is, acting in accordance with the same. This concept is linked to the idea of “giving effect” or “effectiveness” of a norm.

However, implementation refers to the process of giving effect to a norm rather than the result of that process and the application of the relevant norm.<sup>78</sup> The process of implementation will involve the application of legal norms that define such a process, administrative infrastructure (what I call the “administrative scaffolding” of the implementation process) and the resources necessary to apply them, creating effective compliance monitoring and enforcing mechanisms.<sup>79</sup>

For the purposes of this dissertation, it is appropriate to briefly consider the concept of implementation in relation to both EU law (in Subsection (1) below) as well as international law (in Subsection (2) below).

EU law is relevant as a reference point as the UK has just left the EU and the EU legal regime serves, therefore, as a direct comparator for the implementation (or otherwise) of the TCA. International law is relevant as the TCA is an international agreement between the EU and the UK.<sup>80</sup> Implementation is an established feature in both EU and international law.<sup>81</sup>

#### Implementation in EU Law

Article 197 TFEU provides that “[e]ffective implementation of Union law by the Member States, which is essential for the proper functioning of the Union, shall be regarded as a matter of common interest.” However, the TFEU does not define the concept of “effective implementation” any further.<sup>82</sup>

78 Maljean-Dubois, Sandrine “The effectiveness of environmental law: a key topic”, Intersentia 2017

79 T. Risse, “Rational Choice, Constructivism and the Study of International Institutions.” in Katznelson (I.), Milner (H.) (eds.). *Political Science as Discipline? Reconsidering Power, Choice and the State at Century’s End*, 2002.

80 On the precise categorisation of the TCA, see s 5.1.5 below.

81 The academic literature on the subject of the relationship between international, European Union, and national (Member State) law is extensive and a detailed discussion as to the relationship between them outwith the scope of this dissertation. See, e.g. Komori Teruo, *Public interest rules of international law: towards effective implementation* (Routledge 2016); Verdier, Pierre-Hugues and Mila Versteeg, ‘International law in national legal systems: An empirical investigation’ (2015) 109 (3) *American Journal of International Law*. For a discussion of the implementation of international law by the EU and the hierarchical position of international law within the legal order of the EU, see e.g. Wessel, Ramses, *The EU and International Law. EU External Relations Law: Text, Cases and Materials* (Hart Publishing/Bloomsbury Publishing Plc 2020)

82 Nicolaidis Phedon and Maria Geilmann, ‘What is Effective Implementation of EU Law?’ (2012) 19 (3) *Maastricht Journal of European and Comparative Law* <<https://doi.org/10.1177/1023263X1201900305>>; Krzysztofik EA, ‘The Principle of Effectiveness of Eu Law from the Perspective

Article 288 TFEU offers further insight in relation to what types of EU laws require implementation: Article 288 (1) TFEU provides that “[a] regulation shall have general application. It shall be binding in its entirety and directly applicable in all Member States.” Article 288(2) TFEU goes on to provide that “[a] directive shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods.”

On the basis of Article 288, a regulation does not, by virtue of its general application, require further implementation by the Member State, and it applies directly.

EU Directives, however, require implementation. Pursuant to EU law, this process of implementation comprises the following four phases.<sup>83</sup>

1. Transposition of a directive requires the adoption of binding rules of national law.<sup>84</sup> The exact instrument of the transposition will depend on the implementing Member State and the range of instruments available in its legal system and may include primary legislation or secondary legislation such as decrees, regulations, or other forms of statutory instruments.<sup>85</sup>
2. After the transposition of the relevant directive into national law, a phase of operationalisation follows. In this phase, the national authorities that are to be responsible for the further implementation and application of the relevant directive will be designated, and further enforcement and procedural measures may be adopted by that relevant authority.<sup>86</sup> It is worth noting that the operationalisation phase may also be required in relation to EU regulations, which may require Member States to designate a national authority for activities pursuant to such a regulation. In relation to directives, the operationalisation phase may be subsumed in the transposition phase as the designation of a relevant national authority, and the further adoption of implementation measures may be dealt with in the transposing national legislation.
3. The operationalisation phase is followed by the application phase. Application can refer to the relevant EU regulation, or, in the case of EU directives, to the relevant national transposing legislation. In this context, operationalisation refers to establishing the rights and obligations derived from the relevant regulation or

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of the Obligations of National Courts’ (2023) 26 (1) <<https://journals.sabauni.edu.ge/index.php/olr/article/view/203>>

83 For a detailed analysis of the process of implementation in EU law, see, e.g. Jans, J, Prechal, S & Widdershoven, RJGM (eds) 2015, *Europeanisation of Public Law*. 2 edn, Europa Law Publishing, Groningen. The four steps outlined in this section follow the sequence proposed by Jans et al.

84 This has been established by the Court of Justice in e.g. Case 97/81 *Commission v. Netherlands* [1982] ECR 1819 or Case C-361/88 *Commission v. Germany (TA Luft)* [1991] ECR I-2567.

85 Jans et al (op cit), page 14

86 Jans et al, *ibid*.

directive (as transposed into national law) in relation to individual cases and may involve a range of measures, e.g., the grant of licences, the requirements of payments or the organisation of public tenders, granting permits to imposing taxes, from making payments to inviting tenders.

4. Finally, the relevant EU act (or the relevant transposing law, as the case may be) requires enforcement should it not be observed. In turn, this requires the monitoring of its observance and the application of a relevant sanctions regime to offenders.

As Duina has pointed out, the implementation process may vary “along two dimensions, speed and extent, applied to both transposition and application.”<sup>87</sup>

In this context, “speed of transition” refers to the time in which a Member State transposes the relevant directive into its national law; usually, a directive specifies a period of transposition of no more than two years after the publication of the relevant directive in the Official Journal of the European Union.<sup>88</sup>

The concept of “extent” in this context refers to the “degree to which the original directive is actually translated into national law,”<sup>89</sup> i.e., whether it transposes all substantive provisions of the directive and whether it captures the full scope of the relevant provisions and their objectives. Once a directive has been transposed into national law, it is applied and, to the extent necessary, enforced pursuant to the law of the transposing Member State. Therefore, as Kryzstofik has argued, the effectiveness of EU law is linked to “the performance of duties by domestic courts.”<sup>90</sup>

Domestic courts are not the only instance ensuring effectiveness and compliance with EU law: if a Member State fails to transpose a directive correctly (i.e., it does not transpose a directive to its full extent) or too late (not at all or in any event after the deadline prescribed in the relevant directive), the Commission has an important role in the enforcement of EU law.<sup>91</sup>

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87 Duina Francesco, ‘Explaining legal implementation in the European Union’ (1997) 25(2) *International Journal of the Sociology of Law*

88 Enrico Borghetto, Fabio Franchino, Daniela Giannetti, ‘Complying with the transposition deadlines of EU Directives Evidence from Italy’, in: *Rivista Italiana di Politiche Pubbliche* (2006) 1 <[https://sites.unimi.it/fabiofranchino/wpcontent/uploads/Article%20downloads/RIPP%202006/Borghetto\\_Franchino\\_Giannetti\\_2006\\_RIPP.pdf](https://sites.unimi.it/fabiofranchino/wpcontent/uploads/Article%20downloads/RIPP%202006/Borghetto_Franchino_Giannetti_2006_RIPP.pdf)>

89 Ibid.

90 Kryzstofik above, *ibid*.

91 Andersen Stine, *The enforcement of EU law: the role of the European Commission* (OUP 2012); Piotr Bogdanowicz, Matthias Schmidt, ‘The infringement procedure in the rule of law crisis: How to make effective use of Article 258 TFEU’ (2018) 55 (4) *Common Market Law Review* <<https://kluwerlawonline.com/journalarticle/Common+Market+Law+Review/55.4/COLA2018093>>

When the Commission uncovers a potential infringement of EU law, it launches a formal infringement procedure pursuant to Articles 258-260 TFEU.<sup>92</sup> The relevant procedures are triggered, e.g., when a Member State (a) fails to communicate the measures transposing a directive, (b) transposes a directive after the deadline, (c) fails to transpose a directive at all, or (d) applies EU law incorrectly. Pursuant to Article 259 TFEU, infringement proceedings may also be started by a Member State.

The above shows that implementation is not only a well-established but essential element in EU law which is carried out in line with a clear procedural framework.<sup>93</sup>

#### Implementation in International Public Law

The concept of implementation in international public law is complex, and a detailed discussion of the same is outside the scope of this dissertation.<sup>94</sup> The below is, therefore, but a brief introduction to this topic as far as it is of interest in the context of this dissertation.

Article 26 of the Vienna Convention on the Law of Treaties (VCLT) obliges parties to treaties to perform their commitments in good faith.<sup>95</sup> A similar principle is expressed by Article 13 of the United Nations Declaration on the Rights and Duties of States (UNDRDS).<sup>96</sup> The legal principle behind both provisions can be summa-

92 By way of example, in January 2023, the Commission issued a call for Croatia to properly apply the Habitats Directive (Directive 92/43/EEC) concerning authorisation of wind farm projects affecting Natura 2000 sites, (INFR (2020)2204). In the same month, the Commission also referred Portugal (INFR (2019)2254) to the Court of Justice of the European Union for failing to correctly transpose the Directive on the assessment of the effects of certain public and private projects on the environment (Directive 2011/92/EU). Details of both measures are available here: [https://ec.europa.eu/commission/presscorner/detail/EN/inf\\_23\\_142](https://ec.europa.eu/commission/presscorner/detail/EN/inf_23_142)

93 On procedural effectiveness, see e.g. Case 33/76, *Rewe v Landwirtschaftskammer für das Saarland* [1976] ECR 1989; Case 45/76, *Comet v Produktschaap voor Siergewassen* [1976] ECR 2043; Case C2 13/89, *R v Secretary of State for Transport, ex p Factortame* [1990] 3 CMLR 1; Case C208/90, *Emmott v Minister for Social Welfare* [1991] 3 CMLR 894. On substantive effectiveness, see e.g. Case 14/83, *von Colson and Kamaan v Land Nordrhein-Westfalen* [1984] ECR 1891

94 On implementation in international law, see, e.g. Lukashuk Igor I, ‘The principle pacta sunt servanda and the nature of obligation under international law (1989) 83(3) *American Journal of International Law*

95 Article 26 VCLT provides: ‘Every treaty in force is binding upon the parties to it and must be performed by them in good faith’, <[https://legal.un.org/ilc/texts/instruments/english/conventions/1\\_1\\_1969.pdf](https://legal.un.org/ilc/texts/instruments/english/conventions/1_1_1969.pdf)> On the VCLT generally, see e.g. Sinclair, Ian. *The Vienna Convention on the Law of Treaties*. 2d ed. Manchester, UK: Manchester UP, 1984

96 Art 13 of the UNDRDS provides ‘Every State has the duty to carry out in good faith its obligations arising from treaties and other sources of international law, and it may not invoke provisions in its constitution or its laws as an excuse for failure to perform this duty.’ For details on the UNDRDS and its ontology, see, e.g. Kelsen Hans, ‘The Draft Declaration on Rights and Duties of States’ (1950) 44 (2) *The American Journal of International Law* <<https://doi.org/10.2307/2193756>>



rised as “*pacta sunt servanda*.” This has generally been interpreted to mean that international law requires states do all that is necessary to give due effect to the provisions of a treaty to which it is a party, regardless of the state of its internal, domestic law.<sup>97</sup> For instance, in relation to international environmental treaties, Mrema has noted that “[t]he concept of implementation refers to ‘all relevant laws, regulations or policies and other measure and initiatives that [c]ontracting [p]arties adopt or take to meet their obligations.’”<sup>98</sup>

However, the principle of effectiveness has not been captured by the VCLT. Rietiker<sup>99</sup> has argued that it is nevertheless considered an underlying principle of the VCLT.<sup>100</sup> Sorel et al. reference, in particular, the *travaux préparatoires* of Article 31 of the VCLT, some of which contain an expressis verbis reference to “effectiveness,” which did not survive into later drafts. Sorel et al. suggest that effectiveness is implicit in good faith obligations of Article 26 VCLT and in interpretation in the light of the object and purpose,<sup>101</sup> for instance, constructive teleological interpretation and interpretation according to the principle of *effet utile* (*ut res magis valeat quam pereat*, i.e., “that the matter may have effect rather than fail”).<sup>102</sup>

Occasionally, in international law, the device of an “implementing treaty or agreement” is used to give effect to certain elements of a treaty. An example of such an implementation agreement is the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks<sup>103</sup> (the “Straddling Fish Stocks Agree-

97 Dorsey Gray L, ‘A Celebration of the Scholarship And Teaching Of. Washington University Law Quarterly’ (1987) 65 (4); Kohona, Palitha TB, ‘The Implementation of International Economic Agreements Within Municipal Legal Systems and Its Implications’ (1987) Wash. ULQ.

98 Mrema Elizabeth Maruma, *Cross-cutting issues related to ensuring compliance with MEAs. Ensuring Compliance with Multilateral Environmental Agreements* (Brill Nijhoff 2006) page 213

99 Rietiker, Daniel. (2019). Effectiveness and Evolution in Treaty Interpretation. <[https://www.researchgate.net/publication/336042443\\_Effectiveness\\_and\\_Evolution\\_in\\_Treaty\\_Interpretation](https://www.researchgate.net/publication/336042443_Effectiveness_and_Evolution_in_Treaty_Interpretation)>

100 See also Dörr, Oliver. “Article 31: General Rule of Interpretation.” In *Vienna Convention on the Law of Treaties: A Commentary*. Edited by Oliver Dörr and Kirsten Schmalenbach, 521–570. Heidelberg, Germany: Springer, 2018.

101 Sorel, Jean-Marc, and Valérie Boré Eveno. “Article 31 of the Convention of 1969.” In *The Vienna Conventions on the Law of Treaties: A Commentary*. Vol. 1. Edited by Olivier Corten and Pierre Klein, 804–837. Oxford and New York: Oxford University Press, 2011.

102 On the interpretation of treaties, see eg; Alland, Denis. “L’interprétation du droit international public.” *Recueil des Cours* 362 (2012): 41–394 or Rose, Cecily (et al): “An introduction to Public International Law”, CUP 2022, page 69 ff.

103 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling



ment”). The Straddling Fish Stocks Agreement was entered into so as to give effect to certain parts of the Convention on the Law of the Sea and to enter into further detail in relation to the subject matter of fish stocks which was covered by part XI of the Convention on the Law of the Sea (UNCLOS),<sup>104</sup> i.e., it was entered into as a means to enhance the effectiveness of UNCLOS in relation to fish stocks.<sup>105</sup>

An implementing agreement might also refer to “any later agreement that is concluded by some or all of the parties to an original treaty for the purpose of adapting the general rules of that treaty to a specific region.”<sup>106</sup> Implementing agreements do not necessarily have to be “anticipated by the original treaty, and thus there is no direct relationship between the two instruments”<sup>107</sup> but nevertheless improve the effectiveness of the original treaty.

In relation to the enforcement of public international law, it is important to note that, unlike national or EU law, international public law does not have a central law enforcement entity, i.e., there is no “Guardian of the Treaties” as the Commission’s role in relation to the EU Treaties has been described.<sup>108</sup> This means that the care for the application and enforcement of international treaties is “entrusted to the States concerned,”<sup>109</sup> i.e., to the parties to the relevant treaties.

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- Fish Stocks and Highly Migratory Fish Stocks (United Nations [UN]) 2167 UNTS 3, UNTS Reg No I-37924, UN Doc A/CONF.164/37
- 104 (United Nations [UN]) 1833 UNTS 3, UNTS Reg No I-31363, UKTS 81 (1999), UN Doc A/Conf.62/122, Part XI
- 105 For a discussion on a possible bio-diversity focussed implementation agreement pursuant to UNCLOS, see Druel Elisabeth and Kristina Gjerde, ‘Sustaining marine life beyond boundaries: Options for an implementing agreement for marine biodiversity beyond national jurisdiction under the United Nations Convention on the Law of the Sea’ (2014) *Marine Policy* 49 <<https://doi.org/10.1016/j.marpol.2013.11.023>>
- 106 Chie Kojima, Vladlen S Vereshchetin “Implementation Agreements” in Max Planck Encyclopedia of Public International Law [MPEPIL], last updated March 2013, available at <<https://opil.ouplaw.com/display/10.1093/law:epil/9780199231690/law-9780199231690-e1419>> An example of a regional implementation agreement is the “Agreement on Illicit Traffic by Sea, implementing Article 17 of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances” Council of Europe, European Treaty Series No 156, available at <<https://rm.coe.int/168007cdab>>
- 107 Chie Kojima, *ibid.*
- 108 Börzel, Tanja A, *Guarding the treaty: the compliance strategies of the European Commission. The state of the European Union* (6<sup>th</sup> edn, 2003) or Reiners, Konstantin and Esther Verluis, ‘NGOs as new Guardians of the Treaties? Analysing the effectiveness of NGOs as decentralised enforcers of EU law’ (2022) *Journal of European Public Policy*
- 109 Hiroshi Taki (2013) *Effectiveness* <Oxford Public International Law: Effectiveness (ouplaw.com)>

Meaning of Implementation in this Manuscript

Implementation is the process of giving effect to a norm in legal order. That process of implementation will involve transposing the relevant EU norm (directive) or norm of an international treaty into a binding national norm which can be operationalised, applied, and enforced. This process will also involve the application of legal norms that define such a process and require the necessary resources to apply the relevant norm and to create effective compliance monitoring and enforcing mechanisms.

C) Effective Implementation in this dissertation

On the basis of the above definitions of effectiveness and implementation, the following working definition of “effective implementation” shall be adopted for the purposes of this dissertation:

Effective implementation means

1. to the extent required, the transposition of an EU or international norm into national law in accordance with the relevant norms applying to the process of transposition;
2. that the relevant norm creates a result that meets their intended policy objective,
3. that parties obligated pursuant to the relevant norm give effect to it by acting in accordance with the same; and
4. that non-compliance with the relevant norm is being sanctioned by a clear enforcement regime.

Specifically for this dissertation, in the application of this definition, the policy objectives referred to in limb (2) of the above definition are the Brexit objectives as defined in section 2.3.1 (D) above.

#### **2.3.4 The normative criteria as intrinsically linked criteria**

The overarching research question asks to what extent is the TCA an adequate post-Brexit regime for the energy sector in the UK and the EU.

As defined in section 2.2 above, for the purpose of this dissertation, adequate means that the TCA delivers legal certainty, has been effectively implemented and meets the Brexit objectives.

Therefore, the normative criteria are intrinsically linked and build on one another in assessing the TCA in light of the research question.

For the purposes of this dissertation, the Brexit objectives form the “policy baseline” for the TCA. As the focus of this dissertation is the adequacy of the TCA in relation to the energy sector, this dissertation will assess whether the TCA meets the general Brexit objectives of (1) the UK taking control in relation to its legislation, ending the supremacy of EU law and the jurisdiction of the European Court of Jus-

tice (“ECJ”); (2) the freest possible trade in goods and service between the UK and the EU; and (3) certainty as to the application of laws.

In addition, this dissertation also considers whether the TCA meets the energy Brexit objectives in relation to the energy sector, i.e., the continued efficient trading over interconnectors, limited technical cooperation between TSOs and organisations concerned with the planning of energy infrastructure, support for renewable energy projects in the North Sea as well as the continued operation of the iSEM, the integrated single electricity market on the island of Ireland.

Being a legal dissertation, the criterion of meeting the Brexit objectives will be looked at in an abstract manner, i.e., whether the regulatory and formal requirements potentially capable of achieving the intended objectives are in place.

As one of the general Brexit objectives is the “certainty as to the application of laws,” this element is assessed through the normative criterion of legal certainty.

Under the normative criterion of legal certainty, this dissertation considers whether the TCA delivers on the Brexit objective of certainty by setting out foreseeable (predictable), knowable, clear, precise provisions which are consistently applied and are not dependent on the exercise of discretion.

In order to meet the adequacy criterion, the TCA will also need to meet the normative criterion of effective implementation: Therefore, this dissertation will assess whether it has been transposed, to the extent required, into national law, whether the UK and the EU give effect to it by acting in accordance with the same, and whether non-compliance with the TCA is being sanctioned by a clear enforcement regime. The normative criterion of effective implementation, as defined in Section 2.3.3 above, also contains the criterion of whether the TCA meets its policy objectives. As explained in Section 2.3.3 above, the relevant policy objectives to assess this criterion are, for the purposes of this dissertation, the Brexit objectives.

## 2.4 Market, Sector, and Industry

After defining the three normative criteria used in this dissertation, it is necessary to define the concept of the energy sector used in the research question and distinguish it from the concepts of the energy market and energy industry, as these terms are used in the literature and in this dissertation as appropriate in the relevant context.

### 2.4.1 The energy sector

The Cambridge Dictionary defines “sector” as “one of the areas into which the economic activity of a country is divided.”<sup>110</sup> By analogy, this can be extended to the geographical area of the EU (rather than a country).

The Global Industry Classification Standard is an industry analysis framework that helps investors understand the key business activities of companies around the world and is maintained by MSCI and S&P Dow Jones Indices.<sup>111</sup> It suggests that the energy sector consists of two industries: “energy equipment and services” and “oil, gas, and consumable fuels.”<sup>112</sup> However, this definition applies to the conventional, fossil-fuel-based part of the energy sector only and disregards the role of renewable energy in the wider energy sector.

It is, therefore, appropriate to posit that the energy sector consists of a fossil-fuel sub-sector and a renewable energy sub-sector, which in turn “consists of several sub-sectors, including solar photovoltaics, wind energy, hydropower, liquid biofuels, solid biomass, biogas, solar heating and cooling, concentrated solar power, ocean energies, geothermal energy, heat pumps, and municipal and industrial waste.”<sup>113</sup>

It can be inferred that the term sector describes a large segment of the economy and therefore extends beyond the more specific definition of “energy market.” As such, the energy sector would also include companies who, e.g., produce and supply goods and services to market participants, e.g., solar panels for a solar generation project or brokers of insurance products specific to, e.g., the transport of gas. This definition would also include financial service providers, including banks, who might provide finance to energy projects such as interconnectors or new power stations.

### 2.4.2 The energy market

The Cambridge Dictionary defines a market as “a place or event at which people meet in order to buy and sell things;”<sup>114</sup> similarly, the Oxford Learner’s Dictionary provides “an occasion when people buy and sell goods; the open area or building where they meet to do this”<sup>115</sup> by way of definition.

110 <<https://dictionary.cambridge.org/dictionary/english/sector>>

111 For more on the Global Industry Classification Standard, see also Nagy László and Mihaly Ormos, *Review Of Global Industry Classification* (ECMS 2018)

112 <<https://www.msci.com/documents/1296102/1339060/GICSSectorDefinitions.pdf/fd3a7bc2-c733-4308-8b27-9880dd0a766f>>

113 Czako, Veronika, “Employment in the Renewable Energy Sector”, Science for Policy report by the Joint Research Centre of the European Commission, Luxembourg 2020

114 <<https://dictionary.cambridge.org/dictionary/english/market>>

115 ‘Market’ (Oxford Learner’s Dictionaries) <[https://www.oxfordlearnersdictionaries.com/definition/english/market\\_1?q=market](https://www.oxfordlearnersdictionaries.com/definition/english/market_1?q=market)>

In relation to the energy market, Mousavi et al. have expanded this to posit that “[t]he energy market is basically a market handling process specifically with the trade and provision of energy, which may refer to the electrical energy market or other energy resources.”<sup>116</sup>

In the context of the EU, the currently applicable Electricity Directive<sup>117</sup> defines “electricity markets” as “markets for electricity, including over-the-counter markets and electricity exchanges, markets for the trading of energy, capacity, balancing and ancillary services in all timeframes, including forward, day-ahead and intraday markets.” This definition is somewhat circular and narrow: it is circular in that it relies on an understanding of what the market is and narrow in that it does not explicitly include both generation and suppliers and generators of electricity. It may, however, be inferred that an electricity market is a place, whether physical or virtual, in which electricity may be sold and purchased.

At a physical level, the electricity market is based on an underlying supply chain which consists of the installations that generate and transport electricity to consumers. This value chain from generation to final consumption includes generators, the transmission and distribution system, and final consumers.<sup>118</sup>

In relation to gas, there is no equivalent definition in the current EU Gas Directive. In analogy to the definition of the 2019 Electricity Directive, it could be said that for the purposes of the EU, the gas market comprises “markets for gas, including over-the-counter markets and gas exchanges, markets for the trading of energy, gas pipeline capacity services in all timeframes, including forward, day-ahead and intraday markets.” At a physical level, the gas supply chain consists of upstream installation to produce the gas, refineries, the transportation and distribution network, and final consumers.<sup>119</sup>

The above definitions could, by analogy, also be applied to other energy products such as oil. However, the internal energy market, as understood and regulated by the EU (as summarised in section 6 below), relates to electricity and gas, while markets for other energy products, such as oil, are not regulated in the same way by the EU

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116 Fariba Mousavi, Morteza Nazari-Heris, Behnam Mohammadi-Ivatloo, Somayeh Asadi, chapter 1 – Energy market fundamentals and overview, in *Energy Storage in Energy Markets* Eds: Behnam Mohammadi-Ivatloo, Amin Mohammadpour Shotorbani, Amjad Anvari-Moghaddam, Academic Press, 2021. For a general introduction to energy markets, see: Mulder Machiel, ‘*Regulation of Energy Markets: Economic Mechanisms and Policy Evaluation*’ (2020) Springer

117 Directive 2019/944, article 2(9)

118 For a detailed discussion of energy supply chains, please see also: Mulder, Machiel: ‘*Regulation of Energy Markets: Economic Mechanisms and Policy Evaluation*’, Springer 2020, page 26ff

119 In relation to the gas supply chain generally, see e.g. Hamed Maryam, Reza Zanjirani Farahani, Mohammad Moattar Husseini and Gholam Reza Esmaeilian, ‘A distribution planning model for natural gas supply chain: A case study’ (2009) 37(3) *Energy Policy*

legislators. On this basis, references to the EU (and, by extension, the UK) energy market in the context of this dissertation should be read as references to the markets for gas and electricity, respectively.

### 2.4.3 The (energy) industry

The Cambridge Dictionary defines industry as the companies and activities involved in the process of producing goods for sale, especially in a factory or special area.<sup>120</sup> In this dissertation, the term “industry” has therefore been construed to refer to specific groups of companies involved with similar activities in a particular area of the energy sector, for instance, in relation to the nuclear industry.

The “nuclear industry,” therefore, comprises all companies actively working involved with aspects of nuclear energy. This includes a wide range of companies, such as the producers of heavy water or enriched uranium, service companies providing operation and maintenance services to nuclear power stations, as well as nuclear power stations and providers of specialist transport services.

In this dissertation, the term “industry” is also used at times to refer to companies generally active in the energy sector in contrast to other stakeholder groups, such as consumers, in the wider energy sector.

## 3 METHODOLOGICAL FRAMEWORK

As Henn et al. have explained, there is a clear distinction to be drawn between “method” and “methodology.”<sup>121</sup> Whereas “method refers to the range of techniques that are available to us to collect evidence about the social world,” they state that “[m]ethodology, however, concerns the research strategy as a whole.”<sup>122</sup>

Non-lawyers, but also lawyers not engaged in the academic study of law, have at times assumed that the method necessary for the academic study (as opposed to the practical application) of law did not require an explicit clarification or study in itself.<sup>123</sup> Or they have assumed that legal methodologies might simply be implicitly understood or otherwise be absorbed by trainee legal practitioners as “savoir-faire” handed down over generations of lawyers.<sup>124</sup>

120 Cambridge Dictionary, ‘Industry’: <<https://dictionary.cambridge.org/dictionary/english/industry>>

121 Matt Henn, Mark Weinstein and Nick Foard, ‘A Critical Introduction to Social Research’ (2nd edn, Sage 2006) 10.

122 *ibid.*

123 HEB Tijssen, *De juridische dissertatie onder de loep: De verantwoording van methodologische keuzes in juridische dissertaties* (Boom Juridische Uitgevers 2009) 145.

124 Sébastien Pimont, *À propos de l’activité doctrinale civiliste, quelques questions dans l’air du temps*

Others, such as Kestemont,<sup>125</sup> with a bibliographical reference to H.E.B. Thijsen and F. Kunneman, have gone so far as to suggest an “absence of an explicit methodological tradition”<sup>126</sup> in legal research on the basis that little literature on legal methodology was available. However, this position seems to disregard a long European legal-philosophical tradition which explicitly addresses matters of legal methodologies not only in terms of individual research projects but in terms of the place of law in philosophical systems and the function of the law within the politico-legal system and society in general.

Without wishing to digress too far, it seems appropriate to mention a couple of key reference points in the world of legal research and methodology which have had a lasting impact on European legal research, its philosophical positioning, and societal impact. At the same time, these classical reference points will also serve as a contrast to and better definition of my own methodology as applied to this dissertation.

According to Hans Kelsen, pure legal science is to be exclusively descriptive in that it does not contain any form of evaluation or judgement but rather aims to separate the law from any kind of interpretative influence.<sup>127</sup> Kelsen’s position can be said to be the most purist approach in doctrinal legal research.

In his essay on legal methodology, van Hocke, by suggesting that “describing the law is the first step in any legal research,”<sup>128</sup> reduced the space that is accorded to a description of the law to one amongst other research steps and approaches in legal research. Others have concurred with this point of view and taken the approach that describing the law is “not a subordinate activity of the researcher”<sup>129</sup> but in fact, an essential part of the work of legal scholars.

In a political context, this has been captured by Rosa Luxemburg in her dictum “*Wie Lassalle sagte, ist und bleibt die revolutionärste Tat, immer ‘das laut zu*

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(2006) RTD Civ 707.

125 Lina Kestemont, *Handbook on Legal Methodology – From Objective to Method* (Intersentia 2018)

126 *ibid.*

127 “Ziel der reinen Rechtslehre ist, die wissenschaftliche Beschreibung des Rechts von den ihr fremden Beimengungen [...] soziologischer, psychologischer, biologischer, religiöser, ethischer und politischer Art zu scheiden”, in Matthias Jestaedt, *Reine Rechtslehre – Studienausgabe der 1. Auflage von 1934* (Mohr Siebeck 2008).

128 Mark van Hoecke, ‘Aard en methode van rechtsdogmatiek’ (1984) R & R 191.

129 The full quotation is: “Het gaat hier niet om een bijkomstige nevenwerkzaamheid van de rechtswetenschappelijke onderzoeker, maar om een essentieel bestanddeel van zijn werk.”, AR Bloembergen, ‘Iets over object en method van wetenschap en rechtspraak in het privaatrecht’ in OWM Kamstra, FBM Kunneman and CW Maris (eds), *Nederlandse rechtswetenschap; tussen distantie en betrokkenheid: paradigma’s in de twintigste eeuw* (W.E.J. Tjeek Willink 1988) 74.

*sagen, was ist.*”<sup>130</sup> Whilst this dissertation is a dissertation in law, the politics and policies which led to Brexit and accompanied the negotiations are important background to the legal focus of this dissertation and will need to be taken into consideration in the Constituting Manuscripts.

Any legal analysis, let alone one which sets to comment on Brexit in relation to the energy market, will require some description of the applicable law.

This is true of the Constituting Manuscripts, and it can therefore be said that this dissertation takes a doctrinal approach. Doctrinal research has been defined as “a detailed and highly technical commentary upon, and systematic exposition of, the context of legal doctrine.”<sup>131</sup> Doctrinal research has historically “always included an interdisciplinary aspect.”<sup>132</sup>

Any legal consideration of Brexit and its impact on the energy market will naturally consider relevant aspects of EU law. As far as the EU law aspects of this dissertation are concerned, they are considered in a “negative analysis” or “counterfactual legal scenario,” which analyses (a) what the law in a (former) Member State is when EU law ceases to apply in that state, and specifically if the *acquis communautaire* (partially)<sup>133</sup> is removed in relation to energy law; and (b) what the impact the void created by that removal might be.

EU law, and in particular European energy law, requires a more holistic approach that not only reflects the multi-tiered methodology of the “[s]trategy, governance and regulation of the European Energy Union”<sup>134</sup> but also takes into account that, in law as well as generally, “energy has a horizontal”<sup>135</sup> if not transversal quality. It, therefore, lends itself to a hybrid approach which takes into account not only black letter law but also the wider context in which the law is applied.<sup>136</sup>

130 “As Lasalle has said, it is and remains the most revolutionary act to say ‘what is’” (own translation), quote as per Rosa Luxemburg, *Internationalismus und Klassenkampf – Die politischen Schriften* (Luchterhand 1971) 338.

131 Michael Salter and Julie Mason, *Writing Law Dissertations – An Introduction and Guide to the Conduct of Legal Research* (Pearson 2007) 49.

132 Terry Hutchinson, ‘Valé Bunny Watson? Law Librarians, Law Libraries and Legal Research in the Post-Internet Era’ (2014) 106(4) *Law Library Journal*

133 As referenced in section 5.1.2 (D) of this chapter, whilst EU law no longer applies as such in the UK, Retained EU Law continues to apply in the UK, even though this constitutes a separate category of domestic UK law and is not part of the *acquis Communautaire*, as the EU has, post-Brexit, been ‘cut off’ as a source of this category of law.

134 Volker Roeben, *Towards a European Energy Union – European Energy Strategy in International Law* (CUP 2018) 7.

135 *ibid* 1-14.

136 For a detailed discussion of a contextual approach to EU law, see Carol Harlow, ‘The EU and law in context: the context’ (2022) 1 *European Law Open* 209.



A meaningful approach to legal research in relation to EU energy law is therefore somewhat removed from Kelsen's positivist philosophy or any purely, if less rigid, descriptive approach to legal research, as these types of methodologies do not fit well with the purposive interpretative, and to some extent interdisciplinary, approach which is intrinsic to European law itself.<sup>137</sup>

The Constituting Manuscripts in chapters 2–4 expound what the impact of both an impending change in UK law due to Brexit might be, as well as what the future, post-Brexit relationship between the UK and the EU might look like and what challenges such a governance framework might bring for the energy sector. These Constituting Manuscripts can therefore be said to be doctrinal and, by necessity, prospective in approach as they sketch out and analyse how the impending Brexit might affect the energy market or particular aspects thereof.

Those of the Constituting Manuscripts which have been written after the entry into force of the TCA (i.e., chapters 5–7) are both retrospective in the sense that they analyse how the TCA has impacted the energy sector and prospective in the sense that they identify future developments which, due to the nature of the TCA, might yet occur.

Chapters 5–7 all discuss the jurisprudential, and to some extent, practical, consequences of the doctrinal analysis of the TCA. These consequences are of particular relevance for the conclusion which provides a summary of the main findings of the Constituting Manuscripts and answers the research question.

As such, this dissertation adopts a methodologically hybrid approach which will include (1) methods traditionally associated with doctrinal or jurisprudential research and (2) the jurisprudential, and, to some extent, practical, consequences of the doctrinal analysis, which serve as a basis to formulate suggestions for the future energy cooperation between the EU and the UK.

## 4 RELEVANCE

This section sets out the relevance of this dissertation by reference to its societal relevance (section 3.1) as well as its scientific relevance (section 3.2). Section 3.3 summarises the discussion in section 3.1. and 3.2 and concludes this section 3.

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<sup>137</sup> For an in-depth discussion of the development of a methodology suitable to EU law which traces the journey from pure the 'black-letter law' doctrinal approach historically applied to EU law to a more please see Ulla Neergard and Marlene Wind, 'Studying the EU in Legal and Political Science Scholarship' in Ulla Neergard and Ruth Nielsen (eds) *European Legal Method in a Multi-Level EU Legal Order* (DJØF Publishing 2012) 263 ff.

## 4.1 Societal Relevance

The debate in the UK in the run-up to the Referendum focused on issues of sovereignty,<sup>138</sup> “taking back control,”<sup>139</sup> and resource allocation away from payment of the EU membership costs to, e.g., the NHS,<sup>140</sup> as well as migration<sup>141</sup> and the possibility of regulatory reform.<sup>142</sup> Energy and the UK’s participation in the IEM did not feature much in the public debates before or after the Referendum. As Froggatt et al. have noted, there are a number of reasons as to why “both the UK and the EU should treat energy, and in particular electricity, as a special case.”<sup>143</sup>

These reasons include:

1. The essential importance of energy as a vital public service, the need to maintain affordable supply security “for the normal functioning of the economy” paired with the risk for the functioning of the whole of society if “energy prices are high or if energy supply is disrupted.”
2. Difficulties and costs pertaining to the storage of electricity and the consequent need to maintain availability and system stability on the basis of a “clear regulatory framework and government oversight.”
3. The increased use of intermittent renewable energy sources as part of the decarbonisation trend and the fact that the efficiency of the use of renewable energy

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138 On the use of the sovereignty narrative in the Brexit debate, see e.g. Agnew John, ‘Taking back control? The myth of territorial sovereignty and the Brexit fiasco’ (2020) 8(2) *Territory, Politics, Governance*. For a glimpse at the public debate in the UK on this topic in 2016, see, for instance: <<https://www.theguardian.com/politics/2016/feb/24/sovereignty-autonomy-and-britain-relationship-with-europe>>

139 See, e.g. Baldini Gianfranco, Edoardo Bressanelli and Stella Gianfreda, *Taking back control? Brexit, sovereigntism and populism in Westminster (2015–17)* (Routledge 2021); <<https://www.theguardian.com/politics/2016/feb/24/sovereignty-autonomy-and-britain-relationship-with-europe>>

140 See, e.g. Kettell Steven and Peter Kerr, ‘The Brexit religion and the holy grail of the NHS’ (2021) 20(2) *Social Policy and Society*; Independent, ‘Brexit: Vote Leave chief who created £350m NHS claim on bus admits leaving EU could be ‘an error’ <<https://www.independent.co.uk/news/uk/politics/brexit-latest-news-vote-leave-director-dominic-cummings-leave-eu-error-nhs-ps350-million-lie-bus-advert-a7822386.html>>

141 See e.g. Goodman Simon, ‘Take Back Control of Our Borders: The Role of Arguments about Controlling Immigration in the Brexit Debate.’ *Rocznik Instytutu Europy Środkowo-Wschodniej*’ (2017) 15 (3). or Cap Piotr, ‘*Britain is full to bursting point! Immigration themes in the Brexit discourse of the UK Independence Party.*’ *Discourses of Brexit*. (Routledge 2019)

142 Jancic Davor, ‘Regulatory strings that bind and the UK Parliament after Brexit’ (2022) 20 (5) *Comparative European Politics*

143 Froggatt Antony, Georgina Wright and Matthew Lockwood, ‘Staying Connected. Key Elements for UK–EU27 Energy Cooperation After Brexit’ (2017).

“sources will be enhanced by cross-border trade in electricity, for example, as excess supply in some regions is transferred to other regions.”

4. The network-bound nature of especially electricity and, to at least a significant extent, gas and their resulting dependency network or pipeline infrastructure, which in turn relies on a stable regulatory regime for its operation and build-out, e.g., in the case of new electricity interconnectors.
5. In relation to electricity especially, the fact that it is not traded globally and therefore needs a more regional market.

Whilst Froggatt et al. listed these reasons during the Brexit negotiations, i.e., prior to the TCA's adoption, they apply no less in the post-TCA phase as Brexit continues to have an impact on the wider EU-UK relationship and the energy sector post-TCA.

Whereas the TCA provides a general governance framework for the post-Brexit relationship between the EU and the UK and contains a title addressing issues pertaining to the energy market, in some regards, the detail of this regime is still evolving.

By way of example, in relation to the electricity trading arrangements between the EU and the UK, the adoption (and, in due course, implementation) of the anticipated multi-region, low-volume couple regime has missed the deadline for its introduction provided in the TCA, and discussions between the relevant stakeholders continue whilst electricity trading is effectively carried out on a “no deal basis,” i.e., without an agreed regime.

The impact of Brexit in relation to energy trading was a particularly prominent topic in the Irish discussion in relation to Brexit and the TCA negotiations. Ireland, which was connected to the EU energy markets by virtue of its electricity and gas interconnectors with the UK, found itself isolated from the IEM as a result of Brexit, which led to particular fears regarding her supply security and the functioning of the (i)SEM.

As early as 2015, i.e., ahead of the Referendum, Barret et al. pointed to the potential consequences of Brexit for Ireland's supply security and the danger that Brexit might pose to the SEM.<sup>144</sup>

Since then, this topic has featured prominently both in the Irish as well as the wider EU debate on Brexit and, to a lesser extent, in the UK.<sup>145</sup>

<sup>144</sup> Barrett, A., Bergin, A., FitzGerald, J., Lambert, D., McCoy, D., Morgenroth, E., Siedschlag, I. and Studnicka, Z., 2015. Scoping the possible economic implications of Brexit on Ireland. Dublin: Economic and Social Research Institute.

<sup>145</sup> See, for instance, Kinsella, S., 2021. Brexit and the economy of Ireland. In: Ireland and the European Union (pp. 152-165). Manchester University Press.

Other aspects, such as the participation of the UK in the North Seas Energy Cooperation group (or otherwise), have a practical impact on the development of an offshore grid in the North Sea. As the UK plans to add further interconnector capacity to a total of 18 GW installed capacity,<sup>146</sup> questions as to the interface of the UK and EU regulatory regimes and possible divergence and difficulties are likely to require the attention of the relevant market participants and regulatory authorities alike, in particular as both the EU and the UK are considering the future design of their electricity markets.<sup>147</sup>

The new geopolitical realities following the Russian invasion of Ukraine on 24 February 2022 have raised fundamental questions regarding Europe's energy security and cooperation regarding the same and pose the question of the energy relationship between the UK and the EU anew.

Additionally, the TCA is due for review in 2025<sup>148</sup> and its energy arrangements are set to expire on 30 June 2026<sup>149</sup>—further changes, for both the overall UK-EU relationship as well as the energy market, may lie ahead.

Therefore, this dissertation provides relevant background analyses on the impact of Brexit and the likely legal issues that energy market participants, regulatory authorities, and governments will face.

## 4.2 Scientific Relevance

There have been many academic publications on various aspects of Brexit as well as Brexit and energy from the time that the Referendum was announced. In order to show how this dissertation adds to the state of the art of the scientific debate (section 3.2.4), I will first introduce the relevant literature pertaining to Brexit generally (section 3.2.1) and Brexit and energy (section 3.2.2). Section 3.2.2 will be split into subsections surveying the literature on policy (subsection A), economic issues (subsec-

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<sup>146</sup> Ofgem, 'Application Guidance for the Third Cap and Floor Window for Electricity Interconnectors' (7 July 2022) <[www.ofgem.gov.uk/sites/default/files/2022-07/ApplicationGuidance\\_ThirdWindow.pdf](http://www.ofgem.gov.uk/sites/default/files/2022-07/ApplicationGuidance_ThirdWindow.pdf)>, p. 8.

<sup>147</sup> For details on the prospective UK electricity market review see: Department for Business, Energy & Industrial Strategy, 'Review of Electricity Market Arrangements' (July 2022) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1098100/review-electricity-market-arrangements.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1098100/review-electricity-market-arrangements.pdf)>; for the EU consultation on the reform of the EU's electricity market design, see: European Commission, 'Electricity market – reform of the EU's electricity market design' <[https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13668-Electricity-market-reform-of-the-EUs-electricity-market-design/public-consultation\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13668-Electricity-market-reform-of-the-EUs-electricity-market-design/public-consultation_en)>.

<sup>148</sup> TCA, Article 776.

<sup>149</sup> TCA, Article 331.

tion B), legal aspects of energy and Brexit (subsection C) and other relevant literature (subsection D). As it is useful to situate the discussion about the impact of Brexit on the energy sector in the UK and the EU and this dissertation in the context of existing scholarship on EU energy law, section 3.2.3 will provide an overview of the relevant literature on EU energy law. This approach allows for highlighting the added scientific value of this dissertation and positioning it within the broader scientific debate.

#### 4.2.1 The scientific debate on Brexit: State of the art

Since the beginning of the Brexit process, a plethora of academic publications have emerged to consider various aspects of Brexit in great depth and detail from a political,<sup>150</sup> politico-psychological,<sup>151</sup> economic,<sup>152</sup> UK and Irish constitutional,<sup>153</sup> EU trea-

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150 Gamble, Andrew, ‘Taking back control: the political implications of Brexit’ (2018) 25 (8) *Journal of European public policy* <<https://doi.org/10.1080/13501763.2018.1467952>>; Federico Fabbrini (op cit. n 62) Given the volume of Brexit related publications which have emerged since the referendum and in particular since the entry into force of the TCA, it is virtually impossible to provide a comprehensive overview of Brexit related literature. The list of cited works has therefore no claim to completeness and should be taken as an indication as to the depth, range and volume of the literature on the topic. A historiographic or in-depth overview of Brexit related literature may be a desideratum for future research and publication.

151 Andreouli Eleni and Cathy Nicholson. ‘Brexit and everyday politics: An analysis of focus-group data on the EU referendum’ (2018) 39 (6) *Political Psychology*

152 Michael G. Pollitt, ‘The further economic consequences of Brexit: energy, Cambridge Working Paper in Economics’ (6 September 2021) <[cwpe2161.pdf](https://www.cam.ac.uk/files/cwpe2161.pdf) (cam.ac.uk)>

153 On Brexit and the UK constitution, see, Keating, Michael. “Brexit and the territorial constitution of the United Kingdom.” *Droit et société* 98, no. 1 (2018): 53-69; on the constitution of Northern Ireland, see Whitten, Lisa Claire. “Brexit and the Northern Ireland Constitution.” PhD diss., Queen’s University Belfast, 2021. <[https://pure.qub.ac.uk/files/247799468/BrexitNICConstitution\\_LCW\\_Thesis\\_1Sept2021.pdf](https://pure.qub.ac.uk/files/247799468/BrexitNICConstitution_LCW_Thesis_1Sept2021.pdf)> on Brexit and the Irish constitution, see Humphreys, Richard. “Beyond the border: the Good Friday Agreement and Irish unity after Brexit”, Merrion Press, 2018. On the specific Irish constitutional issues and a prospective all-Ireland constitution as a consequence of Brexit, see e.g. Doyle, Oran; Kenny, David and McCrudden, Christopher: “The Constitutional Politics of a United Ireland” in: Doyle Oran, Aileen McHarg, and Jo Murkens eds. *The Brexit challenge for Ireland and the United Kingdom: constitutions under pressure* (Cambridge UP 2021).

ty,<sup>154</sup> EU integration policy,<sup>155</sup> EU institutional,<sup>156</sup> EU external relations,<sup>157</sup> systems theory<sup>158</sup>, federalist,<sup>159</sup> and philosophical<sup>160</sup> perspectives, to name but a few approaches.

By its nature, and for the EU in particular, Brexit constitutes a form of disintegration. There has been some academic discussion of Brexit as a disintegration event, for instance, by Schimmelfennig<sup>161</sup> and Leruth et al.<sup>162</sup>

Some have considered Brexit from a general sector economic perspective,<sup>163</sup> while others have focused on specific industry sectors, such as, the finance<sup>164</sup> or tourism<sup>165</sup> sector.

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- 154 See, e.g. Craig Paul P, *The process: Brexit and the anatomy of Article 50. The Law and Politics of Brexit* (OUP 2017)
- 155 See, e.g. Thierry Chopin and Christian Lequesne, 'Disintegration reversed: Brexit and the cohesiveness of the EU27, *Journal of Contemporary European Studies*' (2021),29 (3)
- 156 Jacobs Francis B, *The EU after Brexit: Institutional and Policy Implications* (Palgrave, UK 2018); Chelotti Nicola, and Edoardo Bressanelli, 'Assessing What Brexit Means for Europe: Implications for EU Institutions and Actors' (2021) 9 (1) *Politics and Governance*.
- 157 Ramses A. Wessel, 'Consequences of Brexit for international agreements concluded by the EU and its Member States', (2018), 55, *Common Market Law Review*, Issue 2; for a general legal overview of the international aspects of Brexit; Vara Juan Santos and Ramses A. Wessel eds, *The Routledge Handbook on the International Dimension of Brexit* (Routledge 2020)
- 158 Paterson John, "Politics, law and legitimacy: Re-constructing Brexit from a systems theory perspective" In: *Luhmann and Socio-Legal Research* (Routledge 2020).
- 159 See, for instance: Glencross Andrew, 'Managing differentiated disintegration: Insights from comparative federalism on post-Brexit EU–UK relations' (2021) 23 (4) *The British Journal of Politics and International Relations*.
- 160 Glencross Andrew and Andrew Glencross, 'Rousseau's Revenge: The Political Philosophy of Brexit. Why the UK Voted for Brexit: David Cameron's Great Miscalculation' (2016)
- 161 Schimmelfennig Frank, 'Brexit: differentiated disintegration in the European Union' (2018) 25(8) *Journal of European public policy*
- 162 Leruth Benjamin, Gänzle, Stefan and Trondal Jarle (eds), *The Routledge Handbook of Differentiation in the European Union*, especially pt 5 "Brexit" p 597 – 719 and specifically also, *ibid*: Mikko Kuisma and Matthew Donoghue, "Brexit as a phenomenon: national solidarity tool against the European project?" p 605 – 618.
- 163 Ramiah Vikash, Huy NA Pham and Imad Moosa, 'The sectoral effects of Brexit on the British economy: Early evidence from the reaction of the stock market' (2017) 49 *J. Appl. Econ*,
- 164 See, e.g. Schoenmaker Dirk, *The UK financial sector and EU integration after Brexit: The issue of passporting* (Springer International Publishing 2017); Howarth David, and Lucia Quaglia, "Brexit and the single European financial market' (2017) 55 *J. Common Mkt. Stud*.
- 165 Hall Derek, *Brexit and tourism: Process, impacts and non-policy* (Channel View Publications 2020) vol 86

In addition, since the adoption of the Withdrawal Agreement and the TCA, academic publications and legal commentaries on each of these agreements have emerged.<sup>166</sup>

Against this backdrop, this dissertation offers a sector-specific analysis of the impact of Brexit on the energy sector from a legal perspective.

#### 4.2.2 The scientific debate on Brexit and energy: State of the art

Whilst there is a growing range of publications on Brexit and the TCA generally, there are relatively fewer publications dedicated to Brexit and energy and yet fewer publications focusing on the legal aspects of Brexit and the energy sector, as will be shown in the following sections.

Considering the body of literature on the topic of Brexit and energy, there is a preponderance of literature focusing on the economic or policy perspectives on this topic, such as:

##### A) Policy

A team led by Antony Froggatt at Chatham House has considered the impact of Brexit on the UK energy sector generally which also included a section on the impact of Brexit on the Irish energy sector.<sup>167</sup> Whilst this work touches on legal issues, it is not a specific legal publication and considers the wider energy policy issues arising from Brexit. Similarly, a study by the European Parliament considers the wider Brexit-related energy policy issues for the EU.<sup>168</sup>

Others have considered the likely impact of Brexit on selected aspects of the UK energy sector. For instance, Pincott, Emmett, and Jones weigh up the potential impact on the UK's offshore wind industry from a prospective perspective, i.e., prior to the adoption and entry into force of the TCA.<sup>169</sup>

166 The UK-EU Withdrawal Agreement: A Commentary, edited by Manuel Kellerbauer, Eugenia Dumitriu-Segnana, and Thomas Liefländer. OUP 2021 or Federico Fabbrini (ed), *The Withdrawal Agreement* (OUP 2020).

Schiek Dagmar, *Brexit and the Implementation of the Withdrawal Agreement* (2021). On the TCA, see e.g. Kübek Gesa, Christian J. Tams and Jörg Philipp Terhechte, *EU/UK Trade and Cooperation Agreements: Handbook* (Nomos 2022).

167 Antony Froggatt, Thomas Raines and Shane Tomlinson, 'UK Unplugged? The Impacts of Brexit on Energy and Climate Policy' (Chatham House Research Paper, May 2016) <[www.chatham-house.org/sites/default/files/publications/research/2016-05-26-uk-unplugged-brexit-energy-froggatt-raines-tomlinson.pdf](http://www.chatham-house.org/sites/default/files/publications/research/2016-05-26-uk-unplugged-brexit-energy-froggatt-raines-tomlinson.pdf)> (op. cit.)

168 Directorate-General For Internal Policies Policy Department A: Economic And Scientific Policy The Impact of Brexit on the EU Energy System IP/A/ITRE/2017-01 November 2017 PE 614.181 <[https://www.europarl.europa.eu/RegData/etudes/STUD/2017/614181/IPOL\\_STU\(2017\)614181\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2017/614181/IPOL_STU(2017)614181_EN.pdf)>

169 Pincott Nicholas, Emmett Kathryn and Jones Lucy B, *Brexit: the potential impact on the UK's*



Several articles have considered the interdependency and interconnectedness of the UK and EU energy markets. Mayer et al. have posited that Brexit could impinge on further market integration and the development of new interconnector projects, with ensuing implications for the GB electricity market for 2030. Mayer et al. suggest that “despite increased British autonomy in energy and climate matters, there remains interdependency between British and EU energy policy.”<sup>170</sup>

Likewise, Dutton has considered the role of interconnectors in the UK-EU energy relation and noted that whilst Brexit had made interconnector development and operation more complex, they are nevertheless needed, and the UK should prioritise interconnector development in its Brexit negotiations with the EU.<sup>171</sup>

Lowe considers the connection between Brexit, policy, and economics and argues that “[n]either the economics nor the politics of energy markets favour policies to ‘take back control.’”<sup>172</sup> and that in order to achieve improved energy security, more, not less, solidarity with neighbouring states is required. For Lowe, the UK has to choose between economics and sovereignty, and a choice for the latter will jeopardise a positive and efficient economic outcome with lower prices and increased energy supply security.

Kuzemko et al. have considered the future of sustainable energy policy in the post-Brexit UK.<sup>173</sup> Likewise, Muinzer has considered the likely implications of Brexit on the EU climate and energy governance from a prospective perspective.<sup>174</sup>

Whilst the majority of publications addressing questions of energy policy and Brexit focus on electricity, possibly due to the level of integration of the electricity market in the EU, Makhholm has analysed the impact of Brexit in relation to a revival

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*offshore wind industr* (Lexis PSL legal database 2016)

- 170 Mayer Philip, Christopher Stephen Ball, Stefan Vögele, Wilhelm Kuckshinrichs and Dirk Rüb-  
belke, *Analyzing Brexit: implications for the electricity system of Great Britain* (2019) 12(17)  
Energies
- 171 Dutton Joseph, *UK-EU Electricity Interconnection: The UK’s Low Carbon Future and  
Regional Co-operation after Brexit* (E3G Briefing Paper 2019) available at <<http://www.jstor.com/stable/resrep21758>>
- 172 Lowe Philip, ‘Brexit and energy: time to make some hard choices’ (2018) 7(4) *European Energy  
& Climate Journal*
- 173 Kuzemko, Caroline, Mathieu Blondeel, and Antony Froggatt, ‘Brexit implications for sustainable  
energy in the UK’ (2022) 50(4) *Policy & Politics*
- 174 Muinzer Thomas ‘An Evaluation of the Implications of EU Climate and Energy Governance for  
the UK in light of Brexit’ in’ (2017) 23(2) *European Journal of Current Legal Issues*, <[https://discovery.dundee.ac.uk/files/29786624/Final\\_Published\\_Version.pdf](https://discovery.dundee.ac.uk/files/29786624/Final_Published_Version.pdf)>



for British gas,<sup>175</sup> and Abdul-Salam<sup>176</sup> considers the impact of Brexit in relation to the gas trade between the UK and the EU.

Others have considered the impact of Brexit on the energy policies and market design issues in Scotland and Northern Ireland, respectively.

Cairney et al., in 2018, discussed the impact of Brexit on the whole UK energy system and specifically the division of policy responsibilities among the market generally, the UK Government, and civil society after the loss of the EU legislative framework.<sup>177</sup>

In 2019, Cairney et al. considered the loss of the EU policy framework analysed in their 2018 article further and analysed the relationship between the UK and Scottish governments as far as the energy transition and the related transformation of the energy system is concerned, arguing that Brexit will have an impact on the allocation of policy responsibilities from the EU to the UK and the devolved administrations.<sup>178</sup> Little also focuses on the impact of Brexit on energy in Scotland, but from a legal perspective, specifically in relation to Scotland's energy strategy.<sup>179</sup> Muinzer et al. have considered the specific legal and policy issues arising for the iSEM as a result of Brexit.<sup>180</sup>

Some academic publications focus on energy-adjacent policy issues and Brexit, such as Hepburn and Teytelboym, who consider the challenges and opportunities for UK and EU climate policy arising post-Brexit and the need for “replacement policies for existing EU policies”<sup>181</sup> and argue, on the basis of the UK's hitherto role in shaping the EU's climate policy, that “Brexit may also impact the ambition and shape of EU climate policy and the direction of future climate agreements.”<sup>182</sup>

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175 Makhholm Jeff D, ‘Brexit and Divestiture Provides New Hope for “British” Gas’ (2017) 33(7) *Natural Gas & Electricity*

176 Abdul-Salam Yakubu, *Evaluating the Impact of Brexit on Natural Gas Trade between the UK and the EU: A Spatial Equilibrium Analysis*. No. 008. *Centre for Energy Economics Research and Policy* (Heriot-Watt University 2019)

177 Cairney Paul, Fiona Munro, Aileen McHarg, Nicola McEwen, Karen Turner and Antonios Katris, *The impact of Brexit on the UK and devolved energy system* (2019).

178 Cairney, Paul, Aileen McHarg, Nicola McEwen, and Karen Turner, ‘How to conceptualise energy law and policy for an interdisciplinary audience: The case of post-Brexit UK’ (2019) 129 *Energy Policy*

179 Little, Gavin, ‘Brexit and energy in Scotland’ (2018) <<https://doi.org/10.3366/elr.2018.0466>>

180 Muinzer Thomas L, Kirsten EH Jenkins, Darren A. McCauley and Gavin MacLeod Little, ‘Energy justice beyond borders? Exploring the impact of Brexit on Ireland's all-island energy market’ (2022) 35 (10) *The Electricity Journal* <<https://doi.org/10.1016/j.tej.2022.107218>>

181 Cameron Hepburn, Alexander Teytelboym, ‘Climate change policy after Brexit’ (2017) 33 (1) *Oxford Review of Economic Policy* <<https://doi.org/10.1093/oxrep/grx004>>

182 Ibid.

## B) Economic perspectives

A number of academic publications consider Brexit-related issues arising in the UK energy sector from an economic perspective. As this dissertation focuses on the Brexit-related legal aspects in the energy sector, I will just refer to some manuscripts focusing on Brexit and energy for context, as there is some overlap between the legal and economic aspects of Brexit in relation to, e.g., cross-border energy trading and investments in the energy sector more generally.

Acquah-Andoh et al. have considered the impact of Brexit on investments in the energy sector, including in the upstream oil and gas sector and concluded that Brexit has not only had a negative impact on investments in the energy sector but also on household energy prices, not least due to the “shadow of uncertainty [Brexit] casts on the future of business in the UK.”<sup>183</sup>

From a socio-macroeconomic perspective, Nieto et al.<sup>184</sup> have analysed the impacts of implementing different post-Brexit UK energy reduction targets compared to the relevant EU targets by 2030 and suggested that the UK’s final energy use must be reduced in the following years to cope with the (UK) mandated carbon budgets and 2050 Net Zero targets.

Castagneto Gissey et al.<sup>185</sup> have examined the impact of Brexit on the value of cross-border electricity trading for the GB electricity market and suggested a rising price differential of 2–3 percent with France and the Netherlands as a result of the GB market being un-coupled from the EU electricity market.

Pollitt has accompanied the Brexit process from an energy-economic perspective from the outset. In 2017, Pollitt et al. considered the (likely) economic consequences of Brexit for the UK energy sector and how these might be addressed in the Brexit negotiations with the EU.<sup>186</sup> At the time, the economic consequences of Brexit in the energy sector were “expected to be small beyond the macroeconomic impact of Brexit on GDP and exchange rates.”<sup>187</sup>

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183 Acquah-Andoh E, Ifelebuegu A and Theophilus S, ‘Brexit and UK Energy Security: Perspectives from Unconventional Gas Investment and the Effects of Shale Gas on UK Energy Prices’ (2019) 12 *Energies* 600 <<http://dx.doi.org/10.3390/en12040600>>

184 Jaime Nieto, Hector Pollitt, Paul E. Brockway, Lucy Clements, Marco Sakai and John Barrett, ‘Socio-macroeconomic impacts of implementing different post-Brexit UK energy reduction targets to 2030’ (2021) 158 *Energy Policy* <<https://doi.org/10.1016/j.enpol.2021.112556>>

185 Castagneto Gissey G., Guo B., Newbery D., Lipman G., Montoya L., Dodds P., Grubb, M, and Ekins P., *The Value of International Electricity Trading, A Project Commissioned by Ofgem UCL and University of Cambridge* (2019)

186 Pollitt Michael G, ‘The economic consequences of Brexit: Energy. Oxford Review of Economic Policy 33’ (2017) suppl\_1

187 Ibid.

In 2022, Pollitt et al. revisited this topic,<sup>188</sup> tested their 2017 assumptions and predictions as to the economic effect of Brexit in the energy sector, and concluded that the “microeconomic impact of Brexit on energy remains modest at the price and policy target level” with “a minimal increase in trade barriers in the electricity sector and no change to trading arrangements for the gas sector.”<sup>189</sup> In relation to the macroeconomic consequences of Brexit for the energy sector, they suggest that these manifest themselves in parallel with the whole of the UK economy, with the output effect on “individual energy-intensive sectors, aggregate GDP, the political integrity of the UK, and on a more muscular industrial policy [having] bigger implications for the energy sector.”<sup>190</sup> In their recommendations, Pollitt et al. postulate increased transparency as to the long-term energy market arrangements between the UK and the EU. Such increased transparency would also contribute to legal certainty for the energy sector.

In relation to the economic impact of Brexit on the Irish energy sector, Do et al.<sup>191</sup> have concluded that Brexit contributed to greater price volatility in the SEM.

Whilst this dissertation focuses on the legal aspects of the impact of Brexit on the energy sector, the policy and economic perspectives provide nevertheless important insights which help to inform the legal analysis of issues where there is an overlap between policy, economics and law, e.g., in relation to the legal certainty of electricity trading arrangements.

### C) Legal aspects of energy and Brexit

As noted above, compared to the literature on Brexit-related issues from a policy and economic perspective, there are relatively fewer publications on this topic from a legal perspective. The majority of these are prospective in nature, i.e., they have been written and published prior to the adoption of the TCA.

Gehring and Freedom have considered examples of climate change and energy provisions in existing bilateral and multilateral trade agreements and what lessons might be derived from these for a “new gold standard” in the EU-UK Agreement.<sup>192</sup>

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188 Pollitt Michael G, ‘The further economic consequences of Brexit: energy. *Oxford Review of Economic Policy*’ (2022) 38(1)

189 Ibid.

190 Ibid.

191 Do, H.X., Nepal, R. and Jamasb, T., 2020. Electricity market integration, decarbonisation and security of supply: Dynamic volatility connectedness in the Irish and Great Britain markets. *Energy Economics*, 92, p.104947.

192 Gehring, Markus, and Freedom Kai Phillips. “Legal Options for post-Brexit climate change and energy provisions in a future UK – EU trade agreement.” (2019), available here: <[https://europeanclimate.org/wp-content/uploads/2019/04/Post-Brexit\\_Provisions\\_report\\_final.pdf](https://europeanclimate.org/wp-content/uploads/2019/04/Post-Brexit_Provisions_report_final.pdf)>

Similarly, Njoroge Daniel has analysed fiscal and regulatory desiderata for future investments in the North Sea and the UK energy market generally post-Brexit.<sup>193</sup>

Also, from a prospective viewpoint, Whitehead has considered selected legal issues and provided an overview of the likely legal issues arising in the UK-EU negotiations.<sup>194</sup> Whitehead emphasises the UK's interconnectedness with the EU and the mutual dependencies of the two jurisdictions and the fact that key participants in the UK energy sector are typically pan-European utility companies with interests on both sides of the Channel. He notes, in particular, the “pivotal role”<sup>195</sup> the UK has played in shaping EU policies in relation to energy market design and renewable energy.

Pre-TCA, Muinzer has considered the legal and policy implications of Brexit for the SEM and concluded that a future UK-EU agreement would require “a specifically delineated, harmonised set of all-island common rules that can facilitate the I-SEM's continued smooth operation in the post-Brexit period.”<sup>196</sup>

Post-TCA, Farrelly and Collins have concluded that the iSEM continues to function not least due to the strong political support it enjoys on the island of Ireland as well as within GB and EU.<sup>197</sup>

Post-TCA, Lazowski et al.<sup>198</sup> have provided a detailed overview of the legal aspects of Brexit with chapters discussing the Brexit process, the TCA as the legal framework for the post-Brexit relationship between the UK and the EU, the “repatriation” of laws and competencies from the EU to the UK and the future of the EU and its now 27 Member States. Whilst Lazowski et al. discuss environmental law,<sup>199</sup> they do not cover energy law.

There are not many publications considering the legal aspects of Brexit in relation to energy post-TCA.

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193 “Fiscal & Regulatory Issues on Energy industry: Examining Changes required to attract Investment in the North Sea & UK Energy Markets as a Result of Brexit”, OGEL 2 (2017) <[www.ogel.org/article.asp?key=3683](http://www.ogel.org/article.asp?key=3683)>

194 Whitehead Andrew, ‘Brexit and the energy sector.’ *Renewable Energy Law and Policy Review* (2018) 9 (1)

195 Ibid.

196 Muinzer, Thomas, Thomas, *Brexit and Ireland's All-Island Energy Market* (2018) <<https://abdn.pure.elsevier.com/en/publications/brexit-and-irelands-all-island-energy-market>>

197 Farrelly G and Collins O, *The Impact of Brexit on Ireland – The Energy Perspective* in Stanič Ana and Goldberg Silke (eds), *Brexit and Energy Law – Implications and Opportunities* (Routledge 2023)

198 Łazowski Adam, and Adam Jan Cygan, *Research handbook on legal aspects of Brexit* (2022).

199 Douma Wybe Th, *Environmental protection after Brexit: preventing the return of Europe's dirty man. Research Handbook on Legal Aspects of Brexit* (Edward Elgar Publishing 2022) in Lazowski et al (op cit).

Howe et al. have, in a publication focusing on the trade-related provisions of the TCA, been outright dismissive of the energy provisions in the TCA and noted that these are “of limited additional value.”<sup>200</sup>

The book in which the Constituting Manuscripts of chapters 6 and 7 have been published<sup>201</sup> is currently the only book-length publication which considers the impact of Brexit on the energy sector from a legal perspective. This edited volume is a snapshot of the impact of Brexit on UK energy law and policy in the wider sense. It also considers “energy- adjacent” areas of law, for instance in relation to environmental, procurement and state aid law. Its chapters analyse the practical legal impact of Brexit in relation to a variety of energy issues ranging from energy trading, inter-connectors, supply security, post-Euratom arrangements, and renewable energy. In addition to a comparative chapter on EU-Swiss relations it also contains a policy-based article by Dorothy Smith on the wider political implications of Brexit and future policy challenges for the UK post-Brexit. The book was written with policy makers and legal practitioners on both sides of the channel in mind and contains contributions from energy law practitioners as well as diplomats and a former EU-Commission official. As such, it does not develop an overarching normative framework, whilst each of the chapters has its own specific conclusions. The book as a whole highlights the practical consequences of the TCA and the significant uncertainty for the energy sector as a result of Brexit, chiefly due to the temporary nature of the energy provisions of the TCA.

By contrast, this dissertation is a monograph that (i) considers the impact of Brexit on the energy sector both pre- and post- TCA, (ii) develops a normative framework for the assessment of the TCA, and (iii) considers the formal legal issues pertaining to the implementation of the TCA. By specifically considering whether the TCA settlement meets the Brexit objectives, it spans an analytical arch between the Brexit objectives as expressed in the Brexit campaign and the post-Brexit legal difficulties affecting the energy sector.

#### D) Grey literature on Brexit

In addition to the academic literature on Brexit and energy, there is a considerable amount of “grey literature” on this topic published by industry associations,<sup>202</sup> law

<sup>200</sup> Howe Martin, Barnabas Reynolds, D. A. Collins and James Webber, *The Lawyers Advise: UK-EU Trade and Cooperation Agreement—Unfinished Business?* (2021)

<sup>201</sup> Stanič, Ana and Silke Goldberg (eds), *Brexit and Energy Law – Implications and Opportunities* (Routledge 2023).

<sup>202</sup> See, for instance, (July 2018) <<https://www.energy-uk.org.uk/index.php/publication.html?task=file.download&id=6547>>

firms,<sup>203</sup> and other consultancies.<sup>204</sup> Whilst these are not academic contributions to the Brexit debate, they often highlight practical aspects of Brexit and the TCA and, particularly in the early days of the debate on Brexit and energy when academic publications on the topic were in the process of being published, this grey literature produced initial analyses which often provided useful background information for the emerging discourse on this topic.

#### 4.2.3 The scientific debate on EU energy law: State of the art

The EU energy market is highly integrated with a detailed regulatory framework (see also section 6 below). It is, therefore, useful to situate the discussion about the impact of Brexit on the energy sector in the UK and the EU and this dissertation in the context of existing scholarship on EU energy law.

EU energy law comprises the legislative and regulatory acts pertaining to the EU energy sector and specifically to the IEM. EU energy law as a body of law has steadily grown since the early liberalisation directives<sup>205</sup> and, in particular, after the adoption of the Treaty of Lisbon, and the bestowing of competence in energy matters onto the EU by the same.<sup>206</sup>

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203 See, for instance, 'Energy's Brexit withdrawal symptoms lessened by the trade and co-operation agreement' (*McCann FitzGerald Law Firm*, 15 January 2021) <<https://www.mccannfitzgerald.com/knowledge/environmental-and-planning/energys-brexit-withdrawal-symptoms-lessened-by-the-trade-and-co-operation-agreement>>

204 See, e.g. 'Brexit, Energy and Ireland' (Fti Insights, June 2017) <<https://ftiinsights.com/brexit-energy-and-ireland/>>

205 For academic works discussing the emergence of European energy law in the early 2000s, see for instance, Opilio, A., 2005. "Energierrecht aus europäischer Sicht: unter besonderer Berücksichtigung der nachhaltigen Entwicklung und des elektrischen Energieträgers. Edition Europa Verlag", or Schneider, J.P. and Prater, J., 2004. Das Europäische Energierrecht im Wandel. *Recht der Energiewirtschaft*, 3. In relation to governance aspects of the EU energy sector in the early phase of liberalisation; Eberlein Burkhard, 'The Making of the European Energy Market: The Interplay of Governance and Government' (2008) 28 *Journal of Public Policy* 73

206 In relation to the newly acquired energy competence of the EU post-Lisbon, see also Kuhlmann J. *Kompetenzrechtliche Neuerungen im europäischen Energierrecht nach dem Vertrag von Lissabon*. Juni 2008 ed. Vienna: *EuropaInstitut, WU Vienna University of Economics and Business*. 2008; Kahl Wolfgang, 'The competences of the EU in energy policy after Lisbon' (2009) 44(5) *Europarecht (EuR)*; Ruete, M., 2010, October. "Europäische Energiepolitik – Bilanz und neue Herausforderungen". In *Energierrecht im Wandel* (pp. 11-23). Nomos Verlagsgesellschaft mbH & Co. KG. Andoura, Hancher and Van Der Woude, Marc discuss the legal energy competence of the EU as a basis for building a European Energy Community: Andoura Sami, Leigh Hancher and Marc Van der Woude, 'Towards a European Energy Community: A Policy Proposal' (2010) (INIS-FR--17-0899). France

Some have considered EU energy law as a whole by way of overview,<sup>207</sup> while others have emphasised particular aspects of the same, for instance, the unbundling regime,<sup>208</sup> the role of capacity markets,<sup>209</sup> and supply security.<sup>210</sup>

The body of scholarly works on EU energy law has grown in parallel with the relevant legislation itself. The adoption of particular measures by the EU legislators is usually accompanied by academic works analysing the same in detail. This includes

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- 207 See, e.g. Johnston, Angus C. and Block, Guy, EU Energy Law (November 6, 2012). Available at SSRN: <https://ssrn.com/abstract=2171572>; Grunwald, Jürgen. “Das Energierecht der Europäischen Gemeinschaften.” In *Das Energierecht der Europäischen Gemeinschaften*. De Gruyter, 2015; or Krüger, Heiko, *European energy law and policy: an introduction* (Edward Elgar Publishing 2016); Jones, Christopher, *EU Energy Law, Volume 1: The Internal Energy Market* (Law Publishing, Claeys & Casteels 2016); Heffron Raphael J. and Kim Talus, ‘The development of energy law in the 21st century: a paradigm shift?’ (2016) 9 (3) *The Journal of World Energy Law & Business*. For a reader covering a range of legal and policy issues in EU and US energy law, see: Heffron, Raphael J and Gavin FM Little, *Delivering Energy Law and Policy in the EU and the US: A Reader* (Edinburgh UP 2016); for a volume providing a detailed overview of EU energy as well as a reflection of the state of research of the law in particular policy areas, see Leal-Arcas, Rafael and Jan Wouters, *Research handbook on EU energy law and policy* (Edward Elgar Publishing, 2017); or Winkler, Daniela, Max Baumgart and Thomas Ackermann, *Europäisches Energierecht*. Nomos Verlagsgesellschaft mbH & Co. KG; 2021
- 208 See, e.g. Wohlfahr, Matthias: “*Ownership Unbundling: Die Vereinbarkeit verschärfter Entflechtungsvorgaben für die leitungsgebundenen Sektoren Elektrizität und Gas mit dem Gemeinschaftsrecht*”, BWV Berliner Wissenschaftsverlag 2009
- 209 Huhta Kaisa, *Capacity Mechanisms in EU Energy Law. Capacity Mechanisms in EU Energy Law: Ensuring Security of Supply* in the Energy Transition (2019)
- 210 For an early policy perspective on EU supply security, see e.g. Chevalier, Jean-Marie, ‘Security of energy supply for the European Union’ (2006) 1(3) *European Review of Energy Markets* or Goldberg, Silke Muter, ‘Security of Supply in the Context of European Energy Market Liberalisation-A Brief Overview’ (2011) *Int’l Bus. LJ*. For an economic perspective, see e.g. Jamsb Tooraj and Michael Pollit, ‘Security of supply and regulation of energy networks’ (2008) 36 (12) *Energy Policy*; for a recent re-assessment of the EU legal and policy framework for energy supply security after the invasion of Russia of Ukraine; Keypour Javad and Ulkar Ahmadzada, ‘Consolidating EU energy security by relying on energy de-politicisation’ (2022) 31(1) *European Security*; Pach-Gurgul Agnieszka and Juliusz Piwowarski, *Axiological, Economic and Legal Challenges for the Functioning of the Energy Union in the Context of Energy Security of the European Union*. In *Security and Defence: Ethical and Legal Challenges in the Face of Current Conflicts* (Springer International Publishing 2022)



works pertaining to the CEP (see above), the Energy Union,<sup>211</sup> the European Green Deal<sup>212</sup> and the Fitfor55<sup>213</sup> package of legislative measures.

Others have focused on the impact of EU energy law on national legislation;<sup>214</sup> or the role of EU energy bodies such as ACER<sup>215</sup> or the ENTSOs.<sup>216</sup>

Reflecting on this still-growing body of scholarly works, virtually all of them consider EU energy law or aspects thereof from the perspective of further laws being added to the *acquis communautaire*, the completion of the IEM, and the (further) integration of the EU energy sector across EU Members States and EU institutions.

This is in contrast to this dissertation in relation to which EU energy law serves as a normative backdrop, but which discusses the effect of the disintegration of the UK from the EU on the energy sector. Therefore, this dissertation considers EU energy law from the perspective of the (former) Member State exiting the *acquis communautaire* and the replacement arrangements for the same between the EU and a former Member State, now in the latter's position as a third country.

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- 211 Szulecki Kacper, Severin Fischer, Anne Therese Gullberg, and Oliver Sartor, 'Shaping the 'Energy Union': between national positions and governance innovation in EU energy and climate policy' (2016) 16(5) *Climate Policy*
- 212 Bäckstrand Karin, 'Towards a Climate-Neutral Union by 2050? The European Green Deal, Climate Law, and Green Recovery' In *Routes to a Resilient European Union: Interdisciplinary European Studies* (Cham: Springer International Publishing, 2022)
- 213 Schlacke, Sabine, Helen Wentzien, Eva-Maria Thierjung, and Miriam Köster. "Implementing the EU Climate Law via the 'Fit for 55' package." *Oxford Open Energy* 1 (2022).
- 214 For instance, on the transposition of the TEP into French law and related challenges, see e.g. Deleuze, Olivier. *Actualités du droit de l'énergie: La transposition du "troisième paquet énergétique" européen dans les lois "électricité" et "gaz"*. Bruylant, 2013; or Gundel, Jörg, and Claas Friedrich Germelmann, *Die Europäisierung des Energierechts-20 Jahre Energiebinnenmarkt: Symposium zu Ehren von Helmut Lecheler aus Anlass seines 75. Geburtstages*. Vol. 17. Mohr Siebeck, 2016; For an Austrian perspective, see Helbok, L.M., 2018. Verbraucherschutz im Energierecht-geltendes (europäisches und nationales) Recht und mögliche Änderungen durch das "Smart and Clean Energy Package", submitted by Lisa-Marie Helbok (Doctoral dissertation, Universität Linz); for a Norwegian (and therefore EEA) perspective on the implementation of EU energy law, see: Ørebech, P., 2018. Grunnloven § 1 og EU-med særlig vekt på implementeringen av vedtak truffet av EU-kommisjonen og EUs energibyrå ACER: Er det grunn til å lytte til professor Johs. Andenæs?. *Lov og Rett*, 57(3), pp.170-190.
- 215 See, e.g. Fresa Siddharth, 'Multilevel EU governance in energy infrastructure development: A new role for ACER. Working Paper' (2015) Retrieved from <[http://www.diw.de/documents/dokumentenarchiv/17/diw\\_01.c.508434.de/fresa.pdf](http://www.diw.de/documents/dokumentenarchiv/17/diw_01.c.508434.de/fresa.pdf)>
- 216 Mathisen Jonas, 'ENTSO-E: With License to Regulate. The transformative impact of ENTSO-E as a new mode of governance in the internal energy market for electricity. MS thesis' (2021) <<https://www.duo.uio.no/handle/10852/88517>>



#### 4.2.4 Adding to the scientific debate on Brexit and the energy sector

This dissertation is, by virtue of focusing on the legal aspects of the impact of Brexit in the energy sector, a new contribution to the emerging field of Brexit studies from a legal perspective.

Whilst a number of manuscripts have been published on the economic and policy impact of Brexit on the energy sector, this dissertation is one of the few publications which focus on the impact of Brexit on the energy sector from the perspective of legal certainty. Most of the legal publications on Brexit and the energy sector focus on individual aspects of the energy sector, e.g., interconnectors or the ETS.<sup>217</sup> This dissertation makes a new contribution by providing two overview articles (chapters 2 and 5, respectively) which discuss the impact of Brexit, a series of energy issues pre- and post-TCA.

The dissertation provides a novel contribution to this field in that it discusses legal issues pertaining to Brexit and the energy sector from both a prospective and retrospective perspective. In doing so, the dissertation does not only “trace” the relevant issues prior to and after the adoption of the TCA but also effectively allows to check the issues identified and highlighted in chapters 2–4, namely, the Constituting Manuscripts written prior to the entry into force of the TCA, against the provisions of the TCA and its impact. In analysing the legal issues arising from the implementation difficulties of the TCA, this dissertation also makes a new contribution to the legal studies of the TCA.

The dissertation also contributes to the academic discussion of European energy law. Whereas such works usually discuss the legal aspects of further integration in the energy sector, this dissertation uses the integration of the energy sector as a backdrop and analyses the legal impact of the dis-integration of a Member State from the EU’s *acquis communautaire* with the TCA as a framework for the management of future regulatory divergence between the EU and its former Member State together with any resulting legal uncertainty and regulatory issues for the UK and/or the EU.

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217 See, for instance, Bartholomew Mark, ‘GB interconnectors in the post-Brexit world. Renewable Energy Law and Policy Review’ (2022) 10(3-4); or Jonuška Karolis, The Future of European Union Emissions Trading Scheme – How Deep is Your Law? Brexit, Technologies, Modern Conflicts, (2017) p.150, <<http://lawphd.net/wp-content/uploads/2014/09/International-Conference-of-PhD-students-and-young-researchers-2017.pdf>>

## 5 THE NORMATIVE MATERIAL AND GEOGRAPHICAL SCOPE OF THIS DISSERTATION

In this section 5, I will set out the relevant legislative and regulatory framework for the analysis (in section 5.1) of this dissertation and the geographical boundaries of the same (in section 5.2).

### 5.1 Normative Background

By way of normative background, this dissertation considers EU, UK, Irish, and international law in so far as these sources relate to Brexit, the exit of the UK from Euratom (“Brexitom”)<sup>218</sup> and the energy market, as follows:

#### 5.1.1 EU law

This dissertation considers EU law (in its primary, secondary, and tertiary forms, including, for these purposes, the Euratom Treaty) which governs the IEM in particular.

#### 5.1.2 UK law

By its very nature, Brexit has had an impact on UK law. Therefore, UK law is part of the normative reference framework for this dissertation, including the changes to UK law that have been brought about by Brexit. At a high level, six different ways in which Brexit impacts UK law can be identified:

##### A) Legislation to implement the Brexit process and/or agreements

In order to implement the Brexit process and consequential legal changes, the UK adopted the European Union (Withdrawal) Act 2018 (EUWA).<sup>219</sup> Amongst other provisions, the EUWA deals with the UK parliamentary process in relation to Brexit. In addition, the European Union (Withdrawal Agreement) Act 2020,<sup>220</sup> which received Royal Assent (i.e., entered into force) on 23 January 2020, implemented the Withdrawal Agreement.

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218 Strictly speaking, references to Brexit should include a reference to Brexitom when referring to the UK’s exit from the EU and Euratom. For ease of reference and by way of shorthand, I have followed public convention and referred to Brexit as the more general expression throughout this dissertation and referred to Brexitom only when specifically discussing the UK’s exit from Euratom.

219 European Union (Withdrawal) Act 2018, 2018 Chapter 16.

220 European Union (Withdrawal Agreement) Act 2020, 2020 Chapter 1.

### B) Consequential legislation

As a result of Brexit and Brexatom, certain new laws needed to be adopted, e.g., to ensure the continued compliance of the UK with requirements of international treaties and the continuity of the UK's civil nuclear trade following the withdrawal from Euratom. The UK adopted several new laws governing different aspects of the nuclear energy sector which were previously governed by the provisions of the Euratom Treaty. One example of such a law are the Nuclear Safeguards (EU Exit) Regulations 2019.<sup>221</sup>

New legislation was also needed to fill legal gaps in relation to matters which had hitherto been governed by EU law or give effect to certain aspects of the TCA. For instance, the TCA provides in Article 392 that both parties shall have an effective system of carbon pricing in place as of 1 January 2021. In order to give effect to this provision, the UK adopted the Greenhouse Gas Emissions Trading Scheme Order 2020.<sup>222</sup>

### C) Repeal of European Communities Act

In addition to dealing with the parliamentary process, the EUWA also repealed the ECA 1972. The repeal of the ECA reverses this, and, as a result, EU law no longer applies in the UK to the extent it is not retained EU legislation (see below).

### D) Retained EU law

During the Brexit negotiation phase, the UK transposed EU legislation which was not already part of the UK body of law by virtue of transposition. This had the effect of bringing UK law into line with EU law at the time of the UK's exit from the EU on 31 January 2020. This category of UK law was created pursuant to sections 2 to 4 of the EUWA at the end of the Transition Period.

EU Directives in force prior to Brexit had already been transposed into British law (and therefore are technically Retained EU Law), so within the category of Retained EU Law, newly created Retained EU Law concerns primarily EU Regulations which were, when the UK was part of the EU, directly applicable without the need for any transposition, but which would have, in the absence of such a transposition mechanism, fallen away upon the UK's exit from the EU.

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<sup>221</sup> The Nuclear Safeguards (EU Exit) Regulations 2019, SI 2019/196.

<sup>222</sup> The Greenhouse Gas Emissions Trading Scheme Order 2020, SI 2020/1265.

By way of example, in the energy sector, this concerned the transposition of the REMIT regime<sup>223</sup> and the 2019 Electricity Regulation.<sup>224</sup>

The relevant laws in this category are, in the UK context, referred to as “Retained EU Law.” Retained EU Law also includes any additions and modifications to this body of UK law which have been made or will be made after the end of the Transition Period, including the interpretations of this category of law by the UK courts pursuant to rules set out in sections 6(3) or 6(6) EUWA.<sup>225</sup>

#### E) EU law falling away

EU legislation that was not part of Retained EU Law fell away by operation of law simply because the UK is no longer a Member State of the EU. By way of example, the EU ETS Directive<sup>226</sup> belongs to this category.

#### F) Constitutional and legislative consequences specific to Northern Ireland

Brexit had, of course, a number of other constitutional and legislative consequences for the UK, in particular in relation to Northern Ireland. There, a limited set of EU laws continues to apply, for instance, in relation to the trade of goods and customs, pursuant to the Protocol on Ireland and Northern Ireland<sup>227</sup> (the “Protocol”). However, this particular category of law falls outside the scope of this dissertation.

### 5.1.3 Irish law

Irish law is relevant for this dissertation only as far as it applies to the iSEM, which is discussed in some of the Constituting Manuscripts.

223 REMIT refers to Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency [2011] OJ L326/1.

This regulation was transposed into UK law by the Electricity and Gas (Market Integrity and Transparency) (Amendment) (EU Exit) Regulations 2019, SI 2019/534.

224 Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast) [2019] OJ L158/54. This regulation was transposed into UK law by EU Electricity Regulation 2019 (Regulation (EU) 2019/943).

225 Retained EU Law is a complex area of UK domestic law which encompasses five main categories of law. A detailed presentation and discussion of Retained EU Law is beyond the scope of this dissertation. A general overview of the different categories of Retained EU Law can be found in: Graeme Cowie, ‘Retained EU Law (Revocation and Reform) Bill 2022-23’ (Research Briefing, 17 October 2022) <<https://researchbriefings.files.parliament.uk/documents/CBP-9638/CBP-9638.pdf>>.

226 Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC [2003] OJ L275/32.

227 Protocol on Ireland/Northern Ireland [2020] OJ L29/102.

#### 5.1.4 Policy notices

In EU law, and particularly so in EU energy law, there is a fluid overlap between (i) what we would traditionally identify as “Black Letter Law,” i.e., legislation in the form of treaties, directions, and regulations and (ii) policy, which might be formulated in political resolutions adopted by the European Parliament, set out in Council conclusions, or formulated by the European Commission to set out its approach to a particular policy question either in the absence of a specific legal provision or in order to interpret such a provision.

In relation to the Brexit negotiations, in the process that followed the formal triggering of Article 50, both the EU and the UK issued various such policy statements or interpretative notes. For instance, on 27 April 2018, the EU issued a Notice to Stakeholders (generally understood to be Member States and industrial enterprises) (the “Notice”) concerning the withdrawal of the UK from the internal energy market of the Union,<sup>228</sup> which outlined the effects of such a withdrawal without respecting the transition periods provided for in the TCA. This Notice reflected the policy position of the EU at the time and set out a clear description of how the UK would be treated as a third country and the effect this treatment might have within the energy sector in the absence of a withdrawal agreement (as the conclusion of the Withdrawal Agreement was in doubt at several points during the relevant period since the Brexit negotiations stalled).

Similarly, the UK Government issued a “White Paper”<sup>229</sup> which set out the UK’s position in relation to its future relationship with the EU energy market, in particular, to avoid disruption to the all-Ireland single electricity market.

Both the Notice and the White Paper became the benchmark against which policy suggestions for the future relationship between the EU and UK energy markets were measured in the political debate about the negotiations and the negotiations themselves, particularly with respect to the discussion of a “no deal” or Hard Brexit (i.e., no follow-on agreement to the Withdrawal Agreement and no agreement as to the future relationship between the EU and the UK).<sup>230</sup> Therefore, these policy notes are part of the normative framework of this dissertation.

228 See also European Commission Directorate-General Energy, ‘Notice to Stakeholders – Withdrawal of the United Kingdom and the Internal Energy Market’ (27 April 2018) <[https://commission.europa.eu/system/files/2018-10/energy\\_market\\_en\\_o.pdf](https://commission.europa.eu/system/files/2018-10/energy_market_en_o.pdf)>.

229 Department for Exiting the European Union, ‘The United Kingdom’s exit from, and new partnership with, the European Union’ (White Paper, 2 February 2017) <<https://www.gov.uk/government/publications/the-united-kingdoms-exit-from-and-new-partnership-with-the-european-union-white-paper>>.

230 See, for instance: Carole Mathieu, Paul Dean and Steven Pye, ‘Brexit, Electricity and the No-Deal Scenario: Perspectives from Continental Europe, Ireland and the UK’ *Études de l’Ifri* (October 2018) <[www.ifri.org/sites/default/files/atoms/files/mathieu\\_deane\\_pye\\_brexit\\_2018.pdf](http://www.ifri.org/sites/default/files/atoms/files/mathieu_deane_pye_brexit_2018.pdf)>.

### 5.1.5 International agreements

In addition to the classic EU sources of law, this dissertation also considers three international treaties between the EU and the UK which give effect to Brexit in EU and international law, i.e., the Withdrawal Agreement, the TCA, and the EU-UK Agreement for cooperation on the safe and peaceful uses of nuclear energy.<sup>231</sup> For context and ease of reference, it is useful to provide a (very) brief overview of these agreements.

#### A) Withdrawal Agreement

The so-called “Withdrawal Agreement”<sup>232</sup> was concluded between the EU and the United Kingdom, entered into force on 1 February 2020, and establishes the terms of the United Kingdom’s withdrawal from the EU (in accordance with Article 50 of the TEU).<sup>233</sup> The Withdrawal Agreement introduced the transition period from 1 February to 31 December 2020, during which the UK was treated as if it were an EU Member State (save for governance and voting matters such as participation in the EU institutions and governance structures; the “Transition Period”). The Withdrawal Agreement deals with what might be termed “separation issues,” such as interim arrangements until a final settlement is found,<sup>234</sup> regarding, e.g., citizens’ rights,<sup>235</sup> the coordination of social security issues,<sup>236</sup> intellectual property,<sup>237</sup> and privileges and immunities.<sup>238</sup> It also contains the financial settlement between the EU and the UK.<sup>239</sup> From an energy perspective, the Withdrawal Agreement addresses a number of issues in relation to Euratom.<sup>240</sup> Importantly, the Withdrawal Agreement also contains the Protocol, which sets out “arrangements necessary to address the unique circumstances on the island of Ireland, to maintain the necessary condi-

231 Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the European Atomic Energy Community for Cooperation on the Safe and Peaceful Uses of Nuclear Energy [2021] OJ L150/1.

232 Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community [2019] OJ C1384/1.

233 A detailed discussion of the Withdrawal Agreement is out of scope for this chapter. For an in-depth study of the Withdrawal Agreement, please see: Federico Fabbrini, *The Law & Politics of Brexit: Volume II – The Withdrawal Agreement* (OUP 2020) and Michael Dougan, *The UK’s Withdrawal from the EU – A Legal Analysis* (OUP 2021), in particular pp. 185ff.

234 Whilst it was not foreseeable at the time of negotiation of the Withdrawal Agreement, that final settlement is in fact the TCA.

235 Withdrawal Agreement, Title II.

236 Withdrawal Agreement, Title III.

237 Withdrawal Agreement, Title IV.

238 Withdrawal Agreement, Title XII.

239 Withdrawal Agreement, Articles 135ff.

240 Withdrawal Agreement, Title IX.

tions for continued North-South cooperation,<sup>241</sup> to avoid a hard border and to protect the 1998 Agreement<sup>242</sup> in all its dimensions.”<sup>243</sup>

From an energy perspective, the Protocol is significant for the operation of the electricity market on the island of Ireland, which operates in an integrated manner as the Single Electricity Market.<sup>244</sup>

Together with the Withdrawal Agreement, the UK adopted the Political Declaration,<sup>245</sup> which set out the framework for the future relationship between the European Union and the United Kingdom as a blueprint for the UK’s Brexit negotiators.

## B) TCA

The TCA was agreed by the UK and the EU in December 2020 and entered into force on 1 January 2021. It defines the objectives and the key details of the cooperation between the EU and the UK after the expiry of the Transition Period.

The TCA is an international agreement and technically an Association Agreement under EU law<sup>246</sup>—a type of agreement based on Article 217 TFEU, which provides that “the Union may conclude with one or more third countries or international organisations agreements establishing an association involving reciprocal rights and obligations, common action and special procedure.”

The energy section in Title VIII of part 2 of the TCA sets out the key points for cooperation between the EU and the UK following the completion of the withdrawal process in order to prevent the isolation of the UK energy market. This section

241 “North-South cooperation” is the established term for cooperation between the Republic of Ireland / Ireland and Northern Ireland / the North of Ireland in the 1998 Good Friday Agreement, as this term avoids any politically laden references to the relevant territories.

242 This refers to the peace agreement of 1998 which put an end to the civil war in Northern Ireland and which is sometimes referred to as the “Good Friday Agreement” or the “Belfast Agreement”. A copy is available here: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1034123/The\\_Belfast\\_Agreement\\_An\\_Agreement\\_Reached\\_at\\_the\\_Multi-Party\\_Talks\\_on\\_Northern\\_Ireland.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1034123/The_Belfast_Agreement_An_Agreement_Reached_at_the_Multi-Party_Talks_on_Northern_Ireland.pdf)>.

243 Protocol, Article 1.

244 A detailed discussion on the functioning of the Single Electricity Market is out of scope for this chapter. Where appropriate, it is being discussed in the Constituting Manuscripts. For further information on the Single Electricity Market, please see this overview provided by the Northern Irish utility regulator: Utility Regulator, ‘SEM’ <[www.uregni.gov.uk/sem](http://www.uregni.gov.uk/sem)> accessed 9 February 2023.

245 There is a later footnote with the details of this declaration.

246 The concept of “association” in the EU context has been discussed in detail by Peter Van Elsuwege and Merijn Chamon, “The Meaning of Association under EU Law. A Study on the Law and Practice of EU Association Agreements”, Study for the AFCO Committee, European Parliament, 2019, PE 608. 861, available at: [https://www.europarl.europa.eu/thinktank/en/document/IPOL\\_STU\(2019\)608861](https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2019)608861), accessed 26 March 2023

includes Art. 299–331 of the TCA and comprises five chapters (General Provisions, Electricity and Gas, Safe and Sustainable Energy, Energy Goods and Raw Materials, and Final Provisions). Chapter 2 on Energy and Gas is divided into four subsections (Competition in Electricity and Gas Markets, Trading Over Interconnectors, Network Development and Security of Supply, and Technical Cooperation).

### C) EU-UK Nuclear Agreement

The EU-UK Nuclear Agreement was entered into at the same time as the TCA. Its stated objective is to “provide a framework for cooperation between the Parties in the peaceful uses of nuclear energy on the basis of mutual benefit and reciprocity and without prejudice to the respective competencies of each Party.”<sup>247</sup> As such, this agreement effectively governs the post-Euratom relationship between the EU and the UK.

## 5.2 Geographical Scope

As this dissertation focuses on the exit of the UK from the EU, it follows that the geographical focus of this dissertation is the EU and the UK, with some references to the EEA. Due to the interconnectedness of the Irish and GB energy sectors, some chapters discuss the legal implications of Brexit for the supply security of Ireland and the iSEM. To that extent, the geographical scope of this dissertation extends to the island of Ireland. Other jurisdictions might be referenced in the context of the application of certain international treaties referenced in this dissertation.

## 6 EUROPEAN INTEGRATION IN THE ENERGY MARKET

In order to understand the discussion on Brexit and energy, it is useful, if only as background and foil to the Brexit process and the energy provisions of the TCA, to briefly reflect on the history of the integration of the EU energy market and to recall the way in which the EU energy market has evolved into an integrated and comprehensively regulated market.<sup>248</sup>

<sup>247</sup> EU-UK Nuclear Agreement, Article 1.

<sup>248</sup> In the framework on this chapter, it is not possible to trace the entire history of EU integration as regards the energy market. The perhaps most comprehensive presentation of the development of and commentary on EU energy law is the 12 volume series on “EU Energy Law”, edited by Christopher Jones published by Edward Elgar. For a brief overview of the legal developments leading to the TEP since the creation of the ECSC, see: Joseph Dutton: “EU Energy Policy and the Third Package”, University of Exeter Energy Policy Group, EPG working Paper 1505 July 2015, available here <[https://ukerc8.dl.ac.uk/UCAT/PUBLICATIONS/EU\\_energy\\_policy\\_and\\_the\\_third\\_pack-](https://ukerc8.dl.ac.uk/UCAT/PUBLICATIONS/EU_energy_policy_and_the_third_pack-)



Given the strategic importance of energy in both times of war and during the reconstruction of Europe after World War II,<sup>249</sup> it is therefore not surprising that energy has been at the heart of the European integration<sup>250</sup> project. In his declaration of 9 May 1950, Robert Schuman, the then French foreign minister, stated that the French government would propose

*[...] that Franco-German production of coal and steel as a whole be placed under a common High Authority, within the framework of an organization open to the participation of the other countries of Europe. The pooling of coal and steel production should immediately provide for the setting up of common foundations for economic development as a first step in the federation of Europe and will change the destinies of those regions which have long been devoted to the manufacture of munitions of war, of which they have been the most constant victims.*<sup>251</sup>

Originally conceived as a defensive mechanism with the aim of making war on European soil, or, at least, between France and Germany, materially impossible, the suggested pooling of resources outlined in the Schuman declaration eventually led to the Treaty establishing the ECSC.

However, in spite of the prominent role the energy sector played in the motivation leading to the ECSC, for many years, the EU had no explicit competence to

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age.pdf>The development of EU energy law has been covered at length by Renate Pirstner-Ebner, *European Energy Law* (Nomos 2022). For the development of the governance regime of the IEM, see also Silke Goldberg and Anne Eckenroth, ‘Governance of the energy market in the European Union’ in Martha Roggenkamp, Kars de Graaf and Ruven C Fleming (eds), *Energy Law, Climate Change and the Environment* (Edward Elgar 2021). See also: Talus, Kim: *EU Energy Law and Policy: A Critical Account*, OUP, 2013

For an overview of the liberalisation of the gas sector in the EU, see Building Competitive Gas Markets in the EU: Regulation, Supply and Demand (The Loyola de Palacio Series on European Energy Policy) by Jean-Michel Glachant, Michelle Hallack, Miguel Vazquez, Edward Elgar 2013 and Christopher Jones (ed.) “EU Energy Law Volume XI: The Role of Gas in the EU’s Energy Union”, Edward Elgar 2017

Specifically in relation to the development and liberalisation of the EU electricity market, see also: Meeus Leonardo, *The evolution of electricity markets in Europe*, Cheltenham : Edward Elgar Publishing, 2020 <<https://hdl.handle.net/1814/69266>>; for a historical overview of the European liberalisation movement, see Ronan Bolton “Making Energy Markets: The Origins of Electricity Liberalisation in Europe”, Palgrave Macmillan June 2021.

249 For a discussion on the role of energy in the reconstruction of Europe and the early years of the European integration, see W.G. Jensen, “*Energy in Europe 1945-1980*”, Foulis, 1967.

250 For ease of reference, the European Union (including all her legal predecessors such as the EEC or the EC) will be referred to as the ‘European Union’ or ‘EU’ throughout this research project, unless specifically required differently in the relevant context.

251 Quoted from the full text as available on: <[https://europa.eu/european-union/about-eu/symbols/european-day/schuman-declaration\\_en](https://europa.eu/european-union/about-eu/symbols/european-day/schuman-declaration_en)>

legislate in energy matters. As a result, European legislators relied on their competencies in adjacent areas of policy, such as competition policy or environmental policy, which led to an emphasis on competitive markets rather than an integrated energy policy in the relevant legislation.

The European Commission's Working Document on the Internal Energy Market (IEM) in 1988<sup>252</sup> was a catalyst for the start of EU legislation specifically related to the IEM, as it provided for the application of the principles of free movement of goods and services and fair competition to the same. This initial policy scope was subsequently supplemented with other policy goals: combating climate change, reducing energy dependency, and ensuring affordable energy access to consumers.<sup>253</sup>

In the following subsections, I will provide a brief overview of the early liberalisation directives (subsection 6.1.), the TFEU and the Third Energy Package (subsection 6.2), the Clean Energy Package (subsection 6.3), and the North Sea Energy Cooperation (subsection 6.4). Subsection 6.5 sets out the UK influence in the EU energy sector, whereas subsection 6.6 contrasts the developments in the IEM with the nuclear sector and the arrangements pursuant to the Euratom treaty. Subsection 6.7 concludes this section 6.

## 6.1 The Early Liberalisation Directives

In 1996, after eight years of negotiations, the EU agreed to liberalise EU electricity markets<sup>254</sup> through the adoption of Directive 96/92/EC concerning common rules for the internal market in electricity (the "First Electricity Directive").<sup>255</sup> In 1998, the attempts to liberalise the electricity sector were replicated in the gas sector with the adoption of Directive 93/30/EC<sup>256</sup> (the "First Gas Directive"), even though "many of the established actors in the European gas industry still regarded the introduction of liberalisation as the equivalent of the end of civilisation."<sup>257</sup>

252 Commission of the European Communities, 'The Internal Energy Market – Commission Working Document' COM(88) 238 final.

253 Malte Fiedler, 'The Making of the EU Internal Energy Market' (2015) Rosa Luxemburg Stiftung Policy Paper, p. 6.

254 Michael G Pollitt, 'The European Single Market in Electricity: An Economic Assessment' (2019) 55 *Review of Industrial Organization* 63.

255 Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity [1996] OJ L27/20.

256 Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998 concerning common rules for the internal market in natural gas [1998] OJ L204/1.

257 Jonathan P Stern, *Competition and Liberalization in European Gas Markets: A Diversity of Models* (Royal Institute of International Affairs 1998) 91.

The introduction of the First Gas and Electricity Directives represented a watershed in the evolution of a sector that, until then, had been shaped by a monopolistic market structure. It also constituted a first steppingstone towards the full liberalisation and comprehensive regulation of the downstream<sup>258</sup> energy sector in the European Union through the subsequent internal energy market directives.

Steps towards liberalisation were introduced for a variety of reasons, including to stimulate efficiency and innovation in the energy sector.<sup>259</sup> One of the key drivers of liberalisation in the EU was the “realisation that wholesale markets for electricity (and for gas) were possible,”<sup>260</sup> and therefore also the creation of an EU-wide market for electricity and gas.

The First Gas and Electricity Directives were soon repealed and replaced by Directives 2003/54/EC<sup>261</sup> and 2003/55/EC<sup>262</sup> (the “Second Electricity Directive” and the “Second Gas Directive,” respectively, collectively referred to as the “Second Energy Package”).<sup>263</sup> The Second Energy Package introduced a mandatory legal unbundling of transmission and distribution system operators (TSOs and DSOs, respectively)<sup>264</sup> from energy producers and suppliers in order to advance the liber-

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258 In the oil and gas markets, there is a general differentiation between “upstream” and “downstream” segments of the relevant markets. In this context, “upstream” refers to the exploration and production of crude oil and natural gas, usually up to and including, the first point of refinery, and “downstream” refers to the processes applied to the relevant oil and gas after refinery and the supply chain the delivery to the final customer. In relation to electricity, there is no direct equivalent of the upstream segment and effectively, the entire electricity market effectively takes place in parallel to and interacts with what is referred to as the downstream segment of the gas market. For a more detailed explanation of the concepts of upstream and downstream in the gas market and how the different market segments related to one another from an economic perspective, see Franziska Holz, Christian von Hirschhausen, Claudia Kemfert, “A strategic model of European gas supply (GASMOD)” in: *Energy Economics* 2008 20 (3) <<https://doi.org/10.1016/j.eneco.2007.01.018>> Available at <<https://www.sciencedirect.com/science/article/pii/S0140988307000217>>

259 For a more detailed discussion of the reasons for and objectives of the early liberalisation steps in the UK, see e.g. Moore John, ‘Privatisation everywhere: the world’s adoption of the British experience. Privatization under Mrs. Thatcher: A review of the literature’ (1992) 69(4) *Public Administration*

260 Pollitt, Michael G, ‘The role of policy in energy transitions: Lessons from the energy liberalisation era’ in: *Energy Policy*, (2012) <<https://doi.org/10.1016/j.enpol.2012.03.004>>

261 Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC [2003] OJ L176/37.

262 Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC [2003] OJ L176/57.

263 Generally on the Second Energy Package, see: Fiedler (n 253) 5.

264 The unbundling provisions for electricity TSOs can be found in Article 10 of the Second Electric-

alisation of the European energy market and create equal access to the networks for all market participants.<sup>265</sup>

The Second Energy Package also required Member States to establish independent National Regulatory Agencies (NRAs), which were to ensure “non-discrimination, effective competition and the efficient functioning of the market.”<sup>266</sup>

Just under two years after the entry into force of the Second Energy Directives, the European Commission undertook an inquiry into competition in gas and electricity markets (the “Sector Inquiry”),<sup>267</sup> as provided for in Article 17 of Regulation 1/2003 on the implementation of the EC Treaty rules on competition, aimed at assessing the prevailing competitive conditions and establishing the causes of the perceived market malfunctioning.

The findings of the Sector Inquiry<sup>268</sup> and the resulting work to improve the IEM by repealing and replacing the Second Energy Package coincided with the negotiations for the adoption of the TFEU in 2009.

## 6.2 The TFEU and the Third Energy Package

The TFEU has been transformative for the IEM, as its Articles 4(2) and 194 bestowed competence on the EU to legislate in energy matters. As a result, energy has moved from being the near-exclusive domain of Member States to a shared competence between the EU and its Member States. As Volker Roeben has noted, the TFEU “ushered in a new approach, elevating energy to the EU level.”<sup>269</sup>

Having acquired a clear legal basis for energy policy and legislation in Article 194 of the TFEU, EU legislators adopted the Third Energy Package (TEP),<sup>270</sup> which con-

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ity Directive, the unbundling of electricity DSOs is provided in Article 15 of the Second Electricity Directive, the equivalent provisions for the gas sector can be found in Article 9 (in relation to TSOs) and Article 13 (in relation to DSOs) of the Second Gas Directive, respectively.

265 On the economic effect of the unbundling provisions in the Second Energy Package; Pollitt, Michael “The arguments for and against ownership unbundling of energy transmission networks” (2008) 36 (2) *Energy policy* <<https://www.sciencedirect.com/science/article/pii/S0301421507004478>>

266 Article 25(1) of the Second Gas Directive and article 23 (1) of the Second Electricity Directive. On the evolution of NRAs in the energy sector, see also: Lavrijssen Saskia, and Leigh Hancher. ‘European regulators in the network sectors: Revolution or evolution?’ (2008).

267 <[https://ec.europa.eu/commission/presscorner/detail/en/IP\\_05\\_716](https://ec.europa.eu/commission/presscorner/detail/en/IP_05_716)>

268 Final report of the Sector Inquiry: DG Competition report on energy sector inquiry 10 January 2007, Brussels, 10 January 2007 SEC (2006) 1724 available here <[https://ec.europa.eu/competition/sectors/energy/2005\\_inquiry/full\\_report\\_part1.pdf](https://ec.europa.eu/competition/sectors/energy/2005_inquiry/full_report_part1.pdf)>

269 Volker Roeben, *Towards a European Energy Union – European Energy Strategy in International Law* (CUP 2018) 15.

270 Directive 2009/72/EC of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC (“Third Electricity Directive”) [2009] OJ L211/25;

tained more extensive and comprehensive provisions for the liberalisation and further integration of the IEM.<sup>271</sup>

The TEP introduced a plethora of changes, for instance, in relation to the unbundling<sup>272</sup> of transmission network activities from supply and generation, increasing

Directive 2009/73/EC of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC (“Third Gas Directive”) [2009] OJ L211/94; Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for crossborder exchanges in electricity and repealing Regulation (EC) No 1228/2003 (“2009 Electricity Regulation”) [2009] OJ L211/15; Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 (“2009 Gas Regulation”) [2009] OJ L211/36; and Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators (“ACER Regulation”) [2009] OJ L211/1.

271 On the introduction and the aims of the Third Energy Package generally, see Kroes, Neelie. “Improving competition in European Energy markets through effective unbundling.” *Fordham Int’l LJ* 31 (2007): 1387. On the TEP in EU energy law generally; Talus (op cit.).

272 Unbundling refers to the separation of electricity and (downstream) gas networks from the activities of supply and generation of electricity and/or gas with the aim of eliminating and to enable equal network access by all market participants. The strictest unbundling regime applies to TSOs for which the TEP introduced three different models of unbundling the strictest of which, full ownership unbundling (“FOU”) does not allow TSOs to hold any interest in generation or supply companies or vice versa. In a second model (referred to as the Independent System Operator, “ISO”) generation and supply companies may own the relevant networks but have to appoint an independent, FOU compliant, network operator; whereas the third model (referred to as Independent Transport Operator (“ITO”)) allows the network business to remain part of a vertically integrated group together with generation and/or supply businesses subject to strict internal separation and information barriers. The main focus of the unbundling regime of the TEP is on TSOs, however, DSOs and certain other grid businesses are also subject to legal and accounting unbundling, meaning that these companies have to be separate at least in their legal form and their accounts from generation and supply businesses which are part of the same vertically integrated company or group.

For a high-level overview of the three TSO unbundling models, see also the presentation by Annegret Groebel, in particular slides 10ff: <<https://www.ceer.eu/documents/104400/-/-/40770749-0a94-c65a-1b02-5c7a9ec3aa58>>

For more detail on the introduction of the unbundling regime as pt of the TEP, see Pielow, Johann-Christian, Gert Brunekreeft and Eckart Ehlers, ‘Legal and economic aspects of ownership unbundling in the EU’ (2009) 2(2) *Journal of World Energy Law & Business* <<https://doi.org/10.1093/jwelb/jwp001>> or Van Koten, Silvester and Andreas Ortmann, ‘The unbundling regime for electricity utilities in the EU: A case of legislative and regulatory capture?’ (2008) 30 (6) *Energy Economics* <<https://doi.org/10.1016/j.eneco.2008.07.002>>

For a comparative study of the introduction of the unbundling regime, see Ehlers E.M, ‘Electricity and gas supply network unbundling in Germany, Great Britain and The Netherlands and the law of the European Union’ (2010). For a progress report on the unbundling of TSOs in the EU,

cooperation both between gas and electricity transmission system operators (TSOs), as well as NRAs, which were mandated to be independent of any political influence,<sup>273</sup> and generally strengthening the regulatory oversight through the creation of a European energy regulator, the Agency for the Cooperation of Energy Regulators (ACER).<sup>274</sup>

The TEP also created the European Networks of TSOs for both electricity and gas (ENTSO-E and ENTSO-G, respectively) and kickstarted the process leading to the adoption of European network codes which provide for common rules governing the EU's gas and electricity grids, in particular in relation to interconnection points and overall grid interoperability.

The Treaty of Lisbon and the TEP have had a transformative impact on energy law in the EU and have ultimately led to a “Europeanisation” (as opposed to national energy laws in the Member States) of the same.<sup>275</sup> Since the adoption of the TEP, the EU electricity market has undergone significant change, which posed a number of technical, economic, and legal challenges. This was not only due to the implementation of the very measures of the TEP<sup>276</sup> but also due to the increase in the share of renewable energy in the overall generation capacity in the IEM and an increasing share of decentralised generation.

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see Global Transmission Report, “Structural Reforms in Europe: Update on unbundling of TSOs”, 14 October 2016, available at <<https://www.globaltransmission.info/archive.php?id=27649>>

In relation to the EU unbundling regime in a WTO context, see Dralle, Tilman Michael: “Ownership Unbundling and Related Measures in the EU Energy Sector: Foundations, the Impact of WTO Law and Investment Protection”: 5 (European Yearbook of International Economic Law, 5), Springer 2018

273 See Art. 35(5) of Directive (EU) 2009/72/EC, which for the first time required that national regulatory authorities can “take autonomous decisions, independently from any political body”.

274 Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators [2009] OJ L211/1.

275 On the Europeanisation of energy law, see also: Wiczorek, Alexander: “*Europäisierung des nationale Energierechts: Der energierechtliche Handlungsspielraum der EU-Mitgliedstaaten im Spannungsfeld supranationaler Normgebung*”, Logos 2014

276 On issues in the implementation of the TEP from a legal perspective, see Zajdler, Robert, “EU Energy Law: Constraints with the Implementation of the Third Liberalisation Package” Cambridge Scholars Publishing, 2012

A significant further step of integration of EU energy markets was the coupling of the single day-ahead electricity markets from 2014 onwards<sup>277</sup> on the basis of the network code on capacity allocation and congestion management.<sup>278</sup>

In parallel to the TEP, the EU adopted a series of measures to promote renewable energy, starting with the Renewable Energy Directive<sup>279</sup> in 2009, whose ultimate goal was to achieve 20% of total energy consumption from Renewable Energy Sources (RES) across the EU by 2020. In 2018, a revised Renewable Energy Directive<sup>280</sup> entered into force as part of the Clean Energy Package, including a new target of at least 32% to be met by 2030, with negotiations underway for the “Fit for 55”<sup>281</sup> and “RePowerEU”<sup>282</sup> packages which provide more ambitious renewable energy and greenhouse gas reduction targets.

### 6.3 The Clean Energy Package

Until the advent of the Clean Energy Package (CEP),<sup>283</sup> the renewable energy targets and support, on the one hand, and market design pursuant to the successive energy packages, on the other, effectively existed in separate legal spheres. The constituent parts of the CEP were adopted in 2018 and 2019, and it can perhaps be called the first “post-liberalisation package,” as its eight legislative instruments built on the TEP and addressed legal issues arising out of the TEP and the subsequent energy market

277 For a brief history of EU electricity market coupling, see Lucia Parisio and Matteo Pelagatti, ‘Market Coupling between electricity markets: theory and empirical evidence for the Italian-Slovenian interconnection’ (DEMS – University of Milan-Bicocca, 14 May 2014) <[www.siecon.org/sites/siecon.org/files/oldfiles/uploads/2014/10/Parisio-Pelagatti-158.pdf](http://www.siecon.org/sites/siecon.org/files/oldfiles/uploads/2014/10/Parisio-Pelagatti-158.pdf)>; ENTSO-E has published a more operationally focussed timeline of the various steps leading to SDAC coupling which can be found here: ENTSO-E, ‘Single Day-ahead Coupling (SDAC)’ <[www.entsoe.eu/network\\_codes/cacm/implementation/sdac/](http://www.entsoe.eu/network_codes/cacm/implementation/sdac/)>.

278 Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management [2015] OJ L197/24, chapter 5 (articles 38 ff).

279 Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC [2009] OJ L140/39.

280 Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast) [2018] OJ L328/82.

281 For an overview of the Fit for 55 package, see: Silke Goldberg and Jannis Bille, ‘Fit For 55 – The RED II Proposal – Power Up’ OGEL 1 (2022).

282 For details on the REPowerEU package of measures, see: European Commission, ‘Factsheet on REPowerEU Actions’ (18 May 2022) <[https://ec.europa.eu/commission/presscorner/detail/en/fs\\_22\\_3133](https://ec.europa.eu/commission/presscorner/detail/en/fs_22_3133)>.

283 For a detailed discussion of the CEP and its individual legal instruments, see also Athir Nouicer and others, *The EU Clean Energy Package* (European University Institute 2020).



developments, in particular as a result of the increased share of renewable energy in the EU's power generation mix.

The CEP is also the first European legislation which considers and addresses in detail the consequences of an ever-increasing share of renewable energy sources in the EU's energy mix, as well as the market design aspects arising from the increasing integration of the EU's electricity market.<sup>284</sup>

Previous EU energy packages were concerned with the opening and creation of the basic legal framework for the liberalisation of the energy market and had the ultimate objective of completing the IEM. The CEP, on the other hand, takes market liberalisation as a European “acquis” in both law and practice and addresses issues pertaining to the design and detailed working of the wholesale and retail segments of liberalised electricity market following the integration of significant amounts of renewable energy. As such, its emphasis is on the integration of the IEM on the basis of EU-level market rules.

#### 6.4 The North Sea Energy Cooperation

The North Seas Energy Cooperation (NSEC) is a cooperation framework encompassing the countries in the North Sea region, focusing on the development of offshore renewable energy sources and related electricity grids in the geographical area of the North Seas, including the Irish and Celtic Seas. It was founded in 2016 on the basis of the “Political Declaration on Energy Cooperation between the North Seas Countries.”<sup>285</sup>

Whilst the NSEC is not an EU institution or forum, the countries constituting this cooperation include Norway,<sup>286</sup> Belgium, Denmark, France, Germany, Ireland, Luxembourg, the Netherlands, and Sweden. The European Commission is involved in its running and provides institutional support. The Commissioner for Energy is represented in NSEC meetings by the European Commission.<sup>287</sup> The UK was one of

284 Horstink, Lanka, Julia M. Wittmayer, and Kiat Ng, ‘Pluralising the European energy landscape: Collective renewable energy prosumers and the EU’s clean energy vision’ (2021) *Energy Policy* 153 <<https://www.sciencedirect.com/science/article/pii/S0301421521001312>>

285 <[https://energy.ec.europa.eu/system/files/2016-06/Political%2520Declaration%2520on%2520Energy%2520Cooperation%2520between%2520the%2520North%2520Seas%2520Countries%-2520FINAL\\_o.pdf](https://energy.ec.europa.eu/system/files/2016-06/Political%2520Declaration%2520on%2520Energy%2520Cooperation%2520between%2520the%2520North%2520Seas%2520Countries%-2520FINAL_o.pdf)>

286 Although Norway is not a Member State of the European Union, it is part of the European Economic Area (the EEA). As such, it has access to the European internal market and can freely trade its goods and service within the EEA territory, subject to compliance with the relevant EU legislation.

287 See the 2021 Political Declaration of the NSEC: <[https://energy.ec.europa.eu/system/files/2021-12/20211124-nsec\\_political\\_declaration.pdf](https://energy.ec.europa.eu/system/files/2021-12/20211124-nsec_political_declaration.pdf)>



the founding members when it was a Member State of the EU, and even though “North Seas Energy Cooperation and Forum require no formal obligation on being a Member State,”<sup>288</sup> which might provide “flexibility for the participation of the UK,”<sup>289</sup> the UK’s membership in the NSEC ended temporarily when it left the EU.

The NSEC is a form of “enhanced cooperation [...which] is necessary to deliver on the objectives of the EU [s]trategy on offshore renewable energy”<sup>290</sup> and, as such, plays an important role in the future development of both renewable energy and the related offshore grids in the North Sea area and therefore for the EU as a whole and, as a corollary due to the geographical position, the UK.

## 6.5 UK Influence in the EU Energy Sector

From the end of World War II until the late 1980s (i.e., the beginning of the liberalisation process in the UK), Western European companies in the energy sector were typically vertically integrated monopolies encompassing generation, transmission and/or distribution networks servicing a defined geographical area which could extend as far as a whole country.<sup>291</sup> In Eastern European countries, until 1989, the dominating principle was central planning in the economy, which for energy supply meant increasing the absolute amount of energy generated, immaterial of the related cost.<sup>292</sup> In practice, this meant that in the pre-liberalised energy sector in both East and Western Europe, a few vertically integrated companies took care of the entire supply and value chain “in house.”

In the initial years of the UK’s membership in the EEC, McGowan et al. observed that the “combination of domestic political divisions over its participation in the European Community and the desire to retain control over the resources of the North Sea meant that British governments were quite hostile to the development of a more coordinated European approach to energy matters.”<sup>293</sup>

288 Gorenstein Dedecca, Joao, ‘Expansion governance of the integrated North Seas offshore grid’ (2018) <<https://repositorio.comillas.edu/xmlui/handle/11531/36294>>

289 Ibid.

290 North Seas Energy Cooperation, ‘Joint Statement on the North Seas Energy Cooperation – 12 (September 2022) <[https://energy.ec.europa.eu/system/files/2022-09/220912\\_NSEC\\_Joint\\_Statement\\_Dublin\\_Ministerial.pdf](https://energy.ec.europa.eu/system/files/2022-09/220912_NSEC_Joint_Statement_Dublin_Ministerial.pdf)>

291 Rainer Eising, ‘Policy Learning in Embedded Negotiations: Explaining EU Electricity Liberalization’ in: *International Organization* (2002) 56 (1)

292 Dietz Raimund, *Die Energiewirtschaft in Osteuropa und der UdSSR* (Springer 1984).

293 McGowan Francis, ‘The UK and EU energy policy: from awkward partner to active protagonist? Toward a common European Union energy policy: Problems, progress, and prospects’ (2011) In: Birchfield Vicki L and John S. Duffield, ‘Toward a Common European Union Energy Policy. Problems, Progress, and Prospects’ (2011) <[https://doi.org/10.1057/9780230119819\\_10](https://doi.org/10.1057/9780230119819_10)>

This eventually changed when it came to the liberalisation of the EU energy market, as the UK was one of the first European countries to not only privatise but also liberalise its energy market, and as a Member State of the EU, it was a strong advocate of the IEM. Successive UK governments have, during the UK's membership of the EU, "viewed the construction of liberalized integrated markets across the EU as a key component of the country's continued energy security and price competitiveness"<sup>294</sup> and have had "a demonstrable impact in shaping EU climate and energy legislation."<sup>295</sup>

The liberalisation of the energy market in the UK<sup>296</sup> applied the concepts of Third Party Access (TPA) and unbundling before these concepts became centre-pieces of the EU model for the energy market.<sup>297</sup>

As Dieter Helm has noted, the EU "has impinged on British energy policy only in a marginal way;" however, "the policy flow in the other direction, *from Britain to Europe*, has been very considerable."<sup>298</sup>

Helm notes that over time the policy parameters in the EU changed, at least to some extent, as a result of UK participation in the EU policy-making process; Whitehead also considers that the UK was an important influence on EU energy policy and law.<sup>299</sup>

The reason for the UK's success in influencing EU energy policy and, ultimately, laws were due in part to its effective lobbying for its position and in part to the fact that in some EU Member States, the energy monopoly companies had come under pressure for failing to deliver investments in transmission grids and customer service as well as a lack of innovation, creating fertile ground for the UK's position to be accepted.<sup>300</sup>

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294 Antony Froggatt, Thomas Raines and Shane Tomlinson, 'UK Unplugged? The Impacts of Brexit on Energy and Climate Policy' (Chatham House Research Paper, May 2016) <[www.chatham-house.org/sites/default/files/publications/research/2016-05-26-uk-unplugged-brexit-energy-froggatt-raines-tomlinson.pdf](http://www.chatham-house.org/sites/default/files/publications/research/2016-05-26-uk-unplugged-brexit-energy-froggatt-raines-tomlinson.pdf)>, p. 10.

295 *ibid* 11.

296 As the liberalisation of the energy market pre-dates the (partial) devolution of energy to the home countries and in particular the SEM, the reference to the UK energy market is therefore correct when referring to the energy market policies in the late 1980s and 1990s.

297 On the history and economic effect of unbundling in the UK energy market, see e.g. Davies Stephen and Catherine Waddams Price, 'Does ownership unbundling matter? Evidence from UK energy markets' (2007) 42 (6) *Intereconomics*

298 Helm Dieter, *Energy, the state, and the market: British energy policy since 1979* (OUP 2004) page 372

299 *ibid* 186.

300 For more detail on the reasons for the success for the UK's liberalisation message, see e.g. Bolton Ronan, *Making Energy Markets: The Origins of Electricity Liberalisation in Europe* (Palgrave Macmillan 2021)

Helm considers in particular that as attitudes towards liberalisation and competition changed, both in the EU energy markets and more generally throughout Europe, the energy policy agenda in the EU broadened and started to include support for renewable energy and, later, climate change.<sup>301</sup>

The UK was also an advocate for the role of the market in relation to renewable energy. As Johansson and Turkenburg have suggested, “the UK has promoted market-based mechanisms with the goal of developing renewable energy at least cost to the customer.”<sup>302</sup> This deployment of market mechanisms to foster the development of renewable energy was adopted by the EU.<sup>303</sup>

In addition to the rapprochement in policy attitudes between the UK and the EU in relation to energy, Lockwood et al. have noted that “[s]ince the late 2000s the electricity market in GB has become increasingly integrated with continental European markets through market coupling and increasing interconnection capacity.”<sup>304</sup>

It can therefore be said that the UK had a significant influence on EU energy policy to the extent that arguably, the UK and EU approaches to the role of the market in the energy sector, including renewable energy, converged over time. The expansion of physical connections, in particular through electricity interconnectors, has further contributed to this trend.

## 6.6 Euratom

Whilst the EU energy directives and regulations cover electricity regardless of its fuel stock, they do not cover the nuclear energy sector. In 2021, in the EU, 25.4% of all electricity produced was generated by nuclear power plants;<sup>305</sup> in 2022, in the UK, that share was about 15%.<sup>306</sup>

301 The UK and EU Energy Policy: From Awkward Partner to Active Protagonist? Francis McGowan

302 Johansson, Thomas B and Wim Turkenburg, ‘Policies for renewable energy in the European Union and its member states: an overview’ (2004) 8 (1) *Energy for sustainable development* <<https://www.sciencedirect.com/science/article/pii/S0973082608603877>>

303 For an overview of the development see Solorio Israel and Pierre Bocquillon, *EU renewable energy policy: A brief overview of its history and evolution. A guide to EU renewable energy policy* (2017)

304 Matthew Lockwood, Antony Froggatt, Georgina Wright, Joseph Dutton, ‘The implications of Brexit for the electricity sector in Great Britain: Trade-offs between market integration and policy influence’ (2017) 110 *Energy Policy* <<https://www.sciencedirect.com/science/article/pii/S0301421517305153>>

305 ‘Eurostat, Nuclear energy statistics’ (December 2022) <[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Nuclear\\_energy\\_statistics#Nuclear\\_heat\\_and\\_gross\\_electricity\\_production](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Nuclear_energy_statistics#Nuclear_heat_and_gross_electricity_production)>

306 ‘Nuclear energy in the UK, UK Parliament POST Note 687’ <<https://researchbriefings.files.parliament.uk/documents/POST-PN-0687/POST-PN-0687.pdf>>

The specific aspects pertaining to the nuclear energy sector, such as the trade in fissile materials and the development of nuclear power stations are, at European level, not regulated by the EU. Instead, this sector is covered by the Treaty establishing the European Atomic Energy Community<sup>307</sup> established a separate legal entity from the (then) EEC.

When analysing the legal aspects of Brexit in relation to the energy sector, it is therefore important to also include Brexatom in this discussion.

Whilst Euratom shares institutions with the EU, its governance is separate, and its scope and focus are solely on the creation and development of nuclear energy and adjacent industries (i.e., supply of the relevant fissile material and relevant technology). A central European Supply Agency oversees the import and transfer of nuclear materials but with no transfer of competence from the Member States to a central Euratom body as far as nuclear energy policy in the wider sense is concerned.

For the purposes of this dissertation, it is useful to note that Article 106a Euratom incorporates the provisions of Article 50 TEU *mutatis mutandis*, but it does not impose an interdependence or conditionality between the two provisions. The UK gave notice pursuant to Article 106a to leave Euratom in the Article 50 Notice. Brexatom was subject to some debate within the UK, as it was not necessarily a legal consequence of Brexit. As the European Court of Justice (ECJ) has jurisdiction over certain issues pursuant to Euratom, some have speculated that Brexatom was a politically motivated act to avoid “continuing ECJ jurisdiction over certain matters relating to nuclear energy and technology.”<sup>308</sup>

Negotiations regarding Brexatom took place in parallel to the negotiations on the Withdrawal Agreement and the TCA, were of a largely technical nature, and happened away from the public limelight. The result of these negotiations was the EU-UK Agreement for cooperation on the safe and peaceful uses of nuclear energy (the “EU-UK Nuclear Agreement”),<sup>309</sup> which governs the relationship between the UK and Euratom.

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307 See also n2 above

308 Haydon Etherington, ‘Euratom’ (Institute for Government 2017) <[>>](http://www.instituteforgovernment.org.uk/article/explainer/euratom#:~:text=While%20the%20UK%20technically%20left,longer%20subject%20to%20Euratom%20rules).

309 Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the European Atomic Energy Community for Cooperation on the Safe and Peaceful Uses of Nuclear Energy, OJ L 150, 30.4.2021, p. 1–18 <[>](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A22021A0430%2804%29&qid=1621337022100).

## 6.7 Interim conclusion to section 6

In summary, over the past 30 years, and especially since 2009, the IEM has transformed from “largely monopolistic, national islands into a more integrated European archipelago,”<sup>310</sup> which functions on the basis of a common rule book and institutions. It can perhaps be said that EU integration is particularly advanced in the energy sector and especially so in the electricity sector.

The nuclear energy sector is governed separately by the Euratom treaty and did not have the same transfer of competence from the Member States to a central Euratom body that took place in the EU for the non-nuclear energy sector. Euratom plays a vital role in the governance of the trade in fissile material and the development and operation of nuclear power stations in the EU.

Today, the energy sector is arguably one of the most integrated sectors in Europe. Yet, it was not a key focus in the public debate about Brexit or the Withdrawal Agreement, while the TCA only dedicates 16 pages to provisions pertaining to the energy market.<sup>311</sup>

It is against this backdrop that this dissertation sets out to examine the impact, in legal terms, of Brexit and Brexatom on the UK and EU energy sector.

## 7 TIMELINE OF BREXIT

As this is a cumulative dissertation by prior publications, which is composed of articles and book chapters written over a period of time, it may be useful to set out, for orientation purposes and at a cursory level only, the main events in relation to Brexit which are referred to in the Constituting Manuscripts.

By necessity, this timeline is selective and focuses on events which will assist the reader of the Constituting Manuscripts; it is not intended to provide a detailed commentary on the various events, as this is beyond the scope of this dissertation.<sup>312</sup> For further background, references to relevant sources and additional literature on each event have been included.

<sup>310</sup> Goldberg and Eckenroth (n 248) 169.

<sup>311</sup> TCA, Articles 299-331.

<sup>312</sup> For a more detailed overview of the timeline leading to Brexit, please see: Nigel Walker, ‘Brexit timeline: Events leading to the UK’s exit from the European Union’ (6 January 2021) House of Commons Library Briefing Paper 7960, <<https://researchbriefings.files.parliament.uk/documents/CBP-7960/CBP-7960.pdf>>; Michel Barnier, n.11 supra, which provides a commentated timeline on the events during the Brexit negotiation phase.

For an analysis of the Brexit process with emphasis on the UK political and constitutional background; Laurence W. Gormley, ‘Brexit-Nevermind the Whys and Wherefores: Fog in the Channel, Continent Cut Off’ (2016) *Fordham Int’l LJ* 40

## 7.1 From Joining to the Referendum: An Uneasy Relationship

The UK joined the EU, or rather, as it then was, the EEC, with effect of 1 January 1973, together with Ireland and Denmark.<sup>313</sup>

From the start, there was a certain uneasiness in the relationship between the UK and the EC due to internal politics within the UK. At the time, the Labour Party had promised a referendum on the question of whether or not the UK should stay in the [then] EEC.<sup>314</sup> That referendum took place on 5 June 1975 and resulted in a resounding vote for the UK to stay in the EEC, as 67.2% of the votes were cast in favour.<sup>315</sup>

However, since the late 1980s, and, in particular, in the wake of the adoption of the Maastricht Treaty of 1992,<sup>316</sup> “Eurosceptics,” mainly within the British Conservative Party, have called for an exit of the UK from the EU.<sup>317</sup> This pressure grew over time and led, ahead of the General Election 2015, the then Prime Minister David Cameron to promise a referendum on the UK’s membership in the EU.<sup>318</sup> The Referendum was held on 23 June 2016 and resulted in a 52% to 48% vote in favour of the UK leaving the EU.<sup>319</sup>

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313 UK Parliament, ‘Into Europe’ <[www.parliament.uk/about/living-heritage/transformingsociety/tradeindustry/importexport/overview/europe/](http://www.parliament.uk/about/living-heritage/transformingsociety/tradeindustry/importexport/overview/europe/)>. For a history of the UK’s journey in and out of the EU, see: Duff Andrew, *Britain and the Puzzle of the European Union* (Routledge 2022); Troitiño David Ramiro, Tanel Kerikmäe, and Archil Chochia, eds. *Brexit: History, reasoning and perspectives* (Springer 2018)

314 James Walsh, ‘Britain’s 1975 Europe referendum: what was it like last time?’ (The Guardian, 25 February 2016) <[www.theguardian.com/politics/2016/feb/25/britains-1975-europe-referendum-what-was-it-like-last-time](http://www.theguardian.com/politics/2016/feb/25/britains-1975-europe-referendum-what-was-it-like-last-time)>. For an academic perspective on the 1975 referendum, see e.g. Saunders Robert, *Yes to Europe!: The 1975 referendum and seventies Britain*. (CUP 2018); Murlon-Druol Emmanuel, *The UK’s EU vote: The 1975 precedent and today’s negotiations. No. 2015/08. Bruegel Policy Contribution* (2015)

315 Richard Nelsson, ‘Archive: how the Guardian reported the 1975 EEC referendum’ (The Guardian, 5 June 2015) <[www.theguardian.com/politics/from-the-archive-blog/2015/jun/05/referendum-eec-europe-1975](http://www.theguardian.com/politics/from-the-archive-blog/2015/jun/05/referendum-eec-europe-1975)>.

316 Treaty on the European Union [1992] OJ C191/1.

317 Nicholas Crowson, ‘How Europe became the Tories’ eternal battleground’ (The Guardian, 9 December 2018) <[www.theguardian.com/politics/2018/dec/09/tories-europe-eternal-battle-ground](http://www.theguardian.com/politics/2018/dec/09/tories-europe-eternal-battle-ground)>.

318 BBC News (n 43). On Cameron’s promise to hold a referendum, see e.g. “Copsey, Nathaniel and Haughton, Tim: “Farewell Britannia: Issue Capture and the Politics of David Cameron’s 2013 EU Referendum Pledge” in *Common Mkt. Stud.* 2014 (52)

319 BBC News, ‘EU Referendum Results’ <[www.bbc.co.uk/news/politics/eu\\_referendum/results](http://www.bbc.co.uk/news/politics/eu_referendum/results)>.

## 7.2 Article 50: The “Trigger” and the Extensions

On 29 March 2017, the UK formally commenced the process of leaving the EU by giving notice pursuant to Article 50 TEU.<sup>320</sup> This triggered the two-year period provided for in Article 50(3) TEU, which accordingly should have ended on 29 March 2019.

It soon became apparent that the two-year period foreseen by Article 50 was quite tight given the political negotiations and agreements that did not only need to take place within the UK to prepare for its exit from the EU but naturally also between the UK and EU to agree both the terms of the separation, as well as the future relationship between the two parties.

Article 50 allows for either party to request an extension. Requests for extensions to the Article 50 process are addressed to the European Council and require its unanimous agreement. During the Brexit negotiations, the UK requested and received three extensions for the process.

Between March 2017 and November 2018, the EU and the UK negotiated and agreed on a draft of the Withdrawal Agreement. This draft agreement was considered controversial within the House of Commons, which was split on the matter, and also across party-political lines. As a result, this draft was rejected several times by the House of Commons, with the first rejection occurring on 15 January 2019<sup>321</sup> and the second on 12 March 2019.<sup>322</sup>

After the second rejection occurred just 17 days before the end of the two-year period prescribed by Article 50 TEU, the UK requested an extension until 12 April 2019, which was granted on 21 March 2019.<sup>323</sup>

After a third rejection of the draft agreement, on 5 April 2019, Prime Minister Theresa May wrote to the President of the European Council, Donald Tusk, requesting a second extension until 30 June 2019.<sup>324</sup> Following a meeting of the specially

320 The Prime Minister, ‘Article 50 TEU Notice’ <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/604079/Prime\\_Ministers\\_letter\\_to\\_European\\_Council\\_President\\_Donald\\_Tusk.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/604079/Prime_Ministers_letter_to_European_Council_President_Donald_Tusk.pdf)>.

321 Heather Stewart, ‘May suffers heaviest parliamentary defeat of a British PM in the democratic era’ (The Guardian, 16 January 2019) <[www.theguardian.com/politics/2019/jan/15/theresa-may-loses-brexit-deal-vote-by-majority-of-230](http://www.theguardian.com/politics/2019/jan/15/theresa-may-loses-brexit-deal-vote-by-majority-of-230)>.

322 Heather Stewart, ‘MPs ignore May’s pleas and defeat her Brexit deal by 149 votes’ (The Guardian, 12 March 2019) <[www.theguardian.com/politics/2019/mar/12/mps-ignore-mays-pleas-and-defeat-her-brexit-deal-by-149-votes](http://www.theguardian.com/politics/2019/mar/12/mps-ignore-mays-pleas-and-defeat-her-brexit-deal-by-149-votes)>.

323 European Council, European Council decision taken in agreement with the United Kingdom, extending the period under Article 50(3) TEU (22 March 2019) EUCO XT 20006/19 <<https://data.consilium.europa.eu/doc/document/XT-20006-2019-INIT/en/pdf>>.

324 The letter is available here: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/793058/PM\\_letter\\_to\\_His\\_Excellency\\_Mr\\_Donald\\_Tusk\\_\\_1\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/793058/PM_letter_to_His_Excellency_Mr_Donald_Tusk__1_.pdf)>.



convened European Council on 10 April 2019, the UK and the EU agreed to extend the Article 50 period until 31 October 2019.<sup>325</sup>

Given the difficulties in getting parliamentary approval for the draft agreement, Theresa May resigned as Prime Minister on 7 June 2019.<sup>326</sup> Following a leadership contest within the Conservative Party,<sup>327</sup> Boris Johnson became Prime Minister on 24 July 2019.<sup>328</sup> He then set about negotiating a new deal for a withdrawal agreement with the EU which was put to the House of Commons for approval.

In October 2019, the UK and the EU agreed to a revised withdrawal agreement (the “Withdrawal Agreement”).<sup>329</sup>

However, parliamentary approval was still not forthcoming, and the UK Parliament adopted the EU Withdrawal (No. 2) Act.<sup>330</sup> This act provided that the Prime Minister would have to request a third extension of the Article 50 timeline until 31 January 2020 if MPs did not approve a deal with the EU or alternatively approved leaving the EU without a deal by 19 October 2019. As no such approval was given by 19 October, the Prime Minister wrote to Donald Tusk requesting an extension until 31 January 2020.<sup>331</sup> The EU accepted this request on 28 October 2019.<sup>332</sup>

### 7.3 Approval of the Withdrawal Agreement and TCA

On 12 December 2019, a UK General Election was called, which resulted in the Conservative Party led by Boris Johnson winning a substantive majority of 80 seats.<sup>333</sup>

325 European Council, ‘Special European Council (Art. 50), 10 April 2019’ <[www.consilium.europa.eu/en/meetings/european-council/2019/04/10/](http://www.consilium.europa.eu/en/meetings/european-council/2019/04/10/)>.

326 Heather Stewart, ‘Theresa May announces she will resign on 7 June’ (The Guardian, 24 May 2019) <[www.theguardian.com/politics/2019/may/24/theresa-may-steps-down-resigns-tory-leader-conservative-brexit](http://www.theguardian.com/politics/2019/may/24/theresa-may-steps-down-resigns-tory-leader-conservative-brexit)>.

327 Ketaki Zodgekar and Beatrice Baar, ‘Conservative Party leadership contests’ (Institute for Government, 15 November 2018) <[www.instituteforgovernment.org.uk/article/explainer/conservative-party-leadership-contests](http://www.instituteforgovernment.org.uk/article/explainer/conservative-party-leadership-contests)>.

328 Heather Stewart, ‘Boris Johnson elected new Tory leader’ (The Guardian, 23 July 2019) <[www.theguardian.com/politics/2019/jul/23/boris-johnson-elected-new-tory-leader-prime-minister](http://www.theguardian.com/politics/2019/jul/23/boris-johnson-elected-new-tory-leader-prime-minister)>.

329 Department for Exiting the European Union, ‘New Withdrawal Agreement and Political Declaration, Policy Paper’ (19 October 2019) <[www.gov.uk/government/publications/new-withdrawal-agreement-and-political-declaration](http://www.gov.uk/government/publications/new-withdrawal-agreement-and-political-declaration)>.

330 European Union (Withdrawal) (No. 2) Act 2019, 2019 Chapter 26.

331 The letter can be found here: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/840665/Letter\\_from\\_UK\\_to\\_EU\\_Council.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840665/Letter_from_UK_to_EU_Council.pdf)>.

332 European Council, ‘European Council decision taken in agreement with the United Kingdom extending the period under Art 50(3)TEU’ (28 October 2019) EUCO XT 20024/2/19 <<https://data.consilium.europa.eu/doc/document/XT-20024-2019-REV-2/en/pdf>>.

333 Jon Henley, ‘Boris Johnson wins huge majority on promise to ‘get Brexit done’ (The Guardian,



With this majority, the Prime Minister obtained parliamentary approval for the Withdrawal Agreement<sup>334</sup> and the Political Declaration<sup>335</sup> and committed to an exit on 31 January 2020.

This deadline was met, and the UK left the EU on 31 January 2020 at 11 P.M. GMT after 47 years of membership.

At the same time, the UK also left the NSEC. Although not a formal EU body, the European Commission had made clear that continued participation post the Transition Period would not be possible.<sup>336</sup>

The Transition Period ended on 31 December 2020.

Since 1 January 2021, the TCA has governed the relationship between the EU and the UK, and the EU-UK Nuclear Agreement (which was adopted at the same time as the TCA) governs the relationship between the European Atomic Energy Community and the UK in nuclear matters.

## 7.4 The Post-TCA Phase

In December 2022, the UK re-joined the NSEC pursuant to a memorandum of understanding.<sup>337</sup>

Pursuant to Article 776, the TCA will be due for review in 2025 and every five years thereafter. In a departure from this review term, pursuant to Article 331 TCA,

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13 December 2019) <[www.theguardian.com/politics/2019/dec/13/bombastic-boris-johnson-wins-huge-majority-on-promise-to-get-brex-it-done](http://www.theguardian.com/politics/2019/dec/13/bombastic-boris-johnson-wins-huge-majority-on-promise-to-get-brex-it-done)>.

334 See: HM Government, 'Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Atomic Energy Community' (19 October 2019) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/840655/Agreement\\_on\\_the\\_withdrawal\\_of\\_the\\_United\\_Kingdom\\_of\\_Great\\_Britain\\_and\\_Northern\\_Ireland\\_from\\_the\\_European\\_Union\\_and\\_the\\_European\\_Atomic\\_Energy\\_Community.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840655/Agreement_on_the_withdrawal_of_the_United_Kingdom_of_Great_Britain_and_Northern_Ireland_from_the_European_Union_and_the_European_Atomic_Energy_Community.pdf)>.

335 HM Government, 'Political Declaration setting out the framework for the future relationship between the European Union and the United Kingdom' (the "Political Declaration") (19 October 2019) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/840656/Political\\_Declaration\\_setting\\_out\\_the\\_framework\\_for\\_the\\_future\\_relationship\\_between\\_the\\_European\\_Union\\_and\\_the\\_United\\_Kingdom.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840656/Political_Declaration_setting_out_the_framework_for_the_future_relationship_between_the_European_Union_and_the_United_Kingdom.pdf)>.

336 Anca Gurzu, 'Post-Brexit UK frozen out of renewable energy group' (politico.eu, 30 January 2020) <[www.politico.eu/article/post-brexit-uk-frozen-out-of-renewable-energy-grouping-north-sea-renewable-energy/](http://www.politico.eu/article/post-brexit-uk-frozen-out-of-renewable-energy-grouping-north-sea-renewable-energy/)>.

337 European Commission, 'North Seas Energy Cooperation and UK establish cooperation framework to facilitate the development of offshore renewable energy' (18 December 2022) <[https://energy.ec.europa.eu/news/north-seas-energy-cooperation-and-uk-establish-cooperation-framework-facilitate-development-offshore-2022-12-18\\_en](https://energy.ec.europa.eu/news/north-seas-energy-cooperation-and-uk-establish-cooperation-framework-facilitate-development-offshore-2022-12-18_en)>. The memorandum of understanding can be found here: <<https://energy.ec.europa.eu/system/files/2022-12/NSEC%20UK%20MoU%20signed.pdf>>.

the energy section of the TCA will automatically expire on 30 June 2026 unless it is renewed or otherwise amended by the parties.

## 8 THE CONSTITUTING MANUSCRIPTS

### 8.1 Overview and Structure

After this introductory chapter (chapter 1), the dissertation unfolds in seven principal chapters.

Chapters 2-7 are comprised of the Constituting Manuscripts, which are introduced below in further detail. For the purposes of this dissertation, the Constituting Manuscripts have been organised in chronological order by their publication date.

Chapter 8 concludes by taking stock of (i) the post-Brexit relationship between the EU and the UK, (ii) the impact of Brexit on the energy sector, and (iii) areas for improvements in the EU-UK relationship from the perspective of legal certainty and effective implementation of the TCA.

In order to appropriately contextualise each of the Constituting Manuscripts in chapters 2-7, a short introduction to the key issues discussed in the relevant chapter, together with an overview of the key relevant literature, has been included at the start of each Constituting Manuscript.

### 8.2 Scope of the Constituting Manuscripts

The chronologically earlier Constituting Manuscripts in chapters 2-4 of this dissertation aim to elucidate general themes emerging from the Brexit negotiations; they do not aim to provide a detailed commentary on the Brexit negotiations. Instead, they discuss the scope of Brexit, in particular as to whether an exit of the UK from Euratom would have been legally necessary.<sup>338</sup> They also discuss the Brexit negotiations as far as they relate to the energy sector as well as models of possible cooperation or free trade agreements and the (then anticipated) “divorce settlement” between the EU and the UK. Moreover, they address questions as to the possible future governance of and regulatory regime applicable to the energy sector as far as cross-border matters between the EU and the UK, in particular interconnectors<sup>339</sup> and the energy market more generally in the UK are concerned.

By contrast, the Constituting Manuscripts in chapters 5-7 focus on the TCA and its effects. They aim to provide an overview of and commentary on the substantive

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<sup>338</sup> See chapter 4 of this dissertation

<sup>339</sup> See chapter 3 of this dissertation

energy-related provisions of the TCA and a retrospective review of the TCA, both in terms of its scope against alternative models of free trade agreements (chapter 5), discuss the access of UK companies to the EU energy market (chapter 6), and the EU's supply security post-Brexit (chapter 7), respectively.

Some of the Constituting Manuscripts touch upon the impact of Brexit on Ireland from a supply security and market governance perspective. However, as the outline above exemplifies, this is not the focus of the Constituting Manuscripts.<sup>340</sup> Likewise, the wider implications of Brexit for the island of Ireland are beyond the scope of this dissertation.<sup>341</sup>

Whilst the Constituting Manuscripts refer, by necessity, to some general EU principles and constitutional and governance issues arising from Brexit beyond the energy sector, a more detailed analysis of these more fundamental EU law questions is outside the scope of this dissertation.<sup>342</sup>

Likewise, the external aspects of Brexit and its impact on the energy sector, namely aspects pertaining to (a) the international energy sector beyond the UK and the EU and (b) the relationships between the EU and/or the UK with third countries, are out of scope of this dissertation other than for a brief mention of post-Brexit nuclear cooperation agreements between the UK and certain countries.

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340 For an overview of the impact on Brexit on the Irish energy market, please see Garret Farrelly and Owen Collins, 'The Impact of Brexit on Ireland – The Energy Perspective' in Ana Stanič and Silke Goldberg (eds) *Brexit and Energy Law – Implications and Opportunities* (Routledge 2023).

341 On this topic, see, for instance, Dagmar Schriek, 'Brexit on the Island of Ireland: Beyond Unique Circumstances' (2018) 69 N Ir Legal Q 367 which contains a detailed historical introduction and provides a high level overview of the particular legal issues arising on the island of Ireland due to Brexit; and Tim Durrant and Alex Stojanovic, 'The Irish Border after Brexit' (Institute for Government, IfG Insights June 2018) <[www.instituteforgovernment.org.uk/sites/default/files/publications/irish-border-after-brexit-final.pdf](http://www.instituteforgovernment.org.uk/sites/default/files/publications/irish-border-after-brexit-final.pdf)>.

342 For a more political approach, see Federico Fabbrini, *The Law & Politics of Brexit* (OUP 2017); for a UK constitutional approach, see Michael Keating, 'Taking back control? Brexit and the territorial constitution of the United Kingdom' (2022) 29 *Journal of European Public Policy* 491; for a discussion from an EU institutions' perspective, see Edoardo Bressanelli and Nicola Chelotti, 'Assessing What Brexit Means for Europe: Implications for EU Institutions and Actors' (2021) 9 *Politics and Governance* 1.



## CHAPTER 2:

# BREXIT AND ITS IMPACT ON THE ENERGY SECTOR: PULLING THE PLUG?

As for the subsequent Constituting Manuscripts, the first section of this chapter offers a contextualisation of the Constituting Manuscript within the Brexit process. Specifically, Chapter 2 provides a general prospective view of key potential consequences of Brexit for the UK-EU relationships in the energy sector at a point in time in which the Brexit negotiations were ongoing. Moreover, the contextualisation in section 1 is completed by a literature review concerning the main aspects within the Constituting Manuscript in section 2. This overarching literature completes the literature review provided in the Constituting Manuscript, which, due to word limitations accompanying its publication, needed to be focussed. The Constituting Manuscript, as previously published, starts in section 3 of this chapter.

### 1 OVERVIEW

Chapter 2 is an article entitled “Brexit and Its Impact on the Energy Sector: Pulling the Plug.”<sup>343</sup> This article is the result of a presentation given to the Dutch energy law association (NeVER) at its European Energy Law seminar on 22 January 2018.<sup>344</sup>

By necessity, as the negotiations were moving fast, this chapter comments on general themes affecting the Brexit negotiations and the likely post-Brexit relations between the EU and the UK as applied to the energy sector rather than providing a detailed commentary on the progress of the then ongoing Brexit negotiations.<sup>345</sup>

As in 2018/2019, it was not foreseeable what model a future relationship between the EU and the UK would follow and what version of Brexit might ultimately be

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343 Originally published in Martha M Roggenkamp and Catherine Banet, *European Energy Law Report XII* (Intersentia 2018) pages 13-40

344 The programme for the seminar can be found here: <[www.never.nl/site/attachments/article/201/EELS%202018%20Programme%20.pdf](http://www.never.nl/site/attachments/article/201/EELS%202018%20Programme%20.pdf)>.

345 One of the difficulties of providing a legal comment on the unfolding of the Brexit negotiations was that the underlying political arguments were moving fast and as a result, the scholarly debate and publications were often slightly behind the contemporaneous political debate, which also had an impact on the available academic sources.

adopted. The chapter starts by discussing several alternative models for the post-Brexit UK-EU relationship. However, chapter 2 notes that the likelihood of these alternative models being used for the post-Brexit relationship between the EU and the UK was diminishing as the UK Government's position focused on its opposition to arrangements that involve acceptance of EU legislation.

These relevant models encompassed:

- The continued membership of the UK in the Internal Energy Market (IEM) is similar to the European Economic Area.<sup>346</sup> In the public debate in the UK, Norway's arrangements, i.e., implementation of the EU's energy market regime and payment into the EU with no voting rights on the relevant legislation, were often referenced by way of shorthand for the broader EEA Treaty;<sup>347</sup>
- A series of sector-specific bilateral arrangements similar to the EU-Swiss arrangement as alternatives to, or in addition to, free trade agreements with specific jurisdictions outside the EU; and
- A type of "tracking" arrangement by which the UK would follow and adopt the EU legislative and regulatory regime without any formal arrangement and with any trade being subject to the rules of the World Trade Organization (WTO).

In addition to discussing the "meta-level" of the governance of the future relationship between the UK and the EU, this chapter also provides an overview of key themes for the energy sector, which at the time of writing (autumn 2019) were considered the most likely to be affected by Brexit. In particular, this chapter discusses the Brexit-related consequences for:

- tariffs on energy imports/exports by the UK as a non-EU state;
- interconnectors;
- security of energy supply;
- the Isle of Ireland and its Single Electricity Market ("SEM," since October 2018, "iSEM");

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346 The European Economic Area, which entered into force on 1 January 1994, comprises the EU Member States and Iceland, Liechtenstein and Norway. The EEA Agreement is available here: <[www.efta.int/media/documents/legal-texts/eea/the-eea-agreement/Main%20Text%20of%20the%20Agreement/EEAAgreement.pdf](http://www.efta.int/media/documents/legal-texts/eea/the-eea-agreement/Main%20Text%20of%20the%20Agreement/EEAAgreement.pdf)>.

347 For sources on the Norwegian model referenced in the Brexit debate, please see, for instance, John Erik Fossum and Hans Petter Graver, *Squaring the Circle on Brexit – Could the Norway Model Work?* (Bristol University Press 2018); The Economist, 'Norwegian lessons for Brexit Britain' (The Economist, 22 February 2018); Simon Carswell, 'Brexit explained: What is the Norway model and is it an option for the UK?' (Irish Times, 15 January 2019) <[www.irishtimes.com/news/world/europe/brexit-explained-what-is-the-norway-model-and-is-it-an-option-for-the-uk-1.3712387](http://www.irishtimes.com/news/world/europe/brexit-explained-what-is-the-norway-model-and-is-it-an-option-for-the-uk-1.3712387)>.

- the UK's membership of the European Atomic Energy Community (Euratom); and
- the UK's commitments to climate change targets and the EU Emissions Trading System (EU ETS).

The chapter concludes by stating that, in relation to the Brexit negotiations, uncertainty prevails and that clarity for the energy sector was likely to emerge only after the political negotiations had moved on to address more detailed issues in 2019.

## 2 KEY ISSUES AND LITERATURE

Two of the key issues explored in this chapter are (1) the nature of the post-Brexit relationship and the relevant agreement to that effect between the UK and the EU and (2) the iSEM.

Key issues and literature in relation to other issues raised in this chapter (e.g., interconnectors, supply security, and Euratom) are discussed in chapter 3 (Interconnectors, see section 5.4.2 below), chapter 4 (Euratom, see section 5.5.2 below), chapter 5 (EU ETS and UK ETS, see section 5.6.2 (B)), chapter 6 (access to the EU energy market and electricity trading, see section 5.7.2) and chapter 7 (supply security, see section 5.8.2) below.

By way of an introduction to chapter 2 of this dissertation, this section briefly touches on key issues and literature pertaining to possible models of Brexit (Part A) and the impact of Brexit on the iSEM (Part B).

### 2.1 Models of Brexit

The question as to the “model of Brexit”<sup>348</sup> is a question as to the future relationship between the UK and the EU. This question has two principal dimensions:

The first is one of depth: how deep should the cooperation be between the UK and the EU, and to what level (if any) should there be any harmonisation or even integration between the two jurisdictions?

The second is one of width: how broad should the cooperation determined by the answer to the first question between the two jurisdictions be, i.e., what areas should it cover?

Both dimensions touch on complex issues such as the governance of the relevant agreements, the institutional framework, the treatment of areas not covered by the relevant agreement, as well as the “symmetry” of the agreement. Symmetry refers to

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348 Emerson Michael, *Which model for Brexit?* (Springer International Publishing 2017)

the roles of the parties in relation to governance and rule setting: namely, is one party adopting the rules of the other (as a “rule taker”) or are both parties establishing new rules together for their future relationship (as joint “rule makers”). In addition, the “dynamism” of the relevant agreement is important, i.e., the mechanism (if any) pursuant to which the relevant agreement can be updated.

In practice, these answers to these two fundamental questions were translated, by way of shorthand, into the “Norway,” “Canada,” “Switzerland,” and No Deal/WTO models, respectively, which each represented different approaches and became reference points both during the Referendum campaign and the Brexit negotiations. To some extent, these models were seen as a scalar perspective on the EU-UK relationship—Michael Barnier’s slide was perhaps the most graphic expression of this point of view.<sup>349</sup>

As far as free or preferential<sup>350</sup> trade agreements<sup>351</sup> between nation-states are concerned, The EU is probably the broadest and deepest agreement between sovereign states and is “generally recognized as the ‘gold standard’ in international trade.”<sup>352</sup>

The EU has negotiated and entered a number of trade agreements with third countries on the basis of Article 217 TFEU (“association agreements”)<sup>353</sup> with a variety of depth and width, e.g., the association agreements with Ukraine, Moldova, and Georgia.<sup>354</sup>

As pointed out by Pickett, the White Paper provided that the UK wanted to pursue a “new strategic partnership with the EU,” including “an ambitious and com-

349 Paul Waugh, <[https://www.huffingtonpost.co.uk/entry/michel-barnier-killer-graphic-brexite-the-resa-mays-red-lines-on-bespoke-model\\_uk\\_5a39497ce4bofc99878f2058](https://www.huffingtonpost.co.uk/entry/michel-barnier-killer-graphic-brexite-the-resa-mays-red-lines-on-bespoke-model_uk_5a39497ce4bofc99878f2058)>

350 On the terminology as to “free” or “preferential” trade agreement, see e.g. Jönsson Oskar Martin, David Presberger, Stephan Pfister and Thomas Bernauer, ‘How to estimate whether preferential trade agreements contribute to international environmental impact shifting. A new methodology and empirical illustration for Switzerland’ (2023) *Ecological Economics* 205

351 For a general introduction to trade agreements, see e.g. Folsom Ralph, ‘Free Trade Agreements’ (West Academic Publishing 2022)

352 Dougan Michael, *The UK’s Withdrawal from the EU: A Legal Analysis* (OUP 2020) page 305

353 On EU association agreements in the context of Brexit, see, e.g. Larik Joris and Wessel, Ramses: “*The EU-UK Trade and Cooperation Agreement: forging partnership or managing rivalry*,” in: Łazowski Adam and Cygan, Adam (eds.) *Research Handbook on Legal Aspects of Brexit* (Elgar 2020) page 130. On association agreements more generally, see e.g. Kormyck Borys, *Pluralism and Europeanisation of Administrative Law: The Role of Association Agreements. Unity in pluralism: Europe’s underestimated strength* (CBPE, Warsaw 2022) or Tyushka Andriy, David Phinnemore, and Wolfgang Weiß, ‘Joint institutional frameworks in EU bilateral agreements: Joint bodies, rs and principles, and special procedures’ (2022) 60(4) *JCMS: Journal of Common Market Studies*

354 Dabrowski Marek, *A new Thessaloniki offer: the aspirations of Georgia, Moldova, and Ukraine to join the EU* (Bruegel-Blogs 2022)



prehensive Free Trade Agreement (FTA) and a new customs agreement.” In addition, the UK wanted to negotiate its “own preferential trade agreements around the world.”<sup>355</sup>

In scoping and negotiating the future agreement between the UK and the EU, the EU itself, together with any trade agreements concluded by the EU in the past, became the standard against which any such future agreement would be measured.

In the discussions as to the possible model for Brexit, the energy sector generally did not play a prominent (if any) role. Therefore, the below sections discuss the various models in general rather than energy-specific terms.

### 2.1.1 Norway-based model

In the public debate in the UK, Norway’s arrangements, i.e., implementation of the EU’s energy market regime and payment into the EU with no voting rights on the relevant legislation, were often referenced by way of shorthand for the broader EEA Treaty. However, as Fossum has highlighted<sup>356</sup> Norway’s arrangements with the EU are considerably more complex. Whilst the EEA Treaty represents the core of Norway’s relationship with the EU, there are a further 130 agreements in place. Norway’s relationship can be described as being based on “dynamic homogeneity”<sup>357</sup> as it tracks the EU’s rules and changes its rules when the relevant rules in the EU change. Dynamic homogeneity implies not only a tracking of rule changes but also a change in Norway’s agreement with the EU as to the scope (“width”) and depth of that agreement depending on changes in the dynamics and patterns of integration in the EU itself.

This means that Norway and the EU are effectively in near-permanent contact and negotiations over aspects of their relationship.<sup>358</sup> The multitude of agreements between

355 Eric Pickett, ‘The Brexit: Implications for the WTO, Free Trade Models and Customs Procedures’ (2017) 12 (3) *Global Trade and Customs Journal* <<https://kluwerlawonline.com/journalarticle/Global+Trade+and+Customs+Journal/12.3/GTCJ2017016>>

356 Fossum, John Erik ‘What is the Norway model? Mode of affiliation or political compromise?. The *Political Quarterly*’ (2019) 90(2)

357 Fossum John Erik and Hans Petter Graver, *Squaring the circle on Brexit: Could the Norway model work?* (Policy Press 2018)

358 For instance, in March 2023, Norway and the EU concluded three separate agreements pertaining to fishing matters: 1. The “Agreed Record of Fisheries Consultations between the E and Norway for 2023” <[https://oceans-and-fisheries.ec.europa.eu/system/files/2023-03/2023-eu-norway-fisheries-consultations\\_en.pdf](https://oceans-and-fisheries.ec.europa.eu/system/files/2023-03/2023-eu-norway-fisheries-consultations_en.pdf)> 2. Protocol of Fisheries Consultations between Norway and the EU, on behalf of Sweden, for 2023. <[https://oceans-and-fisheries.ec.europa.eu/system/files/2023-03/2023-eu-sweden-norway-fisheries-consultations\\_en.pdf](https://oceans-and-fisheries.ec.europa.eu/system/files/2023-03/2023-eu-sweden-norway-fisheries-consultations_en.pdf)>; and 3. Agreed Record of Conclusions of Fisheries Consultations between Norway and the EU on the Regulation of Fisheries in Skagerrak and Kattegat for 2023 <[https://oceans-and-fisheries.ec.europa.eu/system/files/2023-03/2023-eu-norway-skagerrak-fisheries-consultations\\_en.pdf](https://oceans-and-fisheries.ec.europa.eu/system/files/2023-03/2023-eu-norway-skagerrak-fisheries-consultations_en.pdf)> all dated 17 March 2023

the two jurisdictions also raises the problem of regulatory gaps between the same, i.e., issues that are either not or not fully governed by agreements. As Fredriksen has noted, this creates both a degree of uncertainty as well as policy pressure to fill these gaps.<sup>359</sup>

One of the defining factors of the Norway model is that Norway actively wishes to have a close (“deep”) and wide-ranging (“broad”) relationship with the EU, stopping only just short of membership, whereas the Brexit objectives (see section 2.3.3 above) are militating against such an approach.

Yet, the Norwegian model is not without its problems.<sup>360</sup> Whilst it allows Norway to point critics of her EU relationship to her sovereignty and independence, it does not allow the country to participate fully in the EU legislative process, thereby arguably creating a democratic deficit. In relation to the application of the “Norway model,” Pérez Crespo points out that the model would not bring domestic UK laws exclusively under the control of the UK, as the EU “acquis would still have to be met regarding the matters within the framework of the [EEA] Agreement and, moreover, without a say in its decision-making procedure.”<sup>361</sup>

### 2.1.2 Switzerland-based model

Switzerland is a member of EFTA,<sup>362</sup> but not the EEA, and has concluded around 100 bilateral agreements for specific topics or sectors.<sup>363</sup>

In analogy to the Norwegian model, Switzerland is a “rule taker” pursuant to its bilateral agreements with the EU; it adopts EU programmes and rules but does not have a voice in shaping the same. Its democratic decision-making in relation to such agreements and programmes extends to an “in our out” choice put to Swiss citizens but does not include a vote on the rules of the relevant programmes.

The analogy to Norway stops there, however. In contrast to Norway, which, thanks to the EEA Agreement, has a clear institutional framework for its relationship with the EU, there is no equivalent for Swiss-EU relations as the EFTA agreement does not contain rules of engagement for its member states with the EU.

359 H. H. Fredriksen, ‘The EEA and the case law of the EU of the CJEU: incorporation without participation’, in E. O. Eriksen and J. E. Fossum, eds., *The European Union’s Non-Members: Independence under Hegemony?*, Abingdon, Routledge, 2015, pp. 102–17.

360 *ibid* 347

361 Pérez Crespo, María José, *After Brexit... The Best of Both Worlds? Rebutting the Norwegian and Swiss Models as Long-Term Options for the UK* (Yearbook of European Law 36 2017)

362 Iceland, Liechtenstein, Norway and Switzerland form the European Free Trade Association (“EFTA”). The text of the EFTA Convention can be found here: <[https://www.efta.int/sites/default/files/documents/Vaduz\\_Convention\\_Agreement\\_Updated\\_1\\_November\\_2021.pdf](https://www.efta.int/sites/default/files/documents/Vaduz_Convention_Agreement_Updated_1_November_2021.pdf)>

363 A current list as of 1 January 2023 published by the Swiss federal government can be found here: <[https://www.eda.admin.ch/content/dam/europa/de/documents/publikationen\\_dea/accords-liste\\_de.pdf](https://www.eda.admin.ch/content/dam/europa/de/documents/publikationen_dea/accords-liste_de.pdf)>

On the basis of the above, it can be argued that the Swiss model of relationships with the EU is broad in the sense that it covers a wide range of issues and sectors but not deep. In contrast to the Norwegian model, the Swiss model has no built-in dynamics that would update the relevant bilateral agreements in step with changes to the relevant EU legislation.

Given the multitude of bilateral EU-Swiss agreements, the structural risk of issues “falling between the gaps” of agreements mentioned in relation to the Norwegian model is inherent in the Swiss-EU relationship. Coupled together with the absence of any mechanism to periodically update the relevant bilateral agreements, the EU has pushed for an institutional framework for its relationship with Switzerland for some time. The objective of such an EU-Swiss institutional framework agreement (IFA) was to create a horizontal governance framework that would have covered five major EU-Swiss trade-related bilateral agreements signed in 1999.<sup>364</sup>

From the EU’s perspective, the IFA had three purposes: (1) to ensure that Switzerland was accessing and operating within the EU single market on the same terms and conditions that apply to EU companies for reasons of fairness and legal certainty; (2) to provide a basis for future bilateral agreements, including in relation to further market access; and (3) provide a mechanism for updating and modernisation of the existing bilateral agreements.<sup>365</sup> The IFA was also intended to contain a dispute settlement mechanism with the jurisdiction of the Court of Justice of the EU on EU law and State aid rules.

However, efforts in this regard came to an end when the Swiss Federal Council decided to terminate negotiations on 26 May 2021<sup>366</sup> due to its concerns regarding the potential application of the EU Citizens’ Right Directive, the potential future removal of the labour market exemptions provided by the intended IFA protocols, as well as the scope of the intended IFA’s State aid rules.<sup>367</sup>

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364 On the bilateral agreements between the EU and Switzerland, see for instance: Eckert Sandra, ‘Sectoral Governance under the EU’s Bilateral Agreements and the Limits of Joint Institutional Frameworks: Insights from EU-Swiss Bilateralism for Post-Brexit Relations with the UK. JCMS’ (2022) 60 (4) *Journal of Common Market Studies*

365 ‘Commission Statement on the decision by the Swiss Federal Council to terminate the negotiations of the EU-Swiss Institutional Framework Agreement’ (*Europa EU*, 2021) <[https://ec.europa.eu/commission/presscorner/detail/es/statement\\_21\\_2683](https://ec.europa.eu/commission/presscorner/detail/es/statement_21_2683)>

366 On the Swiss-EU Institutional Framework Agreement, see e.g. Kaddous Christine, *Switzerland and the EU: current issues and new challenges under the Draft Institutional Framework Agreement. In The Proliferation of Privileged Partnerships between the European Union and its Neighbours* (pp. 68-83) Routledge 2019)

367 ‘European Parliament Think Tank, Briefing “EU-Swiss trade relations and the institutional framework agreement”’ (19 July 2021) <[https://www.europarl.europa.eu/thinktank/de/document/EPRS\\_BRI\(2021\)696174](https://www.europarl.europa.eu/thinktank/de/document/EPRS_BRI(2021)696174)>

In relation to Brexit and the inner-UK debate, the Swiss model underwent its own evolution, as Church has explained.<sup>368</sup> Whilst initially “Switzerland” was a positive reference and possible role model, with Boris Johnson going so far as to speak of a “Britzerland”<sup>369</sup> deal for the UK, it soon became apparent that what was meant by that reference was first and foremost the structure of the Swiss agreements with the EU rather than the content, which was especially highlighted in the so-called Lancaster House speech by Theresa May (see above Section 2.3.1). In addition, Pérez Crespo argues, whilst the structure of the Swiss approach might have looked attractive, it would, precisely because of its architecture, “probably be impracticable in the UK-EU context,”<sup>370</sup> as the Swiss model is in part based on the voluntary adoption of the EU *acquis communautaire* which would go against the British policy intentions in relation to Brexit.<sup>371</sup> Apart from any British considerations, the EU Council has for some time considered that the Swiss model “has reached its limits and needs to be reconsidered.”<sup>372</sup>

As Eckert has noted, “the failed negotiations on a framework agreement with the Swiss could have repercussions for other third countries”<sup>373</sup> in the sense that the EU is likely to put more emphasis on formal approaches with a clear institutional framework when entering into bilateral agreements with third countries, which in turn would make a repeat of the Swiss approach with other third countries unlikely, including for the reason that the EU Council seems unwilling to continue to apply this model (see above).

More recently, Füeg has suggested that the EU’s requirement of an IFA continues to be controversial in Switzerland<sup>374</sup> and could be a stumbling block for a future bilateral EU-Swiss agreement for the electricity sector, as the EU has made further sectoral agreements with Switzerland contingent on an IFA.<sup>375</sup> He also suggests that

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368 Church, Clive “Learning from Switzerland after Brexit: More barriers than breakthroughs”, in: Dardanelli Paolo and Oscar Mazzoleni, eds. *Switzerland – EU Relations: Lessons for the UK after Brexit* (Routledge 2021)

369 Burns Barbara and Ernest Schonfield, ‘Introduction: European dialogues. Oxford German Studies’ (2018) 47 (1)

370 *ibid* 352.

371 *Ibid*.

372 Council of the EU, Council Conclusions on EU Relations with EFTA Countries 3213<sup>th</sup> Transport, Telecommunications and Energy Council Meeting (20 December 2012).

373 Eckert Sandra, ‘Sectoral Governance under the EU’s Bilateral Agreements and the Limits of Joint Institutional Frameworks: Insights from EU-Swiss Bilateralism for Post-Brexit Relations with the UK. JCMS’ (2022) 60 (4) *Journal of Common Market Studies*

374 Füeg, Jean-Christophe, *Swiss–EU Energy Relations and Insights for Brexit. In Brexit and Energy Law*, pp. 202-220. (Routledge 2023)

375 Tages-Anzeiger, ‘EU-Kommissions-Vize im Interview: «Ich möchte schnelle Ergebnisse. In einem

“much time” will be needed to find a new institutional arrangement between Switzerland and the EU.

### 2.1.3 Canada-based model

The “Canada” model was a shorthand reference to the EU-Canada Comprehensive Economic and Trade Agreement (CETA),<sup>376</sup> which has been in force provisionally since 2017. The reason for the provisional application is that CETA is a “mixed” agreement, meaning that the contracting parties on the European side are both the EU and all the Member States, which in turn means that the agreement requires ratification by the EU and all Member States before it enters into force fully.<sup>377</sup> Alongside CETA, Canada entered into a Strategic Partnership Agreement (SPA)<sup>378</sup> with the EU, which supplements the CETA in relation to political, economic, security, judicial, strategic, environmental and social matters.

CETA is intended, as its name suggests, to be a “comprehensive” trade agreement with an “all-inclusive attitude to commercial relations.”<sup>379</sup> Neuwahl agrees that CETA is intended to operate as a “trade integration” or “deep trade”<sup>380</sup> agreement.<sup>381</sup>

Neuwahl has referred to CETA as an “advanced form of a free trade agreement [which is] less broad in scope than the Treaty on European Union.”<sup>382</sup> In terms of scope, it is less comprehensive than EU primary or secondary law on a range of issues, such as migration (notably there is no freedom of movement), agriculture, and/or financial services.

As with the Norway and Switzerland model, the CETA model would mean that the UK would be a “rule taker” as CETA does not foresee a joint legislative process between the EU and Canada, and any impact the UK would have on EU law in this model would also, like in the Norwegian and Swiss model, be on a “soft power” or diplomatic basis only.

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Jahr können wir viel erreichen» (17 November 2021) <[www.tagesanzeiger.ch/wir-brauchen-ein-signal-dass-die-schweiz-es-ernst-meint-749949623387](http://www.tagesanzeiger.ch/wir-brauchen-ein-signal-dass-die-schweiz-es-ernst-meint-749949623387)>

376 The full text of CETA is available here: <[https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/canada/eu-canada-agreement/ceta-chapter-chapter\\_en](https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/canada/eu-canada-agreement/ceta-chapter-chapter_en)>

377 On the negotiations in relation to CETA, see, e.g. Hübner Kurt, Tugce Balik, and Anne-Sophie Deman, *CETA: the making of the Comprehensive Economic and Trade Agreement between Canada and the EU* (Ifri Canada Program 2016)

378 The text of the SPA is available here: <<https://data.consilium.europa.eu/doc/document/ST-5368-2016-REV-2/en/pdf>>

379 Neuwahl Nanette, ‘CETA as a potential model for (post-brexite) UK-EU relations’ (2017) 22 (3) European foreign affairs review

380 Maule Christopher, *Integrative Trade: Issues for Trade Analysis, Statistics and Policy* (2006)

381 Neuwahl, *ibid.*

382 Neuwahl, *ibid.*

In the Brexit debate, critics of the Canada model have pointed to the different trade and industry profile of Canada compared to the UK, with Canada wishing to “improve conditions for commodities, agricultural products, and some manufacturing products (and their associated services)”<sup>383</sup> which the UK does not have. Therefore, Erixon argues, a CETA-style agreement would neglect key British trading interests and would “seriously reduce Britain’s current market access in Europe,”<sup>384</sup> in particular in relation to financial services.

In addition, during the Brexit negotiations,<sup>385</sup> Woolcock has argued that to the extent the UK were to adopt a CETA-style agreement with the EU, the effectiveness of such an agreement does not depend “on the text of any negotiated agreement, but how effectively the parties adopt the appropriate measures and how effectively these are implemented.”<sup>386</sup>

#### 2.1.4 No deal, WTO, and Hard Brexit

The “WTO” model refers to the UK leaving the EU without a follow-on agreement which would mean that any trade between the EU and the UK would be subject to the rules of the World Trade Organization (WTO) only.<sup>387</sup>

There is consensus in the (mostly economic science-based) literature that a WTO model or Hard Brexit would be most damaging for the UK,<sup>388</sup> with different reduc-

383 Fredrik Erixon, ‘The Canada-EU trade deal is no model for Brexit’ (26 March 2016) <<https://capx.co/the-canada-eu-trade-deal-is-no-model-for-brexit/>>

384 Erixon, *ibid.*

385 On the process of the Brexit negotiations generally, see e.g. Usherwood Simon, ‘Our European Friends and Partners? Negotiating the Trade and Cooperation Agreement’ (2021) *JCMS*

386 Woolcock Stephen, ‘What a CETA (or CETA+) free trade agreement would mean. *LSE Brexit*’ (09 Mar 2018) <https://eprints.lse.ac.uk/88939/>>

387 On the WTO and its role in trade promotion generally, see e.g. Subramanian Arvind and Shang-Jin Wei, ‘The WTO promotes trade, strongly but unevenly’ (2007) 72(1) *Journal of International Economics*, On trade agreements and the WTO, see e.g. Claussen Kathleen, ‘Next-generation agreements and the WTO. *World Trade Review*’ (2022) 21(3) or Ababakr Amer, ‘Global trade governance and WTO: Beyond the model of the club’ (2022) 18 (2) *Asian Social Science*

388 On the economic impact of Brexit and a Hard Brexit generally, see e.g. Latorre María C., Zoryana Olekseyuk, Hidemichi Yonezawa and Sherman Robinson, ‘Brexit: Everyone loses, but Britain loses the most’ (2019) 19 (5) *Peterson Institute for International Economics Working Paper* <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3345244](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3345244)>; Martina and Edgar LW Morgenroth ‘The product and sector level impact of a hard Brexit across the EU. *Contemporary social science*’ (2019) 14(2)

tions in trade with different EU Member States ranging from 5% (Finland) to 43% (Bulgaria) under such a Brexit outcome,<sup>389</sup> including over a longer time period.<sup>390</sup>

Given the “shadow of uncertainty” cast by the possible outcomes of Brexit,<sup>391</sup> the WTO/ Hard Brexit model was often, including in Chapter 2 of this dissertation, used as the baseline analysis for potential Brexit outcomes as all other outcomes would be an improvement on this scenario. Chapter 5 of this dissertation analyses the TCA in the context of the possible “Brexit models” discussed in this chapter.

WTO rules remain relevant to the trade between the UK and the EU, and White has analysed the trade in energy products between the UK and the EU post-Brexit with reference to the relevant WTO rules.<sup>392</sup> White concludes that the UK’s departure from the IEM and the cessation of the application of the EU regulatory and legislative regime in the UK will lead to significant changes in the rules regulating such trade. In the absence of a specific energy trading regime in the TCA, this trade is therefore based on the provisions of the WTO regime. According to White, the TCA does provide a number of avenues for trade in energy products to be developed and for cooperation to be promoted. However, whether such cooperation will develop is uncertain and is likely to depend on how the relationship between the UK and the EU develops more broadly.

## 2.2 The Impact of Brexit on the iSEM

The integrated single electricity market on the island of Ireland, iSEM, is uniquely placed as it straddles a constituent part of the UK (Northern Ireland) and Ireland. After years of civil war (known as the “Troubles”)<sup>393</sup> in Northern Ireland, its existence has been possible on the basis of the Belfast Agreement and the North-South cooperation which has ensued. The iSEM is seen as the success of this cooperation<sup>394</sup> and therefore, an area in relation to which “Brexit raises particular concern.”<sup>395</sup> As far as

389 Figures quoted as per Lawless Martina and Edgar LW Morgenroth, ‘The product and sector level impact of a hard Brexit across the EU’ (2019) 14 (2) Contemporary social science

390 Pandžić Lejla, ‘Impact of brexit on uk-eu trade relationship’ (2021) 10 (1) Ecoforum

391 Acquah-Andoh E, Ifelebuegu A and Theophilus S, ‘Brexit and UK Energy Security: Perspectives from Unconventional Gas Investment and the Effects of Shale Gas on UK Energy Prices’ (2019) 12 Energies 600 <<http://dx.doi.org/10.3390/en12040600>>

392 White Eric, *Trade in Energy Products between the UK and EU Post Brexit. In Brexit and Energy Law* (Routledge 2023)

393 For a general introduction on this topic, see, e.g. Edwards Aaron, *The Northern Ireland Troubles: Operation Banner 1969–2007* (Bloomsbury Publishing 2011)

394 See, for instance Bradley John, ‘The agreement’s impact on economic and business cooperation. Irish Political Studies’ (2018) 33(3)

395 Gouez Aziliz, ‘Ireland on the rocky road to Brexit. Policy Paper’ (2017) 210 Institut Jacques Delors



the island of Ireland, concerns in relation to Brexit and energy quickly focused on the iSEM and the uncertainty which arises from it. For instance, in 2018, Muinzer, from a prospective viewpoint, analysed the financial, infrastructural and governance institutions and mechanisms that underpin the iSEM and found that they were exposed to significant uncertainty as a result of Brexit.<sup>396</sup>

In Ireland, the significance of the iSEM does not only lie in its function as a power market but in the concrete North-South cooperation that it both enables and that it has come to symbolise. Teague agrees with this when he contextualises the iSEM as having been possible as a result of the Belfast Agreement and emphasises Brexit risks the peace the Belfast Agreement brought about.<sup>397</sup> Murphy et al. build on this and argue that the iSEM is an expression of the “post-sovereigntist compromise” of the Belfast Agreement and postulate that the “SEM’s four ‘freedoms of movement’ permitted the virtual disappearance of not just the physical, but also the metaphorical, border between North and South.”<sup>398</sup>

Gormley-Heenan et al.<sup>399</sup> note how EU membership helped “to contextualise being either British or Irish or both, mainly for Nationalists but not only for them. In other words, it was yet another way of not talking about the border.” From a similar vantage point as to the role of the UK’s EU membership, Hayward concludes that leaving the EU and therewith the risk of leaving the iSEM represents “a change in the status of the border between Northern Ireland and the Republic of Ireland.”<sup>400</sup>

One of the key issues in relation to the iSEM highlighted in the run-up to Brexit was that it relies on the EU regulatory regime and that in order for iSEM to continue, this reliance would need to continue. All identified contributors agree with this fundamental posit—prior to the TCA coming into force, Van Noten discussed the likely changes to the iSEM in case of a Hard Brexit and found that even though the majority of changes would arise from the fact that the iSEM is underpinned by EU rules

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<<https://institutdelors.eu/wp-content/uploads/2018/01/irelandontherockyroadtobrexite-gouez-nov17.pdf>>

396 Muinzer Thomas, ‘Brexit and Ireland’s All-Island Energy Market’ (2018) <<https://abdn.pure.elsevier.com/en/publications/brexit-and-irelands-all-island-energy-market>>

397 Teague Paul, ‘Brexit, the Belfast Agreement and Northern Ireland: Imperilling a fragile political bargain’ (2019) 90 (4) *The Political Quarterly*

398 Murphy Mary C. and Jonathan Evershed, ‘Contesting sovereignty and borders: Northern Ireland, devolution and the Union’ (2022) 10 (5) *Territory, Politics, Governance*

399 Gormley-Heenan Cathy and Arthur Aughey, ‘Northern Ireland and Brexit: Three effects on ‘the border in the mind’. *The British Journal of Politics and International Relations*’ (2017) 19(3) <<https://doi.org/10.1177/1369148117711060>>

400 Hayward Katy, ‘The pivotal position of the Irish border in the UK’s withdrawal from the European Union’ (2018) 22 (2) *Space and Polity* <<https://doi.org/10.1080/13562576.2018.1505491>>



and guidelines, most changes would be manageable, and the iSEM would be able to withstand a Hard Brexit.<sup>401</sup>

Post-TCA, Whitten et al. continue to emphasise the necessary continued regulatory alignment between Northern Ireland and Ireland in order to keep the iSEM going, which will require political support on both sides of the border.<sup>402</sup>

From a post-Brexit vantage point, Muinzer et al. have analysed the impact of Brexit on the iSEM and also emphasised the role of the iSEM as an “integral component of the reconciliation process and, through the provision of stable and equal electricity supply across borders, a common sense of justice.”<sup>403</sup> This points to the wider societal role of iSEM as a provider of stability on the island of Ireland and the stakes of any disturbance to the same as a result of Brexit and its accompanying uncertainties.

In contrast to other contributions, Muinzer et al. have identified a degree of “contrary momentum” in relation to the iSEM on the basis that “the momentum instituted under the European Target Model threatens to continue pulling the Republic of Ireland in one direction (towards greater EU integration), while Brexit has served to pull Northern Ireland in a different direction (out of the EU), tugging the iSEM in opposite directions.”<sup>404</sup>

Whilst pre- and post-TCA contributions have discussed the need for cooperation and alignment, few have addressed the governance asymmetry and potential for a democratic deficit that might arise from this alignment.

Muinzer et al. point out the political discrepancy in the governance arrangements underpinning the iSEM: Whereas Irish citizens have a say in the future EU rules governing the iSEM as part of their democratic rights (in both elections for the Dáil as well as elections for the European Parliament), citizens of Northern Ireland do not.<sup>405</sup>

Yet, political alignment between Ireland and Northern Ireland in relation to the governance of the iSEM is of critical importance. It is clear that the iSEM exists on the basis of a political arrangement and is therefore dependent on the political good-

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401 Van Noten L, ‘The Effects of a No-Deal Brexit on the Future of the Irish Single Electricity Market: A Policy Analysis on the short and long term sustainability of the SEM’ <[https://libstore.ugent.be/fulltxt/RUG01/002/783/644/RUG01-002783644\\_2019\\_0001\\_AC.pdf](https://libstore.ugent.be/fulltxt/RUG01/002/783/644/RUG01-002783644_2019_0001_AC.pdf)>

402 Whitten Lisa Claire, ‘Post-Brexit dynamism: the dynamic regulatory alignment of Northern Ireland under the Protocol on Ireland/Northern Ireland’ (2022) 73(S2) Northern Ireland Legal Quarterly

403 Muinzer Thomas L, Kirsten EH Jenkins, Darren A. McCauley and Gavin MacLeod Little, ‘Energy justice beyond borders? Exploring the impact of Brexit on Ireland’s all-island energy market’ (2022) 35 (10) The Electricity Journal

404 Ibid.

405 Ibid.

will of both Ireland, the UK and specifically Northern Ireland. Lynch has emphasised the support expressed by politicians in Ireland and the UK for the iSEM and suggested that “there is no good reason not to expect it to continue.”<sup>406</sup>

More recently, Farrelly and Collins have concluded that notwithstanding the challenges posed by Brexit, there is strong political support in Ireland, Northern Ireland, and Great Britain for the continued operation of the iSEM and other cross-border energy initiatives.

As a result of this support, it should be possible to mitigate the impact of Brexit on the energy sector on the island of Ireland.<sup>407</sup>

Chapter 2 concludes by emphasizing the uncertainty through which the energy sector was going as a result of the ongoing Brexit negotiations and note that further clarity regarding the energy sector would only emerge at some point in 2018 when negotiations were expected to have moved to address energy issues. In hindsight, any more certainty would only be forthcoming in the form of the TCA, with all the uncertainties and issues discussed in this dissertation.

### 3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT

Following the referendum on 23 June 2016 and the subsequent General Election in June 2017, the nature of the UK’s future relationship with the EU remains uncertain. It seems more likely than not, however, that the status quo of remaining within the internal energy market is unfeasible.

Yet, the prevailing mood in the UK energy sector seems to be that a divorce of sorts, i.e., a complete physical separation of the UK<sup>408</sup> and EU electricity markets, is undesirable. Commercial incentives to sustain, and nurture, further market integration between the UK and the EU by way of interconnectors (both in the electricity and gas industry) seem to remain strong, as are concerns about the knock-on effects of Brexit on the security of energy supply and regulatory uncertainty.

The current negotiation timetable, however, does not seem likely to produce anything tangible for the sector until later in the Brexit negotiations, as energy is not one of the high-priority areas to be dealt with early on in the negotiations.

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406 Lynch Muireann A, *Re-evaluating Irish energy policy in light of Brexit*. No. RN20170201. (Economic and Social Research Institute (ESRI) 2017)

407 Farrelly Garret and Owen Collins, *The Impact of Brexit on Ireland: The Energy Perspective. Brexit and Energy Law* (Routledge 2023)

408 Covering both the British and Northern Irish electricity markets.

This is likely to result in prolonged, and unprecedented, regulatory uncertainty across the energy sector. Comments from some EU companies have suggested they too hoped that pragmatism might trump politics in the energy sector.<sup>409</sup>

This chapter will provide a brief overview of key themes for the energy sector which are likely to be affected by Brexit as well as a brief outlook for the immediate future as the Brexit negotiations take shape in a more tangible way.

The areas discussed in this chapter include:

- tariffs on energy imports/exports by the UK as a non-EU state;
- interconnectors;
- security of energy supply post-Brexit;
- the Isle of Ireland and its Single Electricity Market (SEM);
- the UK's membership of the European Atomic Energy Community (Euratom); and
- the UK's commitments to climate change targets and the EU emissions trading system (EU ETS).

By necessity, as the negotiations are a moving feast, this chapter comments on general themes affecting the Brexit negotiations and the likely post-Brexit relations between the EU and the UK as applied to the energy sector rather than providing a detailed commentary on the progress or otherwise, of the ongoing Brexit negotiations.

For the purposes of this chapter, the author has adopted a “hard Brexit” scenario as the assumed outcome of the current negotiations. Throughout this chapter, “hard Brexit” is to be understood as the result where the UK not only leaves the EU but also the internal market, the customs union with the EU and Euratom.

Alternative models for the post-Brexit UK-EU relationship exist but seem increasingly improbable. These options include:

- The continued membership of the Internal Energy Market (IEM), similar to Norway's current arrangements,<sup>410</sup> i.e., implementation of the EU's energy market regime and payment into the EU with no voting rights on the relevant legislation;

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409 Andrew Ward, ‘Ireland weighs post-Brexit energy security options’ (Financial Times, 26 July 2017) <[www.ft.com/content/51c5a4a8-6d2c-11e7-b9c7-15af748b6odo](http://www.ft.com/content/51c5a4a8-6d2c-11e7-b9c7-15af748b6odo)>

410 Although Norway is not a member state of the European Union, it is part of the European Economic Area (the EEA). As such, it has access to the European internal market and can freely trade its goods and services within the EEA territory, subject to compliance with the relevant EU legislation.

- A series of sector-specific bilateral arrangements similar to the EU-Swiss arrangement as alternatives to or in addition to free trade agreements with specific jurisdictions outside the EU; and
- Tracking of the EU legislative and regulatory regime without any formal arrangement (any trade occurring in these circumstances would be subject to the rules of the World Trade Organization (WTO) once Britain becomes a fully-fledged member in its own right).

Although the UK Government's pronouncements to date have not commented specifically on the prospect of remaining in the IEM, this is not likely in view of the Government's firm opposition to arrangements that involve acceptance of EU legislation, such as the relevant European Energy Directives and Regulations, to the remaining part of the relevant EU institutions (such as ACER, ENTSO-E and ENTSO-G) and to the Court of Justice of the European Union's (CJEU) having superior jurisdiction to that of national courts.

Conversely, if Brexit were to result in an exit from the IEM, the UK would likely be excluded from the benefits of market integration initiatives, such as market coupling, cross-border balancing, and capacity market integration.

Each variation of the above may involve some degree of the *acquis* of EU law, the UK acceptance of the jurisdiction of the CJEU and the four freedoms, including the free movement of people. These issues are not considered in detail in this chapter.<sup>411</sup>

In any event, in the immediate future, and probably during the two years in which the UK negotiates its exit agreement with the EU, Brexit may have little or no impact on interconnectors. Thereafter, the extent to which the UK will develop its own energy regulations independent from the EU is as yet unclear.

#### 4 WITHDRAWAL BILL

One of the principal areas of uncertainty for all sectors is the continued application (or otherwise) of EU law by the UK post-Brexit (until 29 March 2019, the likely date of the formal exit of the UK from the EU, the UK remains bound by the *acquis communautaire*).

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<sup>411</sup> See, for instance, UK in a changing Europe, 'What effect would Brexit have on free movement?' <<http://ukandeu.ac.uk/fact-figures/what-effect-would-brexit-have-on-free-movement/>> or Zoe Gardner and Luke Cooper, 'Brexit and immigration: prioritising the rights of all workers' (Another Europe is Possible Policy Briefing) <[www.anothereurope.org/wp-content/uploads/2017/09/aqip-free-movement-final-web.pdf](http://www.anothereurope.org/wp-content/uploads/2017/09/aqip-free-movement-final-web.pdf)> for further details on free movement related issues.

The British Government published the European Union (Withdrawal) Bill in July 2017 (the “Withdrawal Bill”),<sup>412</sup> and this was intended as the key piece of UK domestic legislation that will implement Brexit. The principal purpose of the Bill is to repeal the European Communities Act 1972, which gives effect and priority to EU law in the UK, thereby formally reasserting the sovereignty and independence of domestic law.<sup>413</sup>

So as to avoid a legal vacuum in UK law when EU law ceases to apply, the Withdrawal Bill is also intended to preserve and convert into domestic law the whole body of EU law applying to the UK at the time it leaves the EU.

Whilst there are a number of legal and political issues with the Withdrawal Bill, a detailed critique of these is outside the scope of this chapter. For present purposes, it is sufficient to note that the actual language used in the draft Bill is considerably less clear than the accompanying Explanatory Notes and will require attention on its passage through Parliament if legal clarity and certainty are to be achieved.

From an EU law perspective, the draft is concerning as a provision in Schedule 1 of the Withdrawal Bill seems to remove virtually all of the UK courts’ ability to give effect to general principles of EU law, such as proportionality and legal certainty, potentially even in cases about pre-Brexit matters. This would change the rules of public law enforcement significantly and may limit the ability of the courts to apply EU case law more generally.<sup>414</sup>

It is likely that the Withdrawal Bill (and the implications as to the non-application of future EU law) will elicit a reaction from the EU during the negotiations. For now, it represents merely the domestic policy view of the UK Government on the future application of EU law in all sectors. The consequences of this approach in relation to the energy sector will be discussed as part of this chapter.

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412 The latest version of the Withdrawal Bill as well as information on the current status of the Bill is available at <<https://services.parliament.uk/bills/2017-19/europeanunionwithdrawal.html>>

413 The Long Title of the Withdrawal Bill identifies its purpose as a bill to ‘repeal the European Communities Act 1972 and make other provision in connection with the withdrawal of the United Kingdom from the EU’.

414 See also Institute for Government, ‘Brexit and the European Court of Justice’ (June 2017) <[www.instituteforgovernment.org.uk/sites/default/files/publications/IfG\\_Brexit\\_Euro\\_Court\\_Justice\\_WEB.pdf](http://www.instituteforgovernment.org.uk/sites/default/files/publications/IfG_Brexit_Euro_Court_Justice_WEB.pdf)> pp. 4, 7 and 8.

## 5 TARIFFS

### 5.1 Trade Tariffs as Key Issue

Perhaps the single most important issue for the energy sector post-Brexit is the question of trade tariffs. If trade tariffs<sup>415</sup> were to be imposed on electricity, oil and gas by the UK and the EU, there would be economic consequences affecting both the physical supply of energy to and from the UK and trading arrangements between the UK, the EU, and third-party countries. Likewise, tariffs imposed on key pieces of equipment used in the energy sector could also have an impact on the sector.

In the UK and EU, gas and electricity markets would be affected, and the underlying economics of EU-UK interconnectors would need to be re-evaluated. It is likely that the consumer benefit analyses routinely undertaken at the request of national regulatory authorities for each interconnector project would be less positive than in a scenario without such a tariff or other trade barriers being imposed.

### 5.2 Tariffs within the EU

As an EU Member State, the UK is a member of the European internal market and the customs union and enjoys the following advantages:

- UK goods currently benefit from tariff-free access to the EU market and vice versa; and
- The UK, along with all other EU Member States, applies a common customs tariff to all third-country goods imported from outside the EU. Once third-country goods are admitted upon payment of the common customs tariff, these goods then benefit from tariff-free circulation within the EU, including between the UK and other EU Member States.

The EU's common customs tariff is known as the EU's "most-favoured-nation tariff" because, as a WTO Member, the EU must apply the same most favourable tariffs to products from all other WTO Members.

The position post-Brexit will depend on the parameters of the new UK-EU trade relationship. However, given the complexity and timing of the Brexit negotiations, and the possibility of the UK remaining in the IEM, visibility on this point seems unlikely to be available for some time.

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<sup>415</sup> Trade tariffs in the customs and excise sense, not to be confused with the transportation tariffs that are applied by transmission system operators.

In a “hard Brexit” scenario (i.e., the UK leaves both the EU internal market and customs union without a new free trade agreement (FTA) with the EU in place and can no longer benefit from preferences in the EU’s existing FTAs):

- UK exports to the EU would become subject to the EU-s “most-favoured nation” (MFN) tariff;
- EU exports to the UK would become subject to the new MFN tariff that the UK itself adopts post-Brexit—on the basis of UK Government statements, it seems likely that the UK will seek to replicate the EU’s MFN tariff so far as possible in order to minimise disruption;
- UK exports to the rest of the world (“RoW”) would become subject to the third country’s applicable MFN tariff; and
- RoW exports to the UK would become subject to the UK’s new MFN tariff.

### 5.3 The WTO

At present, import duties on electricity are not allowed to be imposed by the EU, as the EU (along with its Member States, including the UK) has legally committed to a “bound” tariff rate of zero on electricity in its WTO goods schedule. A bound tariff rate is the highest tariff rate that can be imposed by a WTO Member without risking a finding of a legal violation and related trade repercussions.

While bound rates define maximum tariff rates, bound tariff rates can change. Pursuant to Article XXVIII GATT,<sup>416</sup> WTO Members generally have a right to, inter alia, modify the bound rates set out in their goods schedules. In exchange for this, they must provide benefits in other areas (e.g., reduce a tariff on another product of similar importance in trade terms) or face modification or withdrawal of substantially equivalent concessions from certain other interested WTO Members (e.g., an increase of bound duties on a number of products). In practice, the main participants in such a negotiation on electricity would be the EU and the UK, since there is (presumably) little cross-border trade in electricity with other non-EU/EEA countries, with the possible exception of Switzerland.

Under the EU’s current schedule, the bound tariff rate for electricity and crude oil is 0%, whilst tariffs slightly vary for other energy-related products: the tariff for natural gas is set at 0.7%, certain light oil blends at 4.7%, liquid paraffin at 3.7%, lithium-ion for use in battery manufacture at 2.7%, wind turbine blades at 2.7%, etc.<sup>417</sup>

<sup>416</sup> General Agreement on Tariffs and Trade 1994.

<sup>417</sup> Herbert Smith Freehills, the Boston Consulting Group and Global Counsel, ‘Strong Currents: Navigating the Post-Brexit Energy Market’ (28 June 2017) <[www.herbertsmithfreehills.com/](http://www.herbertsmithfreehills.com/)

In a post-Brexit world, goods entering the UK or the EU from third countries will no longer benefit from free circulation between the UK and EU as part of the EU customs union. For natural gas, for instance, this means that the EU -and the UK, should it adopt the same schedule- can apply an MFN tariff of up to 0.7% on natural gas.

It is important to note that the modification described above does not require unanimous agreement. If the EU or the UK wanted to make such a modification, they would have to agree to “compensatory trade benefits” with the “other side,” the UK or the EU. If an agreement could not be reached, the EU or the UK could make such modifications without an agreement, but the other side could then itself remove trade benefits in order to “restore the balance” In other words, a WTO Member that wants to change its tariff obligations can ultimately do this on a quasi-unilateral basis but will have to accept a form of trade retaliation from other WTO Members whose trade is negatively impacted.

WTO Members can invoke emergency or exemption clauses to restrict imports or exports of electricity (such as Article XI:2(a) GATT or XX GATT), provided there is a degree of objective justification.

At present, the EU and the UK share a single WTO goods schedule. Following Brexit, the UK will have to define a goods schedule for itself. It is likely that the UK will largely retain the same conditions, especially regarding bound tariff rates, as contained in the current EU schedule. It is also likely that the EU will retain the fundamental aspects of its goods schedule, at least with respect to bound tariffs. If both the EU (on behalf of its Member States) and the UK do not modify the current bound rate of zero on electricity, then they will be legally prohibited from imposing import duties on electricity. Whilst the UK and any parties investing in its energy sector may, to some extent, rely on the principles in the Energy Charter Treaty in relation to investment protection and the transit of energy across the territory of the UK, the tariff provisions of the WTO will apply regardless.

#### 5.4 Other Import and Export Restrictions

Export duties are not bound in the EU WTO goods schedule and are further permitted by Article XI:1 GATT. Consequently, the EU is free to impose export duties. Post-Brexit, the same right would probably apply to the UK, as it does to most WTO Members, subject to some exceptions.

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insight/strong-currents-navigating-the-post-brexit-energy-market> pp. 8 and 9; the WTO website for the European Union allows to download the Bound Tariff schedule for the EU here: <[http://stat.wto.org/TariffProfiles/E28\\_e.htm](http://stat.wto.org/TariffProfiles/E28_e.htm)>



The ability to impose other import and export restrictions, such as quotas and other non-tariff measures, is mainly governed by Article XI:1 GATT. This provision prohibits all such restrictions on imports and exports other than duties, taxes, or other charges. This legal obligation is, in principle, not subject to negotiation and, therefore, would continue to apply in the same manner following any type of Brexit (hard or soft).

## 6 INTERCONNECTORS

### 6.1 A Brief Introduction

Interconnectors were originally introduced to assist with the security of energy supply. In addition to this prevailing purpose, they also facilitate European energy integration by enabling energy to be traded throughout the EU. Due to their economic and social importance, interconnectors receive funding from the EU and are also heavily regulated.<sup>418</sup> It is this important for the integration of the European energy markets that also makes them particularly vulnerable to Brexit-related risks. Interconnectors are, in more than one sense, at the heart of both the future Energy Union and the energy-related Brexit negotiations.

The UK's interconnectors are necessary for its energy security and the development of its energy market, both of which will most likely be affected by Brexit. This impact is largely dependent on the regulation the UK adopts regarding its interconnectors. The trade deals it enters into with the EU and countries beyond the EU, the funding for which the UK's interconnectors will be eligible, and the contribution the UK's interconnectors make to the energy security of EU Member States.<sup>419</sup>

In the absence of new gas-fired power stations and a capacity market which successfully encourages the building of new generation facilities,<sup>420</sup> the UK is likely to face a generation gap following the closure of coal-fired power stations and the steady decline of North Sea oil and gas production by 2020.

Against this backdrop, electricity interconnectors provide important additional capacity to the UK electricity market:<sup>421</sup>

418 See, for instance, Pavlos Trichakis and Vladimir Parail, 'Obstacles to Interconnectors' (Utility Week, 11 October 2013) <<https://utilityweek.co.uk/obstacles-to-interconnectors/>>

419 Silke Goldberg, 'Brexit & Interconnectors' (2017) OGEL 2 <[www.ogel.org/article.asp?key=3680](http://www.ogel.org/article.asp?key=3680)>

420 On capacity markets, see e.g., Roberts Julian, 'The Capacity Market in Britain, in: European Energy Law Report' (2018) 12 intersentia; Pritschke Kai and Heber Christina, 'Capacity Mechanisms in Germany' in: European Energy Law Report' (2018) 12 intersentia

421 At present, there are no new gas interconnectors planned between the UK and continental

- Currently, there are four interconnectors in operation (IFA1 (France), Moyle (Ireland), BritNed (The Netherlands), and EWIC (Ireland)) which provide around 4 GW of capacity.
- Further planned projects (Nemo (Belgium), Eleclink (France), Aquind (France), GridLink (France), IFA2 (France), FABLink (GB/France/Alderney), NSN (Norway), Viking (Denmark), and Greenlink (Ireland)) will assist by bringing up to 14 GW of additional capacity to the UK's supply portfolio.

The UK interconnector regime is unique in the EU in that it specifically allows for and encourages merchant interconnectors to be developed by private investors.<sup>422</sup> By contrast, other jurisdictions tend to look to incumbent transmission system operators (TSOs) for the development of interconnectors. For instance, the French energy code provides that Réseau de Transport d'Electricité (RTE) (the electricity TSO) is the sole entity with responsibility for interconnection with the grids of other European countries.

## 6.2 Potential Post-Brexit UK-EU Electricity Arrangements

Given that the UK electricity market is highly interconnected — it being reliant upon electricity flows from the continental market, in particular, France (from where the UK is importing up to 2 GW), and already established important trading patterns with the EU electricity market—physical disconnection of the two markets is generally seen as highly unlikely. That being said, Brexit may still negatively impact energy trading, and, therefore, UK energy security, as the UK is a net importer of electricity.

Of course, the overall framework of the future relationship between the UK and the EU post-Brexit will, to a large extent, determine Brexit's impact on the UK's energy sector. Possible models for that relationship include:

- Continued membership of the IEM, similar to Norway's current arrangements, with the implementation of the EU's energy market regime and payment into the EU with no voting rights on the relevant legislation;
- Tracking the EU legislative and regulatory regime without any formal arrangement; or

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Europe, so the impact of Brexit on new gas interconnectors is being set aside for the purpose of this chapter.

<sup>422</sup> On the GB interconnector model, see also: Dutton, Joseph, and Matthew Lockwood, 'Ideas, institutions and interests in the politics of cross-border electricity interconnection: Greenlink, Britain and Ireland' (2017) 105 *Energy Policy*

- A series of sector-specific bilateral arrangements similar to the EU-Swiss arrangement as alternatives for or in addition to free trade agreements with specific jurisdictions outside the EU.

If Brexit were to result in an exit from the IEM, the UK would probably be excluded from the benefits of market integration initiatives, such as market coupling, cross-border balancing, and capacity market integration.

UK Prime Minister Theresa May, in her speech on 17 January 2017, announced a “hard Brexit” strategy which is intended to result in the UK leaving not only the EU but also the internal market, the customs union and Euratom. Nevertheless, the White Paper released by the UK Government<sup>423</sup> emphasises that it is considering all options for the UK’s future relationship with the EU on energy, with a particular focus on avoiding disruption to the all-Ireland Single Electricity Market (see below). The White Paper underlines that:

- Coordinated energy trading arrangements help to ensure lower prices and improved security of supply for both the UK and EU Member States by improving the efficiency and reliability of interconnector flows, reducing the need for domestic backup power, and helping balance power flows as we increase the level of intermittent renewable electricity generation.<sup>424</sup>

Although UK Government statements to date have not commented specifically on the prospect of remaining in the IEM, it is uncertain whether this could be accommodated in spite of its (apparently) firm opposition to:

- Arrangements that would involve post-Brexit acceptance of EU legislation (such as relevant European Energy Directives and Regulations);
- The remaining part of EU-wide institutions (which would include the Agency for the Cooperation of Energy Regulators (ACER), the European Network of Transmission System Operators for Electricity (ENTSO-E) and the European Network of Transmission System Operators for Gas (ENTSO-G)); and
- the CJEU having superior jurisdiction to that of the UK’s national courts.

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423 HM Government, ‘The United Kingdom’s exit from and new partnership with the European Union’ (February 2017) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/589191/The\\_United\\_Kingdoms\\_exit\\_from\\_and\\_partnership\\_with\\_the\\_EU\\_Web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/589191/The_United_Kingdoms_exit_from_and_partnership_with_the_EU_Web.pdf)>

424 *ibid* para 8.28.

### 6.3 The Immediate Impact of Brexit on Interconnectors

The increasing use and role of interconnectors between the UK and the EU energy market speaks to a level of interdependency between the electricity markets, and the UK Government is generally supportive of interconnectors. As a result, during the two years in which the UK negotiates its exit agreement with the EU, Brexit may not unduly impact existing projects. However, there are some concerns amongst investors that the economic case for new interconnectors may be affected if, for example, the UK is not part of the IEM or electricity imports/exports are made subject to trade tariffs.

Ultimately, the likely result and impact of Brexit will not be fully known until 2019 (at the earliest). Commentators have suggested that projects which are already under construction, or which have reached financial investment decisions are likely to be less affected.<sup>425</sup> However, the discomfort for investors, sponsors, and European regulators alike may lead to delays for projects unless pragmatic long-term solutions can be found. The continuing, and unprecedented, uncertainty (including the extent to which the UK will develop its own energy regulations independent from the EU, requiring negotiation of an alternative, reliable regime) will inevitably start to have an effect on interconnector projects, both current and in the pipeline.

European energy regulators are watching Brexit-related developments and their impact on the internal energy market closely. CRE, the French energy regulator, when conducting its consultation on IFA2, specifically raised the issue of Brexit, stating that: “[t]he outcome of the British referendum hence raises two questions. First, one has to check that the project is interesting for the European electricity system, even in a situation where the United Kingdom would no longer be a member of the European Union and an active member of the internal market. Second, a specific analysis of the risks raised by the consequences of the British referendum, and the measures taken to mitigate such risks, is needed.”<sup>426</sup>

In its decision<sup>427</sup> in support of the IFA2 project, the CRE concluded that whilst “there is no visibility on the future operating conditions of these interconnectors following the British referendum, the CRE considers that the treatment of these

425 Frontier Economics, ‘The effects of Brexit on the UK power market – Part One’ (July 2016) <[www.frontier-economics.com/media/1054/20160706\\_the-effects-of-brexit-on-the-uk-power-market-part-one\\_frontier.pdf](http://www.frontier-economics.com/media/1054/20160706_the-effects-of-brexit-on-the-uk-power-market-part-one_frontier.pdf)>

426 Public consultation of 1 December 2016 – 3 January 2017 by the Commission de Régulation de l’Energie, France. The consultation document is available at <[www.cre.fr/en/Documents/Public-consultations/The-interconnector-IFA2-between-France-and-Great-Britain](http://www.cre.fr/en/Documents/Public-consultations/The-interconnector-IFA2-between-France-and-Great-Britain)>

427 CRE, ‘Deliberation of the French Energy Regulatory Commission of 2 February 2017 forming a decision regarding the interconnector “IFA2” project’ (February 2017) <[www.cre.fr/en/Documents/Deliberations/Decision/interconnector-ifa2-project](http://www.cre.fr/en/Documents/Deliberations/Decision/interconnector-ifa2-project)>

projects is an issue of European importance.” The CRE also emphasised that it intended to engage Ofgem and other counterparts to develop a common understanding of UK-EU interconnectors. It could be inferred from this that European regulators may be willing to take a pragmatic approach to Brexit-related regulatory issues in order to find workable solutions for interconnectors.

As the politics and policies around Brexit continue to evolve, operators and sponsors of interconnector projects will need to keep an active watching brief on developments. To the extent that they engage in dialogue with the UK Government, they may wish to consider suggesting that remaining in the IEM is likely to provide more security, not only for their relevant projects, but also for the energy sector as a whole.

## 6.4 The Likely Impact of Brexit on the Regulatory Framework

### 6.4.1 The role of European bodies

ACER is a decentralised EU agency set up by the EU to help ensure that the single European market for gas and electricity functions properly. Its regulatory activities are overseen by a Board of Regulators composed of senior representatives of the national regulatory authorities for the energy of the 28 Member States. Its administrative and budgetary activities fall under the supervision of an Administrative Board, whose members are appointed by European institutions.<sup>428</sup>

There is no concept of “associated membership” or “observer status” within ACER. Its primary function is the monitoring, implementation and, in some limited circumstances, enforcement of EU legislation. With the UK’s departure from the EU and (potentially) the IEM, its participation in the functions of ACER will cease.<sup>429</sup>

The situation is, however, different in relation to the ENTSOs, which, whilst creations of European Regulations, are in essence, non-governmental organisations set up as international non-profit associations under Belgian law. They have full members (i.e., the TSOs from EU Member States) as well as observers and associated members from outside the EU. ENTSO-E, for instance, has 43 member TSOs from 36 countries.<sup>430</sup>

To the extent that the UK remains part of the IEM, it would also likely remain subject to the relevant European Energy Directives and Regulations and part of the institutions (such as ACER, ENTSO-E, and ENTSO-G) regulating the IEM.

428 ACER, ‘Organisation and Bodies’ <[https://acer.europa.eu/en/The\\_agency/Organisation/Pages/default.aspx](https://acer.europa.eu/en/The_agency/Organisation/Pages/default.aspx)>

429 ACER, ‘Revised Programming Document 2018-2020’ (January 2018) <[https://acer.europa.eu/en/The\\_agency/Mission\\_and\\_Objectives/Documents/ACER%20Programming%20Document%202018-Revised%20Jan%202018.pdf](https://acer.europa.eu/en/The_agency/Mission_and_Objectives/Documents/ACER%20Programming%20Document%202018-Revised%20Jan%202018.pdf)>, pp. 13 and 14f.

430 Entso-E, ‘ENTSO-E Member Companies’ <[www.entsoe.eu/about/inside-entsoe/members/](http://www.entsoe.eu/about/inside-entsoe/members/)>

Conversely, following a full exit from the IEM, a new forum would need to be founded to address the relevant aspects of the regulatory regime (e.g., market coupling, capacity allocation, balancing, treatment of interconnection points, and tariffs). The European network codes that define interconnectors' operating rules may also not be enforced in the UK anymore, raising uncertainties regarding future capacity allocation rules.

It may be possible for the relevant UK companies NGENSO (electricity system operator for Great Britain), NGG (gas system operator for GB), and SONI (the electricity system operator for Northern Ireland) to continue to participate in the ENTSOs as an observer or under another, specially negotiated status. However, it is likely that such a status would diminish British influence on EU network codes as the British TSOs would be unlikely to have full participation rights. Should the British TSOs not be part of the ENTSOs in any capacity following a "hard Brexit" scenario, this issue would be exacerbated.

In view of the need to find a pragmatic solution for the treatment of interconnection points as to capacity allocation, tariffs, quality and so on, it is likely that a form of arrangement between the British TSOs and the ENTSOs will be found. The change in status will increase the importance of robust and flexible interconnector agreements as well as IGAs.

#### 6.4.2 Different rules for existing and future interconnectors

The Third Electricity Directive<sup>431</sup> defines interconnectors as 'equipment used to link electricity systems,' which would have meant that UK interconnectors fell within the scope of this definition. However, Regulation 714/2009<sup>432</sup> (the 'Electricity Regulation') amends that definition to restrict interconnectors to mean a 'transmission line which crosses or spans a border between Member States and which connects the national transmission systems of the Member States,' which would exclude EU-UK interconnectors.

This restrictive definition is identical to that in the Third Gas Directive,<sup>433</sup> which defines interconnectors as "a transmission line which crosses or spans a border

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431 Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC [2009] OJ L211/55.

432 Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges electricity and repealing Regulation (EC) No 1228/2003 [2009] OJ L211/15.

433 Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC [2009] OJ L211/94.

between Member States for the sole purpose of connecting the national transmission systems of those Member States.”

Whilst technically, the EU unbundling regime, introduced as part of the Third Energy Package, will no longer apply in the UK, the relevant provisions have already been transposed into UK legislation, which will continue to apply unless Parliament makes the policy choice to amend it post-Brexit. This would appear to be unlikely given that the unbundling regime has, at its core, the liberalisation of the British energy sector: the EU regime is partly based on the UK model and is firmly rooted in the Electricity and Gas Acts as well as the relevant licensing regime (although derogations in specific cases could potentially be implemented through unilateral UK legislative changes). The UK will thus be unable to untangle itself entirely from the EU energy legislation, which means that parts of the EU regime, particularly unbundling, will continue to affect the UK post-Brexit.

It is likely that the exemption regime pursuant to Article 17 of the Electricity Regulation and Article 36 of the Third Gas Directive (under which new infrastructure can be exempted from the ownership unbundling, revenue investment, third-party access, and revenue investment regimes) would no longer be available to new interconnectors.

#### 6.4.3 The applicability of the projects of common interest (PCI) regime to future UK interconnectors

If UK interconnectors do not qualify as interconnectors for the purposes of EU legislation, this may also have implications for the ease with which future UK interconnector projects are able to achieve PCI status.<sup>434</sup>

The PCI list was initially set out in 2013 in Annex I to Regulation 347/2013.<sup>435</sup> The revised list was published on 18 November 2015 and contained 195 key projects that are seen as fundamental to achieving the energy objective of completing the Energy

<sup>434</sup> PCIs are key (cross-border) infrastructure projects which connect the intra-EU energy systems. Their aim is to support the EU’s energy policy, climate objectives and the Internal Energy Market. Every two years, the Commission draws up a new list of PCIs which includes the projects that have met the various relevant requirements. In order to qualify as a PCI, a project has to have a significant ‘impact on energy market and market integration in at least two EU countries, boost competition on energy markets and help the EU’s energy security by diversifying sources, and contribute to the EU’s climate and energy goals by integrating renewables’; further detail on PCIs can be found at: European Commission, ‘Projects of Common Interest’ <<https://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest>>

<sup>435</sup> Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009 [2013] OJ L115/39.

Union and Europe benefitting from affordable, secure, and sustainable energy. PCIs can benefit from:

- Accelerated planning and permit granting;
- A single national authority for obtaining permits;
- Aligned regulatory conditions; and
- Lower administrative costs due to streamlined environmental assessment processes.

Interconnectors feature heavily in this list as they are a fundamental aspect in achieving the objective of an Energy Union. Most importantly, interconnectors support the low-carbon agenda by providing cheap access to low-carbon electricity, supporting the market viability of intermittent generation by facilitating market balancing, and reducing European decarbonisation costs.

In the UK, the NEMO, Greenlink, Viking, Icelink, NSI West Electricity, Aquind, FAB, IFA2, Gridlink, and ElecLink interconnectors, as well as the Moffat reverse flow projects, have obtained PCI status. Several other interconnector projects are understood to have applied for PCI status.<sup>436</sup>

Whilst it is not entirely clear whether an interconnector project will remain eligible for PCI status after the UK exits the EU, there are strong arguments in favour of maintaining that status in relation to the relevant projects on the basis that:

- It is located on the territory of one Member State (the relevant non-UK EU Member State, in relation to which there would be no change following Brexit); and
- It will have a “significant cross-border impact” because it will continue to contribute to cross-border grid transfer capacity on the corridor by at least 500 MW, thus affecting the supply security of EU Member States.

In addition, there are examples of PCIs connecting the EU with third countries, such as the EuroAsia Interconnector, which runs between Israel, Cyprus, and Greece. This interconnector includes three separate PCIs, one of which is the interconnection between Hadera (Israel) and Kofinou (Cyprus).<sup>437</sup>

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436 For a complete list of PCI projects as of April 2018, please see here: <[https://ec.europa.eu/energy/sites/ener/files/documents/memberstatespci\\_list\\_2017.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/memberstatespci_list_2017.pdf)>

437 For a complete list of PCI projects as of 2015, please see: <[http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?url=OJ:JOL\\_2016-019-R-0001&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?url=OJ:JOL_2016-019-R-0001&from=EN)>.



#### 6.4.4 The availability of European project funding sources

In addition to funding available for PCIs, the Commission has listed the indirect financial benefit of increased viability for investors and the direct benefit of access to the CEF. This is a fund of €5.35 billion to be invested in connectivity projects covering the IEM by 2020. A variety of financial instruments are also used to fund projects, such as guarantees and project bonds, as this will aid in attracting private sector investment into the projects funded by the CEF.

The CEF estimates that the upgrading, development, and construction of adequate energy transmission infrastructure of European importance will require investments of about €140 billion in electricity and at least €70 billion in gas. The objective of the CEF is to facilitate this, and it is not the only source of European Funding that can be called upon.

It is likely that access to the CEF will fall away for UK projects in a “hard Brexit” scenario. In addition, there would be long-term funding implications for new projects, given that access to European Investment Bank loans may be cut off by Brexit.

However, in relation to UK-EU interconnectors, there are good arguments that access to CEF support should be maintained even in a post-Brexit scenario, as the non-UK section of the interconnector continues to remain in the UK, and the relevant interconnector will continue to make a positive contribution to the IEM.

### 6.5 Possible Mitigants for Regulatory Risk

#### 6.5.1 Intergovernmental agreements

Project risk, including political and regulatory risk, for international infrastructure projects such as interconnectors is sometimes mitigated through a package of host government agreements for each host state and/or an intergovernmental agreement (IGA) between or among host states. IGAs are usually treaties entered into under local and international law and are ratified or enacted into domestic law accordingly.

Typically, the project sponsors are the beneficiaries of the governmental commitments as the government-to-government undertakings address the political and regulatory risks associated with the project. To the extent that they have not done so, developers and operators of interconnector projects will want to ensure that their interests are represented in any such agreements and promote political support for the relevant project’s objectives and plans.

The European Commission will necessarily have some involvement with any IGA; pursuant to the Treaty of Lisbon, IGAs in the energy sector between EU and EU non-Member States will trigger the involvement of the EU both in the negotiations, through representatives of the European Commission, and as a party to the IGA itself. As such, the EU as a whole will influence the future regime applicable to

energy sector arrangements between the EU and individual Member States, including the role of interconnectors.

Recent experience of IGAs in relation to EU-third-country gas pipelines has shown that the European Commission will approach any such IGA strictly in line with the current EU regulatory regime.

### **6.5.2 Interconnector agreements**

The running of interconnectors and the necessary cooperation between TSOs is usually governed by interconnector agreements (or joint operating agreements) which set out the governance and operational principles of the relevant interconnector.

Accordingly, some of the economic, regulatory and trade issues discussed in this chapter could be addressed at the sub-legislative level in interconnector agreements between the relevant TSOs, including the treatment of interconnection points and the cooperation of TSOs with the relevant regulators.

A key advantage of this type of agreement is that they are bilateral as between the relevant TSOs; for electricity interconnectors, Member States are not normally a party to such agreements (the situation can be different for gas interconnectors which are, for reasons stated above, outwith the scope of this chapter). Interconnector agreements, therefore, do not require legislation nor, in most cases, governmental involvement nor the approval of the remaining 27 EU Member States.

TSOs of existing interconnectors, as well as the relevant adjacent TSOs, may wish to carefully examine any existing interconnector agreements as to whether amendments might be required in light of the changing regulatory landscape in any Brexit scenario.

There will potentially be two or even three regulatory regimes to take into account (UK, EU, and relevant Member States) when drafting post-Brexit interconnector agreements. Further, interconnector agreements cannot fully replicate a regulatory regime, even if they can build upon ones which are not fully aligned in order to make the structure work.

## **7 SUPPLY SECURITY**

In this section, supply security will be discussed in relation to electricity (section 7.1) and gas (section 7.2), respectively.

## 7.1 Electricity

Any disruption of electricity trade between the UK and the EU in the form of tariffs or as a result of diverging regulatory regimes is likely to lead to increased costs which in turn will make it more difficult to insulate UK customers from higher utility bills. The reason for this is that demand for electricity in the UK is rising, thus reducing the UK's spare capacity and increasing the price of electricity. Interconnectors are vital to protecting supply security and increasing capacity.

Research by EnAppSys<sup>438</sup> has shown that, on the basis of the winter's electricity demand in 2015/16, there will be

- 85 hours this winter when spare capacity falls below 2 GW;<sup>439</sup> and
- Roughly 12 hours when demand will exceed standard capacity.

This means that last-resort measures (e.g., restarting large power plants which have been mothballed, firing up small, inefficient diesel and gas engines, and even paying large consumers to use less at peak times) will be required.<sup>440</sup>

Whilst such measures are rarely used, they are cost intensive. In 2015/16, wholesale power prices rocketed to £2,500 per megawatt-hour, up from a going rate of £60. Restarting mothballed power plants this winter would cost at least £3,000 per MWh.<sup>441</sup>

Electricity imported through subsea interconnectors has become an important source of power for the UK, accounting for 6.6% of supplies last year. As further interconnection projects come on stream, this proportion is expected to increase.

Interconnectors are also likely to play a part in lowering consumers' utility bills. In 2013, the then Department of Energy and Climate Change<sup>442</sup> commissioned a study by Baringa which showed that depending on the adopted scenario, level of interconnection and countries to which the interconnection is made, UK consumers could see benefits of up to £9 billion (net present value) in the period up to 2040.<sup>443</sup>

438 EnAppSys, 'GB Electricity Market Summary: Second Quarter 2016 Apr to Jun' <[https://docs.wixstatic.com/agd/42d1d7\\_f659613405074b4993a3b40c4dac5a37.pdf](https://docs.wixstatic.com/agd/42d1d7_f659613405074b4993a3b40c4dac5a37.pdf)>

439 *ibid.*

440 Kiran Stacey, 'Britain told to brace itself for power shortages' (Financial Times, 13 June 2016) <[www.ft.com/content/2c1f71c6-2ef7-11e6-bf8d-26294ad519fc](http://www.ft.com/content/2c1f71c6-2ef7-11e6-bf8d-26294ad519fc)>

441 EnAppSys (n 438).

442 Since February 2023, part of the Department for Energy Security and Net Zero.

443 Department of Energy & Climate Change, 'More interconnection: improving energy security and lowering bills' (December 2013) <[www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/266460/More\\_interconnection\\_-\\_improving\\_energy\\_security\\_and\\_lowering\\_bills.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/266460/More_interconnection_-_improving_energy_security_and_lowering_bills.pdf)>

## 7.2 Gas

As between the UK and the EU, gas markets are physically already well integrated through three interconnectors (IUK,<sup>444</sup> BBL,<sup>445</sup> and Moffat<sup>446</sup>) with only small wholesale price differences and little congestion.<sup>447</sup> Subject to any drastic changes in energy policy by the UK Government, the gas sector is, therefore, unlikely to suffer following Brexit. Structurally, any EU27-UK gas interconnectors will be affected by the same type of issues as the electricity interconnectors.

The Brexit negotiations coincide with (i) the end of the initial long-term gas interconnector contracts (IUK 2018, BBL 2022) and, therefore, greater pressure on gas hubs like the National Balancing Point in the UK (NBP) and the Title Transfer Facility in the Netherlands (TTF) and (ii) the EU's review of its gas security strategy.

In respect of the replacement of the IUK and BBL contracts, whilst the NBP-TTF spread, a mathematical indicator showing the delta of the gas price in the Netherlands and the UK, provides the direction for gas to flow, shippers will take other factors into account, such as the cost of the service provided by the IUK and BBL interconnectors compared to alternatives such as LNG.

The UK gas market is amongst the most mature and liquid gas markets in Europe. Brexit may, however, contribute to a shift towards other EU markets (particularly TTF in the Netherlands, which outranked the UK as the most liquid market in 2015) and change expectations in respect of future infrastructure investments.<sup>448</sup>

As the EU is currently undergoing a review of its gas supply security arrangements, including Regulation 994/2010,<sup>449</sup> Brexit could increase the UK's supply security risk, as the UK might be excluded from the "solidarity principles," in accordance with which European nations agree to supply gas to their neighbours in the event of a gas supply crisis. Conversely, as Ireland is largely dependent on GB gas imports

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444 The IUK interconnector is a 235-km pipeline between Zeebrugge (Belgium) and Bacton (UK) which started operations in 1998. It is the only bi-directional gas pipeline between continental Europe and the UK.

445 The BBL interconnector is a 235-km pipeline between the Netherlands and the UK; see also Martha M Roggenkamp, 'Establishment and Role of the Bacton-Balgzand Pipeline within the Internal Gas Market' in Martha M Roggenkamp and Ulf Hammer (eds), *European Energy Law Report II* (Intersentia 2005) Chapter 11.

446 The Moffat interconnector is a one-way pipeline from Moffat (Scotland) to the Republic of Ireland by way of which the UK exports gas to Ireland.

447 See also Ofgem, 'Wholesale energy markets in 2016' (3 August 2016) <[www.ofgem.gov.uk/publications-and-updates/wholesale-energy-markets-2016](http://www.ofgem.gov.uk/publications-and-updates/wholesale-energy-markets-2016)>

448 *ibid.*

449 Fleming, Ruven, 'Security of Gas Supply: The New European Approach' in: *European Energy Law Report XII*, Intersentia, 2018, (chapter 13)

(see below), it is possible that the EU will try to intervene in the form of a solidarity mechanism for Ireland.

## 8 IRELAND AND THE SINGLE ELECTRICITY MARKET

Brexit will also have an impact on the energy sector in Ireland, perhaps more so than on any other EU country, as part of the UK (Northern Ireland) is currently operating a single electricity market (SEM) with the Republic of Ireland.

SEM was established in 2007 with the aim of improving the competitive structure and efficiency of the energy markets of both Northern Ireland and the Republic of Ireland. SEM fully links both jurisdictions, creating an integrated market with its own set of market rules in the form of the Trading and Settlement Code.<sup>450</sup> Every entity that wishes to become active on the market, for example, market operators, system operators, generators, and interconnector owners, has to comply with the Code and, in turn, the EU regulatory regime. In May 2018, SEM will become iSEM, the integrated single energy market built on the EU electricity target model, which in turn is based on bilateral trading, market coupling and uniform gate closure across the EU.<sup>451</sup>

Although compliant with the EU's Third Energy Package (but not yet the Target Model), the Code is not based on European legislation. This is due to the fact that the bilateral agreement on the establishment of SEM predates the Third Energy Package. Instead, it derives its *raison d'être* from a bilateral cooperation agreement between Dublin and Westminster. The effects of Brexit are, therefore, unlikely to be felt immediately after the UK's departure but may become apparent in the medium to long term.

iSEM is regulated by an iSEM Committee which is the decision-making authority for all matters pertaining the SEM. The iSEM Committee is composed of three representatives of each of the Irish Commission for Regulation of Utilities (CRU) and the Northern Irish Utility Regulator (UR) as well as an independent and a deputy independent member. In February 2014, the CRU and UR entered into a Memorandum of Understanding<sup>452</sup> that forms the basis for the cooperation between the two regulatory authorities. As Ireland is an EU Member State, the iSEM is effec-

450 The Trading and Settlement Code can be accessed at <[www.semcommittee.com/trading-and-settlement-code](http://www.semcommittee.com/trading-and-settlement-code)>

451 EirGrid Group, 'Quick Guide to the Integrated Single Electricity Market: The I-SEM Project Version 1' (2016) <[https://www.eirgridgroup.com/\\_\\_uuid/f110639e-9e21-4d28-b193-ed56ee372362/EirGrid-Group-I-SEM-Quick-Guide.pdf](https://www.eirgridgroup.com/__uuid/f110639e-9e21-4d28-b193-ed56ee372362/EirGrid-Group-I-SEM-Quick-Guide.pdf)>, p. 3.

452 Memorandum of Understanding between CRU and UR dated 25 February 2014, available at: <https://www.semcommittee.com/sites/semcommittee.com/files/media-files/SEM-14-015%20MoU%20between%20CER%20and%20UR.pdf>

tively subject to the EU energy sector regime. If SEM were maintained post-Brexit, a part of the UK would therefore continue to be subject to EU law.

Brexit, if not carefully managed with a solution which specifically addresses the SEM issue, would effectively reverse a decade's worth of progress in energy integration on the island of Ireland. There are a number of possible post-Brexit arrangements and solutions to this issue:

- Designate Northern Ireland as a special zone where EU law remains applicable. This might cause tension, though, if the UK's energy policy were to diverge from European provisions in the future. One key point must be considered. If EU legislation continued to apply in Northern Ireland, the UK Government would have to accept that regulatory divergence could occur in the UK itself, i.e., between Northern Ireland and Great Britain. This may, in turn, create the constitutional challenge of how to transpose EU legislation that requires domestic implementation. So far, this power has not been devolved to the Stormont assembly but remains securely with Westminster.
- Create a special status for iSEM which, whilst compliant with EU law, would not subject Northern Ireland to the jurisdiction of the European institutions (i.e., an "EU-compatible" solution). Like option one, this arrangement would raise implementation issues and would equally require a new jurisdictional forum to assume the former responsibilities of the European institutions.
- Unwind iSEM entirely, which is unlikely to be politically palatable in either the Republic or Northern Ireland.
- Alternatively, and perhaps the most straightforward solution (from a UK domestic perspective), the EU might grant the Republic of Ireland the right to conclude a bilateral agreement with the UK to address the future workings of SEM (or, indeed iSEM). This option is politically outside the gift or influence of the UK Government as it is dependent both on the political will of the EU27 as well as the Irish Government. As there are many Brexit-related issues that impact the island of Ireland directly and more immediately than any other EU27 country, any bilateral deal between the UK and Ireland, if entered into, is likely to cover a wide range of issues. Such issues include border control and freedom of movement, as well as energy, and look set to be rather complex.

Irish gas supply security is heavily dependent on the UK and specifically on the Moffat interconnector. According to the winter outlook document produced by Gas Networks Ireland,<sup>453</sup> 96.3% of annual Irish gas supply requirements in 2014/15 came

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453 Gas Networks Ireland, 'Winter Outlook 2015/16' (2015) <[www.gasnetworks.ie/docs/corporate/gas-regulation/18444\\_GNI\\_WinterOutlook\\_15-16\\_v9.pdf](http://www.gasnetworks.ie/docs/corporate/gas-regulation/18444_GNI_WinterOutlook_15-16_v9.pdf)>

from British imports via the Moffat interconnector. Whilst the Corrib gas field is anticipated to improve Ireland's security of supply, it is anticipated that even at full operational capacity, it will only meet approximately 56% of Gas Networks Ireland System's annual forecast, leaving Ireland's supply security reliant on UK gas imports and accordingly exposed to Brexit risks.

The issue of Irish security of supply is therefore likely to be a key feature on the agenda during the energy sector-related Brexit negotiations, as the current arrangements through the Moffat interconnector are the "cheapest way to provide security of supply to Irish consumers,"<sup>454</sup> If it is not possible to maintain the current arrangements regarding the Moffat interconnector, it is conceivable that Ireland may need to build a dedicated LNG terminal with regasification facility.

Issues pertaining to the Irish energy market seem to be an important factor for the Government in considering the UK's future relationship with the EU energy sector, as it is the only sector in relation to which the White Paper specifically states that the UK would explore "all options"<sup>455</sup> regarding its future relationship with the EU; not least to avert disruption to SEM as both Northern Ireland and the Republic of Ireland rely on its functioning for their supply security.

## 9 EURATOM

### 9.1 Euratom's institutional relationship with the European Union

Established in 1957 by the Euratom Treaty, Euratom is a separate entity from the EU with its own legal personality.<sup>456</sup> The Euratom Treaty has not seen any major changes ever since it took effect six decades ago.<sup>457</sup> Whilst structurally sharing the same institutional framework as the European Union, Euratom also comprises two further exclusive bodies:

454 Thierry Bros, 'Brexit's impact on gas markets' (January 2017) The Oxford Institute for Energy Studies <<https://a9w7k6q9.stackpathcdn.com/wpcms/wp-content/uploads/2017/01/Brexit-impact-on-gas-markets-OIES-Energy-Insight.pdf>>

455 HM Government (n 229) para 8.28.

456 The Euratom Treaty can be accessed at <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A12012A%2FTXT>>

457 It has been pointed out that 'the Euratom Treaty has largely been left behind in the development of the European Community and European Union Treaties', in Christiane True, 'Legislative Competences of Euratom and the European Community in the energy sector: The Nuclear Package of the European Commission' (2003) 28 EL Rev 684.

- The Supply Agency, which has both the exclusive permission to enter into contractual agreements with respect to ores, source materials and special fissile materials originating from within or outside of the Euratom area and a general right of option in relation to ores, source materials and special fissile materials produced within the Member States; and
- The Safeguards Office, which guarantees that nuclear material is not diverted for unintended purposes and that all safeguarding duties, relevant to nuclear material, are adequately complied with.

As indicated, both Euratom and the EU use the European Commission, Council and Parliament, as well as the CJEU. Legally speaking, however, Euratom is a distinct entity from the Union, having been established under the separate Euratom Treaty (as opposed to the European Treaties, currently in form of the Treaty on European Union (TEU) and the Treaty on the Functioning of the European Union (TFEU)). This separate identity has been highlighted in various instances, amongst others, in the context of the changes introduced by the Treaty of Lisbon. Whilst this legislation materially amended the institutional arrangements in relation to the EU, Euratom was mostly unaffected “by the European Union construct *stricto sensu*”<sup>458</sup>

Both the European Treaties and the Euratom Treaty set out the competencies of their respective institutions, i.e., in relation to the EU and Euratom. However, rather than replicating the text of the institutional provisions as included in the European Treaties, Article 106a of the Euratom Treaty simply contains references to all the relevant provisions in the European Treaties, deeming them similarly applicable to Euratom.<sup>459</sup> The European Treaties only apply insofar as they do not derogate from, or conflict with, anything set out in the Euratom Treaty.<sup>460</sup>

One such “assumed” competence, for instance, is the withdrawal mechanism contained within Article 50 TEU. Should the UK wish to leave Euratom, it can therefore do so; however, this is not effected by way of Article 50 itself but by the separate provision set out in Article 106a of the Euratom Treaty.

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458 Ilina Cenevska, ‘The European Parliament and the European Atomic Energy Community: a Legitimacy Crisis?’ (2010) 35 *EL Rev* 424.

459 Silke Goldberg and Shekhar Sumit, ‘Withdrawal of the United Kingdom from Euratom’ (2007) *OGEL 2* <[www.ogel.org/article.asp?key=3684](http://www.ogel.org/article.asp?key=3684)>

460 See Art 106a(3) of the Euratom Treaty; Evelyne Ameye and Iñigo I Arregui, ‘National Nuclear Third Party Insurance Pools Revisited from a European Union Competition Law Perspective’ (2012) 30 *J Energy & Nat Resources L* 265, 274.



## 9.2 The UK'S Withdrawal: Mandate, Challenges, and Consequences

Due to this inherent separate nature, an important issue to consider is whether the referendum to leave the EU even provided the UK Government with a mandate to withdraw from Euratom. The referendum never expressly enquired whether the British people wished to exit Euratom (nor is the author aware of Euratom ever being mentioned in this context in any relevant publications or consultations by the government).

Furthermore, in order to withdraw from Euratom effectively, a notice in accordance with Article 106a of the Euratom Treaty (and not Article 50) must be made. As the UK's Withdrawal Notice<sup>461</sup> purported to be "in accordance with Article 50(2) as applied by Article 106a," however, the author considers it arguable that it did not meet the formal requirements of an effective notice. This issue may seem technical, but it could have practical ramifications, as the two-year notice period for Euratom only commences on the date of the notice. If no effective notice has been given, the clock has not yet started ticking.

In light of these issues, there are several grounds on which the UK's exit from Euratom could be challenged before the British courts:

- As it is uncertain whether the Withdrawal Bill actually bestowed on the government the right to depart from Euratom, the legal argument could be made that the government has no mandate to proceed with the departure;
- Whilst leaving the EU does not equate to exiting Euratom, by law doing so may have material ramifications for the civil nuclear generation sector and consumers; and
- Arguably, an exit from Euratom would infringe on the property rights of members of the British nuclear market, as the departure may deprive them of the rights they currently enjoy (e.g., access to the nuclear common market or nuclear supply chain arrangements).

Whilst no challenges have been brought so far and it is not yet possible to say with certainty whether any legal challenges may be brought, successfully or not, it is nevertheless useful to be aware of the potentially impending risks.

Irrespective of the issue of effective notice, the UK's withdrawal from Euratom will have significant practical consequences. As explained, the "exit clock" starts ticking from the moment the government serves its notice. Unless it is granted an

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<sup>461</sup> The Prime Minister, 'Prime Ministers Letter to Donald Tusk Triggering Article 50' (29 March 2017) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/604079/Prime\\_Ministers\\_letter\\_to\\_European\\_Council\\_President\\_Donald\\_Tusk.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/604079/Prime_Ministers_letter_to_European_Council_President_Donald_Tusk.pdf)>

extension, the UK will need to agree on replacement arrangements alongside all other Brexit aspects within the two-year window (assuming that Brexit applies to the UK's Euratom membership).

Such negotiations would need to be carried out on multiple parallel tracks:

- Negotiating any Brexit-related terms and substitutional arrangements for the UK;
- Negotiating any Brexatom-related terms and substitutional arrangements for the UK;
- Meetings with Euratom and non-Euratom countries for the purposes of negotiating any bilateral substitutional arrangements;
- Discussions regarding the new security and safeguarding provisions that the UK will have to adhere to after leaving Euratom (it is unlikely that any states would consent to new cooperation or trade agreements without having the reassurance of an adequate regime);
- Considering the more universal effects of leaving Euratom, seeing as that it also forms part of other instruments, including the Treaty of Almelo (establishing the enrichment company Urenco)<sup>462</sup> and Euratom Directives (e.g., the Radioactive Waste and Spent Fuel Management Directive);<sup>463</sup> and
- Preparing for the improbable and undesirable version of Brexatom in which the UK departs after the two-year notice period without having agreed on any replacement arrangements. To cater for such an outcome, the Government may be advised to take into account more practical responses, such as increasing the existing stocks of fuel, and potentially expanding current storage facilities or alternative generation capacity.

Given the potential timing issue in simultaneously progressing (and concluding) all these multiple tracks of discussion until March 2019 (or the end of a potential transition period), Tom Greatrex, the Chief Executive of the Nuclear Industry Association (the trade association of the UK civil nuclear industry) has flagged that it is “vital” for transitional arrangements to be put in place “to give the UK time to negotiate and complete new arrangements with EU member states and third countries including the U.S., Japan and Canada who have Nuclear Cooperation Agreements within the Euratom framework.”<sup>464</sup>

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462 Treaty of Almelo (4 March 1970) <<https://fissilematerials.org/library/urenc070.pdf>>

463 Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste [2011] OJ L199/48.

464 Nicola Newson, ‘European Union (Notification of Withdrawal) Bill (HL Bill 103 of 2016-17), House of Lords Library Note’ (15 February 2017) <<http://researchbriefings.files.parliament.uk/documents/LLN-2017-0009/LLN-2017-0009.pdf>>

Where no such agreement is reached when the UK exits Euratom, nuclear industry imports and exports do not simply become more expensive but illegal. This will materially affect the civil nuclear generation sector (and consumers),<sup>465</sup> as well as other nuclear industries such as nuclear decommissioning and those that use radioactive materials (e.g., automobile, aeronautics, and mining). In this light, the author notes that it is inconceivable that the Government would not secure adequate replacement arrangements (or transitional agreements) to Euratom (though, in order to do so, the government may have to relent on certain other matters in the wider Brexit negotiations).

In a statement to the House of Commons on 31 January 2017, Mr Davis noted that the UK “will maintain the closest possible nuclear cooperation with the European Union,” though that “relationship could take a number of different forms and will be of course subject to negotiation.”<sup>466</sup> At the same time, Mr Davis has also confirmed that the government has been planning for a scenario where it is unable to agree on an exit deal and that it has “been planning for the contingency—all the various outcomes, all the possible outcomes of the negotiations.”<sup>467</sup>

### 9.3 The Road towards Brexatom

As highlighted above, the author considers that the Government’s decisions (i) to exit Euratom and (ii) to do so without having secured replacement arrangements are predominantly motivated by politics and not legally necessary. If the UK had chosen to retain its Euratom membership for the time being, even though proceeding with Brexit, it would undoubtedly have faced a certain degree of complexity, but primarily in relation to technical aspects. The key advantage of remaining within Euratom on a temporary basis would, of course, have been that it would not have been pressured to achieve any agreements within the prescribed two-year window alongside the separate Brexit negotiations. Instead, the government could have provided its withdrawal notice at a point in the future once all the relevant Brexit arrangements had been reached.

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465 See the evidence given before the Business, Energy and Industrial Strategy Committee: ‘Leaving the EU: Energy and climate negotiation priorities, Business, Energy and Industrial Strategy Committee’ (28 February 2017) <<http://www.parliamentlive.tv/Event/Index/54352a9b-ac49-44a8-8fab-25c533571ca6>>

466 Department for Exiting the European Union, ‘Opening statement on Second Reading of EU (Notification of Withdrawal) Bill’ (31 January 2017) <<https://www.gov.uk/government/news/opening-statement-on-second-reading-of-eu-notification-of-withdrawal-bill>>

467 William James, ‘Britain has a Brexit backup plan if talks fail, says David Davis’ (Reuters, 12 March 2017) <[www.reuters.com/article/uk-britain-eu-idUKKBN16J0JN](http://www.reuters.com/article/uk-britain-eu-idUKKBN16J0JN)>

That being said, whilst the Government theoretically has the option to withdraw its notice to exit Euratom (and re-submit it at a later stage after all Brexit-related terms have been agreed),

- There are currently no provisions in either of the treaties (relating to Euratom or the European Union) that would set out how a Member State may withdraw its notice of withdrawal from Euratom (or the EU); and
- The Government could run the argument that a party may withdraw an offer at any point before the relevant acceptance occurs. As such, there is, generally speaking, nothing that should stop the Government from withdrawing its notice (whilst still continuing with its departure from the EU).

Another factor that may support this approach is that neither the European Council<sup>468</sup> nor its president, Mr Donald Tusk,<sup>469</sup> have acknowledged the UK's decision to leave Euratom in their respective responses to the Article 50 Notice (or addressed the existence of Article 106a). However, such a decision would naturally be subject to political consideration by the British government, and, at the time of writing, this seems unlikely as the May administration remains committed to a joint Brexit/Brexit/atom exit from the EU.<sup>470</sup>

## 10 CLIMATE CHANGE

Even if the UK were to leave behind the EU Climate Change Package, it would still have to comply with the very stringent UK targets, as well as any commitments arising from international agreements such as the Paris Agreement and the UNFCCC.<sup>471</sup>

UK regulations of many energy topics, including carbon capture and storage, implement the relevant Directives of the Climate Change Package, and therefore, conscious decisions would need to be taken to move away from them through new regulations.

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468 European Council, 'Statement by the European Council (Art. 50) on the UK notification' (29 March 2017) <[www.consilium.europa.eu/en/press/press-releases/2017/03/29/euco-50-statement-uk-notification/](http://www.consilium.europa.eu/en/press/press-releases/2017/03/29/euco-50-statement-uk-notification/)>

469 European Council, 'Remarks by President Donald Tusk following the UK notification' (29 March 2017) <[www.consilium.europa.eu/en/press/press-releases/2017/03/29-tusk-remarks-uk-notification/](http://www.consilium.europa.eu/en/press/press-releases/2017/03/29-tusk-remarks-uk-notification/)>

470 See chapter 4 of this dissertation

471 The UK is a separate party to both the Paris Agreement and the UNFCCC and therefore will be bound by its obligations under these agreements post-Brexit.

## 10.1 The EU's Emission Trading System

Brexit may also have an impact on the future of the EU's carbon market and weaken the current structure of the EU ETS. The UK is the EU's second-largest emitter of greenhouse gases (after Germany),<sup>472</sup> with its utility companies being among the largest buyers of carbon allowances for the EU ETS.

On the day after the referendum, prices for EU ETS allowances fell by more than 10% to their lowest level since March 2016.<sup>473</sup> Brexit occurring before the end of Phase III (2013–20) may be highly disruptive to the smooth functioning of the system. The author notes, however, that there might be room for the UK to continue its participation in the EU ETS until 2020 or even thereafter as part of the possible transition period (subject, of course, to the outcome of the ongoing negotiations). At the time of writing (February 2018), the UK government is considering a two-year transition period post-2019; whilst this is not driven by EU ETS-related concerns but rather overall policy issues pertaining to the post-Brexit arrangements of the UK, such a transition period would help to keep the current commitment phase of the EU ETS intact.<sup>474</sup> Whilst this is not a policy that is fully accepted by the entire British Cabinet and would, obviously, also require EU consent, such a transitional period would, among other things, successfully address the issues arising from a UK exit from the EU ETS mid-compliance period.

Furthermore, the supply/demand dynamics of the EU ETS and the market reforms for the period after 2020 (when the current commitment period of the EU ETS expires) could be affected. The UK's departure has the potential of shifting the existing balance towards lower ambition for further reforms of the EU ETS ahead of Phase IV (2021–30),<sup>475</sup> thus weakening the decarbonisation element of the system.

As an alternative to a full exit, it is possible that the UK might continue to participate in the EU ETS without being an EU member and follow a similar path to

472 Eurostat, 'Total Greenhouse Gas Emissions by Countries (Including International Aviation and Indirect CO<sub>2</sub>, Excluding LULULCF), 1990-2015 (Million Tonnes of CO<sub>2</sub> Equivalents) Updated' <[http://ec.europa.eu/eurostat/statistics-cxplained/index.php/File:Total\\_greenhouse\\_gas\\_emissions\\_by\\_countries\\_\(including\\_international\\_aviation\\_and\\_indirect\\_co2\\_excluding\\_LULULCF\)\\_1990\\_-\\_2015\\_\(million\\_tonnes\\_of\\_co2\\_equivalents\)\\_updated.png](http://ec.europa.eu/eurostat/statistics-cxplained/index.php/File:Total_greenhouse_gas_emissions_by_countries_(including_international_aviation_and_indirect_co2_excluding_LULULCF)_1990_-_2015_(million_tonnes_of_co2_equivalents)_updated.png)>

473 See: <[http://markets.businessinsider.com/commodities/historical-prices/co2-emissionsrechte/EURO/1.3.2016\\_27.6.2016.>](http://markets.businessinsider.com/commodities/historical-prices/co2-emissionsrechte/EURO/1.3.2016_27.6.2016.>)

474 For more on the EU ETS and Brexit, see, for instance, George Smeeton, 'Crunch time on Brexit and climate policy' (3 January 2018) <<https://eciu.net/insights/2018/crunch-time-on-brexit-and-climate-policy>>

475 For more Information on Phase IV of the EU ETS, see European Commission, 'Revision for phase 4 (2021-2030)' <[https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/revision-phase-4-2021-2030\\_en](https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/revision-phase-4-2021-2030_en)>

Norway, whose companies participate in the scheme despite not being an EU member;<sup>476</sup> in this case, any impact on the EU ETS is likely to be of a short-term nature only.

## 10.2 International Climate Commitments

In the past, the UK has been a driving force in the EU's involvement in international climate negotiations.<sup>477</sup> This role emerged in part due to the UK's own high level of ambition in this area as well as its capacity to conduct international climate diplomacy.

With its departure, the EU's overall level of ambition may well decrease, which, in turn, could affect the upcoming review cycles for updated nationally determined contributions under the Paris Agreement in 2018 (for 2020), 2023 (for 2025) and 2028 (for 2030).<sup>478</sup> The author considers it likely that, whilst the UK and EU will remain important players on the international climate scene, Brexit will dampen the voices of both during future negotiations.

## 11 OUTLOOK

It is too early yet to estimate the shape of the future EU-UK relations post-Brexit as a whole or specifically in relation to the energy sector. Whilst there are economic (and perhaps common sense) indicators that would suggest that strong relations and indeed (inter-) connections will remain between the two jurisdictions post-March 2019, the Brexit negotiations are an intensely political process which may yet hold surprises for the sector.

As mentioned in the introduction, the Withdrawal Bill will transpose any part of the *acquis communautaire* that is not already part of UK legislation into UK law

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476 The EEA-EFTA states (Norway, Iceland and Liechtenstein) joined the EU ETS scheme in its Phase II; Directive 2008/101/EC amended the original EU ETS directive to include all flights to, from and within all EU countries and Norway, Iceland and Liechtenstein are covered under the EU ETS.

477 See, for instance, David Pratt, 'UK to ratify Paris agreement by the end of year pledges May' (current-news.co.uk, 21 September 2016) <[www.current-news.co.uk/uk-to-ratify-paris-agreement-by-the-end-of-year-pledges-may/](http://www.current-news.co.uk/uk-to-ratify-paris-agreement-by-the-end-of-year-pledges-may/)>; Department for Business, Energy & Industrial Strategy, 'UK ratifies the Paris Agreement' (18 November 2016) <[www.gov.uk/government/news/uk-ratifies-the-paris-agreement](http://www.gov.uk/government/news/uk-ratifies-the-paris-agreement)>

478 Catherine Banet, 'Chapter IV – The Paris Agreement to the UNFCCC: Underlying Dynamics and Expected Consequences for the Energy Sector' in Martha M Roggenkamp and Catherine Banet (eds), *European Energy Law Report XI* (Intersentia 2018).

on 29 March 2019. However, the implementation of the Withdrawal Bill is also likely to mark the end of automatic tracking of EU legislation in the UK.

For the energy sector, the Clean Energy Package (or Winter Package) proposed by the European Commission may be the first significant EU energy legislation that might not be implemented in the UK. At the time of writing, this is somewhat unclear as it will, in part, depend on the timing of the adoption of the Clean Energy Package (if adopted by the EU legislators prior to 29 March 2019, the UK would technically be obligated to transpose and implement it) as well as on practical issues that will arise from certain aspects of the Clean Energy Package such as, for instance, the governance of the Energy Union in relation to the GB and Northern Irish energy markets.

At present, anecdotal evidence suggests that there is no “Brexit effect” in relation to private investments in the UK energy sector. However, as the negotiations progress, there is a real risk of a private sector investment hiatus as Brexit approaches, particularly in respect of pre-financial close and pre-Final Investment Decision (FID) developments unless the negotiations send signals of stability and an outline of the framework for future EU-UK relations soon.

As it seems likely that further clarity regarding the energy sector will only emerge at some point in 2018, when negotiations have moved on from the so-called “first tier” issues, the next year will be both a year of uncertainty and, perhaps, more clarity as to future EU-UK relations post-Brexit.





## CHAPTER 3:

# BREXIT AND INTERCONNECTORS

As for the other Constituting Manuscripts, the first section of this chapter offers a contextualisation of the Constituting Manuscript within the Brexit Process. Specifically, chapter 3 provides a prospective view of the potential consequences of Brexit for GB – EU interconnectors at a point in time in which the Brexit negotiations were ongoing. Moreover, the contextualisation in section 1 is completed by a literature review concerning the main aspects within the Constituting Manuscript in section 2. This overarching literature completes the literature review provided in the Constituting Manuscript, which, due to word limitations accompanying its publication, needed to be focused. The Constituting Manuscript, as previously published, starts in section 3 of this chapter.

### 1 OVERVIEW

Whereas chapter 2 provided an overview of how different aspects of the energy sector might be affected by Brexit, chapter 3 constitutes a legal analysis of how Brexit might impact the United Kingdom's current and future electricity interconnectors.

This chapter was originally written as a contribution to OGE<sup>479</sup> in response to concerns raised by a number of debates with interconnector companies and following a presentation on the topic I gave at Chatham House.

Electricity and gas interconnectors are the “hardware” of EU energy market integration as they physically enable cross-border energy trading and, therewith, the integration of the IEM.

EU law defines electricity interconnectors specifically as “a transmission line which crosses or spans a border between Member States and which connects the national transmission systems of the Member States,”<sup>480</sup> and gas interconnectors as “a transmission line which crosses or spans a border between Member States for the purpose of connecting the national transmission system of those Member States or

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479 Silke Goldberg, ‘Brexit & Interconnectors’ (2017) OGE<sup>2</sup> <[www.ogel.org/article.asp?key=3680](http://www.ogel.org/article.asp?key=3680)>.

480 Article 2(1) 2019 Electricity Regulation

a transmission line between a Member State and a third country up to the territory of the Member States or the territorial sea of that Member State.”<sup>481</sup>

The article in chapter 3 discusses some of the policy choices as to the scope of future EU-UK agreements referenced in chapter 2, because the overall governance of the relationship would necessarily have an impact on interconnectors and their governance. This was of particular importance as the governance of the EU-UK relationship might have an immediate effect on the status of existing and future interconnectors between the EU and the UK.

The article goes on to discuss the consequences of UK-EU electricity cables and gas pipelines no longer qualifying as interconnectors for the purposes of EU legislation by reference to governance and funding issues, including:

- The extent to which the UK will continue to adopt EU-wide electricity regulation or to develop its own set of policies with the risk of a growing policy gap over time;
- The role of interconnector agreements and intergovernmental agreements (IGA) in mitigating the risk posed by Brexit;
- Whether UK interconnectors can obtain and maintain the status of an EU Project of Common Interest (PCI);
- Whether or not tariffs will be applied to the trading of electricity and gas between the UK and the EU;
- The continued membership of UK transmission system operators (TSOs) in the European Network of Transmission Operators for electricity and gas, respectively;
- Access to European funding sources such as the Connecting Europe Facility (CEF) and loans by the European Investment Bank (EIB) for EU-UK interconnector projects;
- Electricity and Gas supply security for GB; and
- The future status of the Irish electricity market and Irish supply security.

Whilst the article discusses both gas and electricity interconnectors, the emphasis is on electricity interconnectors. This is due to the fact that the EU electricity market is more closely integrated, in particular since the introduction of market coupling<sup>482</sup> in 2014.

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481 Article 2 (17) Third Gas Directive as amended by Directive (EU) 2019/692 of the European Parliament and of the Council of 17 April 2019 amending Directive 2009/73/EC concerning common rules for the internal market in natural gas.

482 Market Coupling refers to the EU price coupling in the IEM which simultaneously determines volumes and prices in all participating areas, based on the marginal pricing principle. For a

The relevance of this chapter lies in the fact that interconnectors are, by their very nature, the most physical and concrete tie between the UK and EU energy markets and facilitate European energy integration by enabling energy to be traded throughout the EU.

This chapter concludes that the Brexit process is an unprecedented situation and likely to create prolonged uncertainty as to the regulatory regime that will apply to the operation of interconnectors and, more generally, access to the IEM for UK companies. The chapter suggests that this uncertainty is likely to be the source of some discomfort for investors, sponsors, and European regulators alike, and it may lead to delays in projects unless pragmatic long-term solutions are found. It concludes on a practical note by recommending that as parties to interconnector project agreements are unlikely to be able to provide for all future scenarios in their relevant documentation, they may wish to consider including a robust change in law clause with clearly defined triggers in order to give themselves the flexibility to cater of any Brexit related developments in those agreements.

## 2 KEY ISSUES AND LITERATURE

By their very nature, interconnectors are also the most physical and concrete tie between the UK and EU energy markets; as such, their status played an important role in the public debate on Brexit and energy.<sup>483</sup>

By way of an introduction to chapter 3 of this dissertation, this section briefly touches on key issues and literature pertaining to:

- Definition of interconnectors in EU legislation (subsection (A));
- Interconnectors in the IEM (subsection (B));
- Legal framework of interconnectors in EU (subsection (C));
- Role of interconnectors in UK (subsection(D)); and
- Interconnectors in the context of Brexit (subsection (E))

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detailed explanation and background to price coupling, please see Le Hong Lam, Valentin Ilea and Cristian Bovo, 'European day-ahead electricity market coupling: Discussion, modelling, and case study' (2018) 155 *Electric Power Systems Research* 80.)

483 See, for instance: 'Staying Connected: Key Elements for UK-EU27 Energy Cooperation after Brexit' (Chatham House, 10 May 2017) <[www.chathamhouse.org/sites/default/files/publications/research/20170510-brexite-launch%20%282%29.pdf](http://www.chathamhouse.org/sites/default/files/publications/research/20170510-brexite-launch%20%282%29.pdf)>, slides 6 ff.

## 2.1 Definition of interconnectors in EU legislation

As far as interconnectors featured in the Brexit debate and negotiations, the debate focused on the future status of existing and planned UK-EU interconnectors and likely trading arrangements,<sup>484</sup> as well as the anticipated future status of UK-EU electricity cables, as these might not qualify as “interconnectors” for the purposes of EU legislation.

The then (i.e., at the time of writing the article) applicable Third Electricity Directive defined interconnectors as “equipment used to link electricity systems,” which would bring UK interconnectors within the scope of this definition.<sup>485</sup> However, Regulation 714/2009 (the “2009 Electricity Regulation”) amended that definition to restrict interconnectors to meaning a “transmission line which crosses or spans a border between Member States and which connects the national transmission systems of the Member States,”<sup>486</sup> which would exclude EU-UK interconnectors once the UK is no longer a Member State.

Since the publication of the Constituting Manuscript, the Third Electricity Directive and 2009 Electricity Regulation have been replaced by the 2019 Electricity Directive and the 2019 Electricity Regulation, which maintain the same legal position as far as the definition of interconnectors is concerned.

This position in the electricity sector is mirrored in the gas sector where the Third Gas Directive defined interconnectors as “a transmission line which crosses or spans a border between Member States for the sole purpose of connecting the national transmission systems of those Member States.”<sup>487</sup>

Prima facie, post-Brexit, UK-EU interconnectors, therefore, no longer qualify as interconnectors for the purposes of EU legislation and will need to rely on the TCA for a replacement regime.

Whilst Brexit concerns the governance of both EU-UK gas and electricity interconnectors, in Chapter 3, as well as this overview and key issues section, the focus is on electricity interconnectors. This is reflective in part of the Brexit debate and in part of the greater integration of the EU electricity market compared to the gas market.<sup>488</sup>

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484 On the likely post-Brexit electricity trading arrangements between the UK and the EU, see, for instance, Pollitt, M.G. and Chyong, K., 2017. Brexit and its implications for British and EU Energy and Climate Policy. *Centre on Regulation in Europe (CERRE): Brussels, Belgium*.

485 Third Electricity Directive, Article 2(13)

486 2009 Electricity Regulation, article 2 (1).

487 Third Gas Directive, Article 2 (17)

488 A recent assessment on gas PCIs, including gas interconnectors in the EU can be found here: Selei Adrienn and Borbála Takácsné Tóth ‘A modelling-based assessment of EU supported natural gas projects of common interest’ (2022) Energy Policy 166

## 2.2 Interconnectors in the IEM

Currently, the European power grid consists of five main synchronous networks: the continental synchronous grid, the Nordic synchronous grid, the Baltic synchronous grid, the British grid, and the Irish grid. The five synchronous grids are interconnected with one another through direct current (DC) cable links and cover 34 countries.<sup>489</sup>

With the increasing change in the makeup of the EU's electricity mix, moving away from baseload electricity generation capacities, such as coal and gas power plants, to variable energy sources increases the complexity of grid operations and challenges operators to find solutions for maintaining stability while dealing with increased intermittency.<sup>490</sup>

As Pean et al. have pointed out, interconnectors have a key role in the integration of intermittent generation and the management of increased balancing demands.<sup>491</sup> Child et al.<sup>492</sup> have analysed interconnections as part of a portfolio offering technical flexibility and balancing solutions for a generation profile consisting of 100% renewable energy; whereas Malvaldi et al.<sup>493</sup> have considered the positive economic impact of an “ideally interconnected” EU in relation to the development of wind power projects in the EU. Moreover, Imdadullah et al. have analysed the impact of high-voltage interconnections to support decarbonisation trajectories from a technical perspective and emphasised the role of interconnectors in achieving decarbonisation objectives.<sup>494</sup>

489 Zengxun Liu, Yan Zhang, Ying Wang, Nan Wei, Chenghong Gu, ‘Development of the interconnected power grid in Europe and suggestions for the energy internet in China’ (2020) 3(2) *Global Energy Interconnection* <<https://www.sciencedirect.com/science/article/pii/S2096511720300451>>

490 Eurelectric, ‘Why electricity networks are critical for Europe’s climate neutrality’ (02 December 2022) <<https://www.eurelectric.org/in-detail/electricity-networks/>>

491 Pean Emmanuel, Marouf Pirouti, and Meysam Qadrdan, ‘Role of the GB-France electricity interconnectors in integration of variable renewable generation’ (2016) 99 *Renewable energy*. Generally, the available literature on interconnectors focusses, with a few exceptions which concentrate on legal issues, on policy or economic aspects of the same. As this dissertation focusses on legal rather than policy or economic aspects of Brexit, policy or economic literature is cited for context only.

492 Child Michael, Claudia Kemfert, Dmitrii Bogdanov, and Christian Breyer, ‘Flexible electricity generation, grid exchange and storage for the transition to a 100% renewable energy system in Europe’ (2019) 139 *Renewable energy*

493 Malvaldi, A., Weiss, S., Infield, D., Browell, J., Leahy, P. and Foley, A.M., ‘A spatial and temporal correlation analysis of aggregate wind power in an ideally interconnected Europe. *Wind Energy*’ (2017) 20(8) <<https://onlinelibrary.wiley.com/journal/10991824>>

494 Imdadullah Alamri B, Hossain MA, Asghar MSJ, ‘Electric Power Network Interconnection: A

The EU is actively encouraging more interconnectors: in 2002, the European Council set a 10% electricity interconnection target,<sup>495</sup> whose delivery date was eventually prolonged until 2020.<sup>496</sup> The October 2014 European Council called for interconnection of at least 10% of installed electricity production in the Member States by 2020, endorsed the 15% target by 2030, and underlined that they would be both attained via implementation of Projects of Common Interest in energy infrastructure.<sup>497</sup>

Taking into account these interconnection targets and considering future interconnector needs, the 2016 Ten-Year Network Development Plan of ENTSO-E<sup>498</sup> noted: “[there is a] need for up to €150 billion investment in electricity infrastructure only, of which 70–80 billion for mid-term and long-term projects (committed in national plans and to be commissioned by 2030)” and that “[i]n its Progress Monitoring Report, ACER estimates the investment costs for electricity transmission Projects of Common Interest (‘PCIs’)<sup>499</sup> reported by project promoters to reach €49.3 billion.”<sup>500</sup> In 2020, ENTSO-E noted that in addition to the “35 GW of new cross-

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Review on Current Status, Future Prospects and Research Direction’ (2021) 10(17) *Electronics* <<https://doi.org/10.3390/electronics10172179>>

495 European Council, Conclusions on Energy (February 2011): <[www.consilium.europa.eu/media/27067/119141.pdf](http://www.consilium.europa.eu/media/27067/119141.pdf)>

496 On the 10% interconnection target, in particular from a supply security and climate change perspective; see Mezósi András, Zsuzsanna Pató and László Szabó, ‘The assessment of the 10% interconnection target: security of supply, market integration and CO<sub>2</sub> impacts’ (2015).

497 The Conclusions of the October 2014 Council meeting are available here; <[https://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/ec/145356.pdf](https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145356.pdf)> (accessed 9 April 2023). See also recital (6), article 2(11) and 4 (d) of Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (Text with EEA relevance.) PE/55/2018/REV/1 OJ L 328, 21.12.2018, p. 1–77

On interconnection targets, see also Yang Yuting, ‘Electricity interconnection with intermittent renewables’ (2022) 113 *Journal of Environmental Economics and Management and European Commission, Directorate-General for Energy, Contribution of the electricity sector to smart sector integration: fourth report of the European Commission Expert Group on electricity interconnection targets*, Publications Office, 2020, <<https://data.europa.eu/doi/10.2833/96862>>

498 For details on ENTSO-E’s role in network planning and the TYNDP, see section 1.3.2 in this chapter.

499 On PCIs, see section 7.1 of chapter 6 in this dissertation. On the PCI process and an evaluation of the first set of PCIs, see: Meeus, L. and Keyaerts, N., 2015. *First series of cross-border cost allocation decisions for projects of common interest: main lessons learned*.

500 ENTSO-E, ‘A push for Projects of Common Interest’ (*ENTSO-E*) <<https://tyndp.entsoe.eu/2016/>>

border reinforcements expected to be built by 2025 in addition to the 2020 grid, 50 additional GW of cross-border reinforcements would be cost-efficient to support the electric system in its path towards decarbonisation.”<sup>501</sup> The efficient management of available cross-border capacity is of particular importance in this context, which Rumpf et al. have considered in detail.<sup>502</sup>

A study conducted by ENTSO-E in July 2022 identified yet more interconnection capacity requirements stating that “[n]eeds [for more interconnection] exist everywhere in Europe, with a total of 64 GW of needs on close to 60 borders in 2030.”<sup>503</sup>

These capacity increases represent about €2.4 billion of investment per year and would deliver a yearly increase in socio-economic welfare of €4.8 billion. By 2040, 24 GW of additional cross-border capacity increases on top of the increases identified for 2030, 41 GW of storage and 3 GW of CO<sub>2</sub>-free peaking units would be needed to support Europe’s move towards a carbon-free power system and ensure continuous and cost-effective access to electricity.<sup>504</sup>

insight-reports/common-projects/#:~:text=ENTSO%2DE's%20TYNDP%202016%20identifies,to%20be%20commissioned%20by%202030>

501 ENTSO-E, ‘Completing the map – Power system needs in 2030 and 2040’ (ENTSO-E, November 2020) <[https://eepublicdownloads.azureedge.net/tyndp-documents/IoSN2020/200810\\_IoSN-2020mainreport\\_beforeconsultation.pdf](https://eepublicdownloads.azureedge.net/tyndp-documents/IoSN2020/200810_IoSN-2020mainreport_beforeconsultation.pdf)>.

502 Rumpf Julius, and Henrik Bjernebye, ‘Just how much is enough? EU Regulation of capacity and reliability margins on electricity interconnectors. 37(1) Journal of Energy & Natural Resources Law. pp.67-91. For an assessment of the status quo of EU interconnector development, see also: Brunekreeft Gert and Roland Meyer, ‘Cross-border electricity interconnectors in the EU: The Status Quo. The European Dimension of Germany’s Energy Transition: Opportunities and Conflicts’ (2019)

503 For a further analysis of interconnector needs, see e.g. Beato Paulina and Nikolaos Vasilakos, ‘Identifying and promoting missing EU power interconnectors’ 7(4) European Energy & Climate Journal. Ritter et al have analysed the effect of delayed or lacking investment in electricity interconnectors in the EU: Ritter David, Roland Meyer, Matthias Koch, Markus Haller, Dierk Bauknecht and Christoph Heinemann, ‘Effects of a delayed expansion of interconnector capacities in a high RES-E European electricity system’ (2019) 12 (16) Energies

504 ENTSO-E, ‘System Needs Study: Opportunities for a more efficient European Power System in 2030 and 2040’ (Brussels July 2022) <<https://eepublicdownloads.blob.core.windows.net/public-cdn-container/tyndp-documents/TYNDP2022/public/system-needs-report.pdf>>

Often, interconnectors are planned, sponsored, developed and operated by the established regional and national transmission system operators. However, this does not apply to call interconnectors, and the UK in particular has a long-standing history of non-incumbent TSOs developing interconnectors. See, e.g. Rubino Alessandro and Michael Cuomo, ‘A regulatory assessment of the Electricity Merchant Transmission Investment in EU’ (2015) Energy Policy 85; and Goldberg Silke, and Chris Davis, *The Baltic Cable Case: A New Level Playing Field for Single Interconnector Transmission System Operators?* (Eur. Competition & Reg. L. Rev. 4 2020); Giesbertz Paul, Petra Kistner and Martin Steger, *The Legal and Economic Challenges for Single Interconnector Companies in the European Electricity Market–The Baltic Cable Case* (SSRN 3439447 2019).



This means that demand for interconnectors is growing. Given the offshore opportunities in the region of the North Sea Energy Cooperation with an EU-set target of at least 260 GW of installed offshore wind capacity by 2050<sup>505</sup> and the ambition of 50 GW of offshore wind capacity by 2030 set out in the British Energy Security Strategy,<sup>506</sup> by mid-century more than 310 GW of offshore wind capacity could be installed in the North Sea. The successful delivery of this volume of offshore wind will require significant investment, including in interconnectors and offshore cross-border transmission links (multi-purpose interconnectors, “MPIs”). This volume of investment will require a stable and legally certain regulatory regime to deliver both the decarbonisation of electricity generation as well as supply security.

### 2.3 Legal framework for interconnectors in the EU

Primary and secondary EU legislation provides a detailed and comprehensive framework for the development and operation of electricity and gas interconnectors.<sup>507</sup> Vrana<sup>508</sup> has considered the role of interconnectors in the IEM and the regulatory and competition regime applicable to interconnectors from a legal perspective. Gramlich et al.<sup>509</sup> have, in an early post-Lisbon analysis, considered, in particular, electricity interconnectors as part of European supply security planning.

All authors emphasise the importance of a clear legislative and regulatory regime for the development of interconnectors, which has been developed by EU legislators over the past 20 years, as will be further explained in subsections 1 (in relation to

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505 As the UK was not a member of the North Seas Energy Cooperation at the time this target was adopted, the figure of 260 GW excludes the UK target. Adnan Durakovic, ‘Nine North Seas Countries Set 260 GW by 2050 Offshore Wind Target’ (offshorewind.biz, 12 September 2022) <[www.offshorewind.biz/2022/09/12/nine-north-seas-countries-set-260-gw-by-2050-offshore-wind-target/](http://www.offshorewind.biz/2022/09/12/nine-north-seas-countries-set-260-gw-by-2050-offshore-wind-target/)>

506 HM Government, ‘British Energy Security Strategy – Secure, clean and affordable British energy for the long term’ (April 2022) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1069969/british-energy-security-strategy-web-accessible.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1069969/british-energy-security-strategy-web-accessible.pdf)>

507 A detailed analysis of the relevant primary and secondary legislation in relation to interconnectors is beyond the scope of this section and this dissertation. The relevant legislation will only be discussed here to provide the necessary background to the issues discussed in the Constituting Manuscripts and chapter 3 in particular.

508 Vrana Nina, *Interkonnectoren im Europäischen Binnenmarkt* (Nomos 2012) There is no newer monograph on the current legal regime applicable to interconnectors in the EU available for the time being.

509 Gramlich, Ludwig; Manger-Nestler, Cornelia: “Europäisierte Regulierungsstrukturen und -netzwerke: Basis einer künftigen Infrastrukturvorsorge” Nomos 2011, T3 – Schriftenreihe des Arbeitskreises Europäische Integration e.V. <https://doi.org/10.5771/9783845234267>



primary EU legislation) and subsection 2 (in relation to secondary EU legislation) below.

### 2.3.1 Primary legislation

Interconnectors have featured in EU primary legislation since the introduction of the Treaty of Maastricht, as for the first time in EU legislation, Article G 3 bestows on the European institutions the competence to take “measures in the spheres of energy, civil protection and tourism.”<sup>510</sup>

Whilst the Treaty of Maastricht is not more specific as to the scope of this new competence, and this provision does not seem to recognise the strategic importance of energy (compared to tourism), it is nevertheless noteworthy from energy and, in particular, an interconnector perspective, as it grants the EU the power to legislate in relation to trans-European networks (TEN).<sup>511</sup>

TENs are of particular importance to the completion of the internal market in the energy sector and at the centre of EU policies in relation to energy interconnectors and projects of common interest. Arguably, TENs constitute the backbone of EU energy and infrastructure integration.<sup>512</sup>

It could be said that the Treaty of Maastricht was the first step out of “three decades of hibernation”<sup>513</sup> for European energy policy and law, as shortly after its entry into force, work on the trans-European networks began and the Group of Personal Representatives of the Heads of State or Government and presented a report on the future of trans-European networks including energy networks which called upon the European Council to endorse a list of projects and their priority statement and to “reiterate the importance of the rapid creation of an Internal Energy Market in the light of its synergy effect with the physical energy networks.”<sup>514</sup>

The TFEU continues the emphasis on TENS by providing, in Article 170 (1), that in order “[t]o help achieve the objectives referred to in Articles 26 and 174 and to

510 CEC (Commission of the European Communities), ‘Treaty on European Union Signed at Maastricht on 7 February’ (1992) <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:1992:191:FULL&from=EN>>

511 Title XII, article 129c, *ibid*.

512 For an early, cross-sectoral detailed analysis on TENS and the Maastricht Treaty, see e.g. Johnson, Debra and Turner, Colin: ‘Strategy and Policy for Trans-European Networks’, Palgrave 2007. For an historical perspective on TENS see e.g. Schipper Frank and Erik van der Vleuten, ‘Trans-European network development and governance in historical perspective’ (2008) 10(3) *Network Industries Quarterly*

513 Kim Talus, *EU Energy Law and Policy: A Critical Account*, page 15

514 Group of the Personal Representatives of the Heads of State of Government, ‘Transeuropean Network: Report’ (Luxemburg 1995) page 15 <<http://aei.pitt.edu/35867/1/Trans.European.Networks.report.pdf>>

enable citizens of the Union, economic operators and regional and local communities to derive full benefit from the setting-up of an area without internal frontiers, the Union shall contribute to the establishment and development of trans-European networks in the areas of transport, telecommunications and energy infrastructures.”<sup>515</sup> The last sentence makes it clear that Article 170 is applicable to network infrastructure for transport (e.g., roads or train tracks), telecommunications (e.g., fibre optics cables) as well as energy (e.g., electricity interconnectors). The contribution of the EU is here put into the context of market participants as well as communities benefitting from the internal market. At the same time, the use of “contribute” clearly points towards a shared competence between the EU and its Member States.

The two cross-references in Article 170 (1) are significant and provide further context for the EU’s mandate to promote interconnections and their function for the success of the EU itself:

- Article 26 (1) confers a mandate to “adopt measures with the aim of establishing or ensuring the functioning of the internal market, in accordance with the relevant provisions of the Treaties” into the European Union. Article 26 (2) defines the internal market as “an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured in accordance with the provisions of the Treaties.”
- The cross-reference to Article 26 in Article 170, therefore, places the development of Transeuropean Networks firmly into the context of the internal market. In doing so, Article 26 makes clear that Transeuropean Networks are critically necessary to the completion of the internal market.

The critical need for Transeuropean Networks for the success of the EU overall is further emphasised by the explicit reference to Article 174 in the first line of Article 170. Article 174 (1) provides that “[i]n order to promote its overall harmonious development, the Union shall develop and pursue its actions leading to the strengthening of its economic, social and territorial cohesion,” whereas Article 174(2) mandates that the EU is to aim to reduce “disparities between the levels of development of the various regions and the backwardness of the least favoured regions,” in particular,

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515 On Article 170 TFEU generally, see e.g. Hestermeyer H.P, Art. 170 TFEU. In *The Law of the European Union* (2012); LexisNexis. On the role of Art. 170 TFEU in the context of Foreign Direct Investment screening; Reins Leonie, “The European Union’s framework for FDI screening: Towards an ever more growing competence over energy policy?” (2019) *Energy Policy* 128. For a discussion on Art 170 – 172 in the context of the current EU interconnector regime and its application to single asset transmission system operators, see e.g. Huhta, K., 2023. Case T-295/20 Aquind: Clarifying the Division of Powers in the EU Energy Sector [pre-publication]. *European Energy and Environmental Law Review*, 32(3) [pre-publication].

regions disadvantaged by their geographic or demographic position (e.g. islands, or regions with very low population density).<sup>516</sup>

Article 171 TFEU mandates the EU to “establish a series of guidelines covering the objectives, priorities and broad lines of measures envisaged in the sphere of trans-European networks; these guidelines shall identify projects of common interest, [...] and implement any measures that may prove necessary to ensure the interoperability of the networks.” It also references “support [for] projects of common interest supported by Member States, which are identified in the framework of the guidelines.” Article 171 further instructs the Member States to liaise with the Commission and “coordinate among themselves the policies pursued at national level which may have a significant impact on the achievement of the objectives referred to in Article 170.”

Whilst Article 171 references the possibility of interconnectors between the EU and third countries,<sup>517</sup> no further details as to the legislative or regulatory framework are provided.

Article 172 TFEU regulates the procedure for any guidelines and other measures referred to in Article 171. It also makes clear that interconnectors and projects of common interest are effectively a shared policy space between the EU and its Member States.<sup>518</sup> Müller has emphasised that Treaty derived competences of the EU have two dimensions, i.e., a horizontal one which concerns the relationship between the relevant competence and the other competencies of the EU, and a vertical one which concerns the relationship between the EU’s competencies and the Member States competencies.<sup>519</sup>

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516 On the critical role of electricity interconnectors generally in relation to the functioning of the IEM, see e.g. Jacottet Alex, ‘Cross-border electricity interconnections for a well functioning EU Internal Electricity Market’ (2012) <<https://ora.ox.ac.uk/objects/uuid:1f610d1c-9edc-49c1-a437-6179ee932ea8>>

517 For examples of EU- third country energy cooperation and interconnectors, see e.g. Jarou, R., 2015. *Les Partenariats Energétiques entre l’Union Européenne et son Voisinage Méditerranéen* and Gaudino, U., “Nuovi progetti per la sicurezza energetica nel Mediterraneo: il corridoio ELMED tra Italia e Tunisia”, November 2018, available here: <https://isagitalia.org/wp-content/uploads/2019/02/2018-11-113.ELMED-Tunisia-Italia.pdf>>

518 On the shared competency of the EU and Member States in relation to PCIs, see also Aquind Case T-295/20, *Aquind Ltd and Others v European Commission*, <<https://curia.europa.eu/juris/document/document.jsf?jsessionid=9BF15A63454983E09E97DF198F97C33E?text=&docid=270308&pageIndex=0&doclang=en&mode=req&dir=&occ=first&part=1&cid=2797519>>

519 See also: Müller, Hannah Katharina, *Legal Bases for Offshore Grid Development Under International and EU Law: Why National Regimes Remain the Determining Factor* (October 1, 2013). (2013) *European Law Review* 38(5) 618-637, Available at SSRN: <<https://ssrn.com/abstract=2561388>>

The perhaps clearest treaty mandate for the EU to develop further energy interconnectors comes from Article 194 TFEU,<sup>520</sup> which builds on the provisions of Article 170ff TFEU and provides that “[...] *Union policy on energy shall aim, in a spirit of solidarity between Member States, to [...] (d) promote the interconnection of energy networks.*” Leal-Arcas has pointed out that this competence is, first and foremost, an internal competence—and therefore not in relation to energy policy in as far as it relates to third-country relations.<sup>521</sup>

### 2.3.2 Secondary legislation

#### A) Electricity Directive and Electricity Regulation

In addition to the aforementioned primary legislation, EU energy law contains a detailed regime for the development and operation of interconnectors, a detailed description of which would be beyond the scope of this dissertation. In general, the legal and regulatory regime briefly described in section 6 of this chapter applies to interconnectors and their operators.

In addition, the 2019 Electricity Directive contains specific provisions for the development of interconnectors by stating that “Member States shall ensure that their national law does not unduly hamper crossborder trade in electricity, consumer participation, including through demand response, investments into, in particular, variable and flexible energy generation, energy storage, or the deployment of electromobility or new interconnectors between Member States, and shall ensure that electricity prices reflect actual demand and supply.” Article 3(2) of the 2019 Electricity Regulation contains an explicit reference to the electricity interconnection targets set out in point (1) of Article 4(d) of Regulation (EU) 2018/1999.

The 2019 Electricity Regulation contains detailed provisions pertaining to the capacity allocation and congestion management in relation to interconnectors,<sup>522</sup> congestion income,<sup>523</sup> the role of interconnectors in cross-border participation in

520 Strobel in particular has emphasised the primary law nature of the EU’s mandate to build out its interconnector capacity arising out of Article 194: Strobel, Tobias. “Der Ausbau grenzüberschreitender Verbindungsleitungen im Elektrizitätsbereich—Eine insbesondere regulierungsrechtliche Betrachtung.” *Deutsches Verwaltungsblatt* (2016) 131(9).

521 See also: Rafael Leal-Arcas, “The European Energy Union: The Quest for secure, affordable and sustainable energy”, Claey’s & Casteels (2016) page 24. On the governance aspects of Article 194 TFEU, see also Knodt, Michèle and Jörg Kemmerzell eds, *Handbook of Energy Governance in Europe* (Springer Nature 2022); Talus Kim and Pami Aalto, *Competences in EU energy policy*. In *Research handbook on EU energy law and policy* (Edward Elgar Publishing 2017)

522 Article 16

523 Article 19

capacity mechanisms,<sup>524</sup> exemptions from certain provisions of the 2019 Electricity Directive together with a procedure for such exemptions,<sup>525</sup> as well as the tasks of regional coordination centres.<sup>526</sup>

## B) TEN-E Regulation

Given its importance to interconnectors in terms of both regulatory status as well as funding opportunities, it is appropriate to briefly discuss the role of the regulation pertaining to trans-European networks. At the time of writing the Constituting Manuscript in Chapter 3, Regulation EU 347/2013<sup>527</sup> applied in relation to trans-European energy networks and contained the regime for Projects of Common Interests (PCIs) for trans-European electricity and gas networks.

Since the publication of the Constituting Manuscript in chapter 3, Regulation (EU) 2022/869 (“New TEN-E Regulation”) has replaced Regulation 347/2013. The New TEN-Regulation maintains the concept of PCIs, and projects in this category may benefit from EU grants in the development phase. They are also eligible for certain regulatory treatment pursuant to Article 16 of the New TEN- E Regulation (see below). The status also confers the right to streamlined administrative processes as well as certain political kudos and signals support from the EU Member States, which would be connected by the relevant interconnector project.<sup>528</sup>

Once the PCI status is bestowed on a project, the relevant project is eligible for funding from Connecting Europe Facility for energy,<sup>529</sup> a funding instrument with a total budget of €5.84 billion for the 2021-2027 period.<sup>530</sup> The Commission establishes the list of PCIs via a delegated act, which enters into force only if Parliament or the Council express no objection within a period of two months from its notification.<sup>531</sup>

524 Article 26

525 Article 63

526 Annex 1 of the 2019 Electricity Regulation

527 Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009 Text with EEA relevance (the “TEN-E Regulation”). OJ L 115, 25.4.2013, p. 39–75

528 For a general overview of PCIs and their progress, see ACER Consolidated report on the progress of electricity and gas Projects of Common Interest, June 2022, available here: <[https://www.acer.europa.eu/sites/default/files/documents/Publications/2022\\_ACER-Report-on-progress-of-PCIs-old.pdf](https://www.acer.europa.eu/sites/default/files/documents/Publications/2022_ACER-Report-on-progress-of-PCIs-old.pdf)>

529 CEF Energy, (European Commission) <[https://cinea.ec.europa.eu/programmes/connecting-europe-facility/energy-infrastructure-connecting-europe-facility-o\\_en](https://cinea.ec.europa.eu/programmes/connecting-europe-facility/energy-infrastructure-connecting-europe-facility-o_en)>

530 Ibid.

531 See also Aquind Case T-295/20, Aquind Ltd and Others v European Commission, <<https://curia.europa.eu/juris/document/document.jsf?jsessionid=9BF15A63454983E09E97DF198F97C33E?tex>>

Whilst projects between a Member State and the UK (as a country that is not a Member State or a European Economic Area country) may still meet the criteria to be a PCI if it “is located on the territory of one Member State, either inland or offshore, including islands, and has a significant cross-border impact.”<sup>532</sup>

For electricity transmission projects, a significant cross-border impact means that the project increases the grid transfer capacity between that Member State and the other Member States by at least 500 MW.<sup>533</sup> Alternatively, a project may meet the criteria by “decreas[ing] energy isolation of non-interconnected systems in one or more Member States and increas[ing] the cross- border grid transfer capacity at the border between two Member States by at least 200 MW.”<sup>534</sup>

While PCIs may exist between Member States and non-Member States, it is not clear how certain provisions of the New TEN-E Regulation would be applied in relation to such projects. For example, in accordance with Article 16 of the New TEN-E Regulation, a PCI may submit an investment and cross-border cost allocation request. However, in the case of an interconnector PCI between a Member State and a non-Member State, it is not clear how such an application would be decided with the NRA of the non-Member State (who would not be bound by the TEN-E Regulation).

It is worth noting that the New TEN-E Regulation also introduces a new category for projects of “mutual” interest (PMI),<sup>535</sup> which may exist on the territory of at least one Member State and one-third country (such as the UK) if they (i) increase the grid transfer capacity with other Member States and (ii) contribute significantly to sustainability and either market integration or security of supply. In addition, the project, to be considered to provide a significant cross-border impact the project should bring significant benefits, either directly or indirectly (via interconnection with a third country).

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t=&docid=270308&pageIndex=0&doclang=en&mode=req&dir=&occ=first&part=1&cid=2797519> op.cit.

532 Regulation (EU) 2022/869, Art 4(1)(c)(ii)

533 Ibid, Annex IV at para 1(a)

534 Ibid.

535 As the PMI status is relatively new in EU legislation, I have not been able to identify any further literature on the same. However, the concept has been established for longer in relation to the Energy Community (on the Energy Community, see e.g. Renner Stephan, *The Energy Community of Southeast Europe: A neo-functionalist project of regional integration* (European Integration online Papers (EIoP) 2009) and Petrov Roman, *Energy Community as a promoter of the European Union’s “energy acquis” to its Neighbourhood:[preprint]* (2012); Takácsné et al have provided an assessment of some such PMIs in: Takácsné Tóth, Borbála, Péter Kaderják, Péter Kotek, László Szabó, András Mezósi, Daniel Grote, Martin Paletar, *Final report on Assessment of the candidate Projects of Energy Community Interest (PECI) and Projects for Mutual Interest (PMI)* (2016)

### C) Network Codes

In addition to the legal regime briefly described above, both electricity and gas interconnectors are subject to EU network codes. These network codes are legally binding European Commission Implementing Regulations. They govern all cross-border electricity market transactions and system operations alongside the Regulation on conditions for accessing the network for cross-border electricity exchanges ((EC)714/2009).<sup>536</sup> Equivalent network codes are in place in relation to gas interconnectors on the basis of Regulation (EC) No 715/2009.<sup>537</sup>

In summary, it can be said that there is a detailed and comprehensive legal and regulatory regime in place for electricity and gas interconnectors in the EU.

## 2.4 Role of Interconnectors in the UK

Interconnectors play an important role in the UK energy mix, and they also provide key routes to the market for both electricity and gas.

### 2.4.1 Gas interconnectors

The UK currently has three gas interconnectors with the EU.<sup>538</sup>

Interconnector UK (IUK), owned by the Belgian gas TSO Fluxys, links the UK to Belgium and has the capability for physical flow in both directions, linking the NBP and Zeebrugge hubs. IUK was commissioned in 1998.<sup>539</sup> IUK provides 20 bcm/yr of UK export capacity and 25.5 bcm/year of UK import capacity.<sup>540</sup>

The second gas interconnector links Bacton in the UK with Balgzand in the Netherlands (the Bacton- Balgzand or “BBL” gas interconnector). BBL was commis-

<sup>536</sup> Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 (Text with EEA relevance). For an analysis of the EU electricity network codes, see e.g. Jevnaker, T., 2012. *Regulate, or else: The EU procedure for harmonizing cross-border network codes for electricity* (Master’s thesis at the university of Oslo), available here: <<https://www.duo.uio.no/handle/10852/13470>> or Schittekatte, T., Reif, V. and Meeus, L., 2020. *The EU electricity network codes (2020ed.)*.

<sup>537</sup> Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Reg (EC) No 1775/2005 (Text with EEA relevance)Text with EEA relevance

<sup>538</sup> Skea Jim, Modassar Chaudry and Xinxin Wang, ‘The role of gas infrastructure in promoting UK energy security’ (2012) *Energy Policy* 43

<sup>539</sup> For an early assessment of IUK and its potential for the EU and UK gas markets, see: Cornish, R, *The UK gas interconnector and its European impact, International Oil and Gas Engineer* (1999).

<sup>540</sup> ‘Linking the gas markets of the UK and continental Europe’ (Interconnector, 2023)<<https://www.fluxys.com/en/company/interconnector-uk>>



sioned in 2009 and had an hourly capacity of 20,600,000 kWh/h (Forward Flow) between Balgzand in the Netherlands and Bacton in Great Britain and an hourly capacity of 7,000,000 kWh/h (Reverse Flow) between Bacton and Balgzand.<sup>541</sup> The third interconnector connects Moffat in Scotland with Ireland. The “Moffat interconnector” is configured as a monodirectional connection to export gas from Britain to Ireland. A bidirectional build-out is planned.

Ameli et al. have discussed the role of gas infrastructure in relation to cost-effective power networks with specific references to both IUK and BBL. On the basis of a series of scenarios for the operation of the GB electricity and gas network in 2030, Ameli et al. found that the integrated operation paradigm versus sequential operation of gas and electricity networks brought higher overall system benefits (up to 65% in extreme cases). This highlights the importance of the optimization of gas and electricity systems and emphasises the function of gas network infrastructure flexibility in efficiently accommodating the expected expansion of intermittent RES in future power systems.<sup>542</sup> These findings also suggest that gas interconnectors will continue to play an important role in the future. Therefore, the regulatory regime underpinning investment in the operation and maintenance of this infrastructure as well as the regime applicable to the trading of gas across interconnectors is critical to the EU and UK energy sector.

#### 2.4.2 Electricity interconnectors

Between 2010 and 2021, electricity imports to the UK increased almost ten-fold to 28.7 TWh, while electricity exports amounted to 4.2 TWh in 2021. Since 2010, electricity imports’ share of the UK’s electricity supply has increased, up from 2.0 % in 2010 to 9.1 % in 2021. As of March 2023, the UK has seven international interconnectors with a total capacity of 7,440 MW, an almost three-fold increase in capacity since 2010. In the 2020 Energy White Paper, the Government set an ambition of 18 GW of interconnector capacity by 2030.<sup>543</sup>

Undoubtedly, for the island nation that is, the UK, interconnectors are an important part of the GB electricity market. This has been discussed by, e.g., Newbery et al., who in 2019 concluded that “[i]nterconnectors have value for Britain, providing access to cheaper Continental power, security of supply, and managing increased renewables, prompting proposals for substantial new interconnectors.”<sup>544</sup>

541 BBL Company – Transport gas in both directions between the Netherlands and Great Britain <<https://www.bblcompany.com/>>

542 Ameli Hossein, Meysam Qadrdan, and Goran Strbac, ‘Value of gas network infrastructure flexibility in supporting cost effective operation of power systems’ (2017) *Applied Energy* 202

543 Electricity interconnectors in the UK since 2010 – <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1086528/Electricity\\_interconnectors\\_in\\_the\\_UK\\_since\\_2010.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1086528/Electricity_interconnectors_in_the_UK_since_2010.pdf)>

544 Newbery David, Giorgio Castagneto Gisse, Bowei Guo, and Paul E. Dodds, ‘The private and



## 2.5 Interconnectors and Brexit

As briefly indicated above, interconnectors, especially electricity interconnectors, played a key role in the debate on Brexit and energy in the run-up to and during the TCA negotiations.

This is also reflected in the number of scholarly articles on the topic, chiefly from a policy and economic perspective, such as Judge, who has focused on the Brexit-related consequences for energy crisis management and gas interconnection.<sup>545</sup> Palle discusses the geopolitical aspects of both gas and electricity interconnectors generally and places Brexit in this context.<sup>546</sup> She concludes that while geopolitics are (1) becoming more important in the context of EU supply security and (2) exposing the EU's supply security to potential tensions with supplier countries, a "Brexit of energy infrastructures" from the EU energy market is unlikely to contribute to such tensions, as the interconnection between the EU and Switzerland, Norway and the Balkan peninsula demonstrate. The geopolitical perspective is interesting, but Palle's assessment does not consider the regulatory framework of EU interconnections with third countries and therefore leaves out an important aspect of the operation of such interconnectors.

These regulatory perspectives are considered in more detail by Gunst and Carig: Gunst has considered the prospective impact of Brexit on both electricity and gas interconnectors from a legal perspective and highlights the likely uncertainties arising from Brexit,<sup>547</sup> whereas Craig argues that from a regulatory perspective, the fundamental benefits of more interconnections persist, Brexit notwithstanding. Craig concedes that Brexit would lead to uncertainties in relation to the financing and regulation of new interconnectors. He concludes that both the UK and EU would be best served by continued barrier-free IEM access with full regulatory alignment on energy.<sup>548</sup> By contrast, Guo and Newbery have considered the economic impact of uncoupling GB interconnectors from the IEM market-coupling mechanism and concluded that there would be but limited losses as a result of the same, and certainly fewer losses than anticipated prior to the entry into force of the TCA.<sup>549</sup>

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social value of British electrical interconnectors' (2019) Energy Policy 133

545 Judge Andrew, 'Brexit and Crisis Management: Gas Supplies' (2019) <<https://policyscotland.gla.ac.uk/publication-policy-briefing-brexit-and-crisis-management-gas-supplies/>>

546 Palle, A., 2017. Géopolitique des infrastructures énergétiques en Europe. *Revue internationale et stratégique*, 107(3), pp.133-143.

547 A. Gunst; "Brexit: Cross-border Energy Infrastructure and Network-bound Energy Trading" OGEI 2 (2017), URL: <[www.ogel.org/article.asp?key=3681](http://www.ogel.org/article.asp?key=3681)>

548 Craig, Nicholas. "The case for increased UK–Nordic electricity interconnection and the implications of Brexit: Challenges, opportunities, and trends." *Renewable Energy for the Arctic* (2018): 193-209.

549 Guo, Bowei and Newbery, David: "The cost of uncoupling GB interconnectors" in: Energy Policy,

Brexit may have had an indirect role in the increased (planned) interconnection between Ireland and the continental EU. Barret et al. have analysed that Brexit would leave Ireland vulnerable to interconnection to the EU, and as a result, interconnection to the continental EU would be desirable;<sup>550</sup> likewise, Di Cosmo et al. have considered the welfare impact of increased interconnection between France and Ireland and concluded that a French-Irish interconnector would reduce wholesale electricity prices in France and Ireland as well as the net revenues of thermal generators and lead to potential welfare losses for GB as a result of French-Irish interconnection.<sup>551</sup>

More recently, Bartholomew has considered the situation of GB interconnectors post-Brexit and concluded on an optimistic note that the TCA provides a basis for electricity trading between the EU and the GB electricity market.<sup>552</sup>

### 3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT

This paper addresses the possible impacts of Brexit on the United Kingdom's current and future interconnectors. Interconnectors facilitate European energy integration by enabling energy to be traded throughout the European Union. This, in turn, protects the supply security of states within the EU. Due to their economic and social importance, interconnectors receive funding from the EU and are also heavily regulated.

The UK's interconnectors are necessary for its energy security and the development of its energy market, both of which will most likely be impacted by Brexit. This impact is largely dependent on the regulation the UK will adopt regarding its interconnectors, the trade deals it will enter into with the EU and countries beyond the EU, the funding the UK's interconnectors will be eligible for, and the contribution the UK interconnectors make to the energy security of EU Member States.

This paper addresses some of the issues flowing from the UK's exit from the EU and, possibly, the Internal Energy Market (IEM), including:

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- 2021, <<https://doi.org/10.1016/j.enpol.2021.112569>>
- 550 Barrett Alan, Adele Bergin, John FitzGerald, Derek Lambert, Daire McCoy, Edgar Morgenroth, Iulia Siedschlag and Zuzanna Studnicka, 'Scoping the possible economic implications of Brexit on Ireland' (ESRI 2015).
- 551 Di Cosmo, V., Collins, S. & Deane, P. Welfare analysis of increased interconnection between France and Ireland. *Energy Syst* 11, 1047–1073 (2020). <<https://doi.org/10.1007/s12667-019-00335-1>>
- 552 Bartholomew Mark, 'GB interconnectors in the post-Brexit world. Renewable Energy Law and Policy Review' (2022) 10 (3-4)

- The extent to which the UK will continue to adopt EU-wide electricity regulation or to develop its own set of policies with the risk of a growing policy gap over time;
- The role of interconnector agreements and intergovernmental agreements (IGA) in mitigating the risk posed by Brexit;
- Whether UK interconnectors will continue to constitute “interconnectors” for the purpose of EU legislation and be able to benefit from exemptions of various EU regulations, in particular in relation to the non-UK component of the relevant interconnector;
- Whether UK interconnectors can obtain and maintain the status of an EU Project of Common Interest (PCI);
- Whether or not tariffs will be applied to the trading of electricity and gas between the UK and the EU;
- The continued membership of UK transmission system operators (TSOs) in the European Network of Transmission Operators for electricity and gas, respectively;
- Access to European funding sources such as the Connecting Europe Facility (CEF) and loans by the European Investment Bank (EIB);
- Electricity and Gas supply security for the GB market; and
- The future status of the Irish electricity market and Irish supply security.

### 3.1 Supply Crunch/Generation Gap

In the absence of new gas-fired power stations and a weak capacity market to encourage the building of new generation facilities, the UK is likely to face a generation gap following the closure of coal-fired power stations and the steady decline of North Sea oil and gas production by 2020.

Against this backdrop, electricity interconnectors provide important additional capacity to the GB electricity market. There are currently four interconnectors in operation (IFA1 (France), Moyle (Ireland), BritNed (The Netherlands), and EWIC (Ireland)) which provide around 4 GW of capacity. Further planned projects (Nemo (Belgium), Eleclink (France), Aquind (France), GridLink (France), IFA2 (France), FABLink (France/Alderney), NSN (Norway), Viking (Denmark), and Greenlink (Ireland)) will assist by adding up to 14 GW of additional capacity to the UK's supply portfolio.

The UK interconnector regime is unique in the EU in that it specifically allows for and encourages merchant interconnectors to be developed by private investors, whereas other jurisdictions look to incumbent transmission system operators for the development of any interconnectors. For instance, the French energy code provides

that Réseau de Transport d'Electricité (RTE), which operates the electricity transmission network, is the sole entity in charge of interconnection with the grids of other European countries.<sup>553</sup>

As the UK is a net importer of electricity, any impact of Brexit on energy trading may have a negative impact on UK energy security. Given the high level of interconnection of the GB electricity market, established trading patterns and reliance of the GB market on electricity flows from the continental market, and in particular France (from where the UK imports up to 2 GW), physical disconnection of the two markets is generally seen as highly unlikely.

However, there are a number of legal, commercial, and practical issues that will need to be addressed in order to ensure that existing and planned interconnector projects can operate successfully. These issues will be discussed in this paper. Whilst this paper focuses on electricity interconnectors, many of the issues (aside from market coupling and some more technical issues specific to electricity) also apply to the UK's three gas interconnectors: IUK (Belgium), BBL (Netherlands), and Moffat (Ireland).

### 3.2 Policy Choices at the Outset

The framework of the future relationship between the UK and the EU post-Brexit will determine Brexit's impact on the UK's energy sector. Possible models for that relationship include:

- The continued membership of the Internal Energy Market (IEM) (similar to Norway's current arrangements, i.e., implementation of the EU's energy market regime and payment into the EU with no voting rights on the relevant legislation);
- Tracking of the EU legislative and regulatory regime without any formal arrangement; and
- A series of sector-specific bilateral arrangements similar to the EU-Swiss arrangement as alternatives to or in addition to free trade agreements with specific jurisdictions outside the EU.

Prime Minister Theresa May has, in her speech on 17 January 2017, announced a "hard Brexit" strategy which is intended to result in the UK leaving not only the EU but also the internal market, the customs union with the EU and Euratom.

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<sup>553</sup> Code de l'énergie, Articles L. 121-4 and L. 321-6.

The White Paper released by HMG<sup>554</sup> emphasises that the Government is considering all options for the UK's future relationship with the EU on energy, in particular, to avoid disruption to the all-Ireland single electricity market. The White Paper underlines that “coordinated energy trading arrangements help to ensure lower prices and improved security of supply for both the UK and EU Member States by improving the efficiency and reliability of interconnector flows, reducing the need for domestic back-up power, and helping balance power flows as we increase the level of intermittent renewable electricity generation.”<sup>555</sup>

Although the UK Government's pronouncements to date have not commented specifically on the prospect of remaining in the IEM, this is not certain in view of the Government's firm opposition to arrangements that involve acceptance of EU legislation such as the relevant European Energy Directives and Regulations, to the remaining part of the relevant EU institutions (such as ACER, ENTSO-E, and ENTSO-G) and to the CJEU having superior jurisdiction to that of national courts. Conversely, if Brexit were to result in an exit from the IEM, the UK would likely be excluded from the benefits of market integration initiatives, such as market coupling, cross-border balancing, and capacity market integration.

In the immediate future, and likely during the two years in which the UK negotiates its exit agreement with the EU, Brexit may have little or no impact on interconnectors. Thereafter, the extent to which the UK will develop its own energy regulations independent from the EU is as yet unclear. As the historical use and role of interconnectors between the UK and the EU energy market speak to a level of interdependency between the electricity markets, policy certainty will likely be a key requirement for investors and operators in the UK and EU electricity markets.

Whilst the UK Government is supportive of interconnectors, there are some concerns amongst investors that the economic case for new interconnectors in the Channel may be affected if the UK is not part of the IEM and electricity imports are subject to trade tariffs.

#### **4 EUROPEAN BODIES (ACER, ENTSO-G, AND ENTSO-E)**

The Agency for the Cooperation of Energy Regulators (ACER) is a decentralised EU agency set up by the European Union to help ensure that the single European market in gas and electricity functions properly. The Agency's regulatory activities are overseen by a Board of Regulators composed of senior representatives of the national regulatory authorities for the energy of the 28 Member States. Its administrative and

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<sup>554</sup> HM Government (n 229).

<sup>555</sup> *ibid* para 8.28.

budgetary activities fall under the supervision of an Administrative Board, whose members are appointed by European institutions. There is no concept of “associated membership” or “observer status” with ACER, as its primary function is the monitoring, implementation, and, in some limited circumstances, enforcement of EU legislation. Therefore, if the UK were to leave the EU, its participation in the functions of ACER would cease.

The situation is, however, different in relation to the ENTSOs, which, whilst creations of European regulations, are in essence non-governmental organisations set up as international non-profit associations under Belgian law with full members (i.e., TSOs from EU Member States), as well as observer and associated members from outside the EU. For instance, ENTSO-E has 42 member TSOs from 35 countries.

To the extent that the UK remains part of the IEM, it would likely remain subject to the relevant European Energy Directives and Regulations and remain part of the institutions (such as ACER, ENTSO-E, and ENTSO-G) regulating the IEM.

Conversely, were the UK to leave the IEM, a new forum would need to be found to address the relevant aspects of the regulatory regime (e.g., market coupling, capacity allocation, balancing, treatment of interconnection points and tariffs). The European network codes that define interconnectors’ operating rules may also no longer be enforced in the United Kingdom, raising uncertainties regarding future allocation rules.

It may be possible for the relevant UK companies (NGESO, NGG, and SONI) to continue to participate in the ENTSOs as observers or with another specially negotiated status, but it is likely that such a status would diminish British influence on EU network codes as British TSOs would be unlikely to have full participation rights. Should the British TSOs not be part of ENTSOs in any capacity following a hard Brexit scenario, this issue will likely be exacerbated.

In view of the need to find a pragmatic solution for the treatment of interconnection points as to capacity allocation, tariffs, quality, etc., it is likely that (a) a form of arrangement between the British TSOs and the ENTSOs will be found and that (b) the change in status of British TSOs will increase the importance of robust and flexible interconnector agreements and intergovernmental agreements (IGAs).

## 5 IGAS

Project risk for international infrastructure projects such as interconnectors is sometimes mitigated through a package of government agreements within each host state and/or an IGA between or among host states. IGAs are usually treaties under local and international law and are ratified or enacted into domestic law accordingly.

Typically, project sponsors are the beneficiaries of these governmental commitments as the government-to-government undertakings address the political risks of the project. To the extent that they have not done so, the interconnector projects will want to confirm that their interests are represented in any such agreements so as to ensure that the political support given conforms to the relevant project's objectives and plans.

The European Commission will necessarily have some involvement with any IGA. Pursuant to the Treaty of Lisbon, IGAs in the energy sector between EU Member States and EU non-Member States will trigger the involvement of the EU both in the negotiations (through representatives of the European Commission) as well as a party to the IGA itself. As such, it would be for the UK and the EU as a whole to decide on the future regime applicable to the energy sector, including the role of interconnectors in any policy regime.

Recent experience with third country gas pipelines has shown that the European Commission will approach any IGA strictly in line with the current EU regulatory regime.

## **6 INTERCONNECTOR AGREEMENTS AND THEIR RELATIONSHIP TO INTERNATIONAL TRADE**

The running of interconnectors and the necessary cooperation between TSOs are usually governed by interconnector agreements (or joint operating agreements) which set out the governance and operational principles of the relevant interconnector.

As such, some of the economic and regulatory and trade issues discussed in this paper, such as the treatment of interconnection points and the cooperation of TSOs with the relevant regulators, could be addressed at the sub-legislative level in interconnector agreements between the relevant TSOs.

A key advantage of this type of agreement is that they are bilateral as between the relevant TSOs, and interconnector agreements, therefore, do not require legislation or, in most cases, governmental involvement. The approval of the remaining 27 EU Member States is not required as the Member States are not normally a party to interconnector agreements.

TSOs of existing interconnectors, as well as the relevant adjacent TSOs, may wish to carefully examine any existing interconnector agreements to determine whether amendments might be required in light of the changing regulatory landscape in any Brexit scenario.

## 7 DIFFERENCE BETWEEN EXISTING AND FUTURE INTERCONNECTORS?

The Third Electricity Directive<sup>556</sup> defines interconnectors as “equipment used to link electricity systems,” which would bring UK interconnectors within the scope of this definition. However, Regulation 714/2009<sup>557</sup> (the “Electricity Regulation”) amends that definition to restrict interconnectors to meaning a “transmission line which crosses or spans a border between the Member States and which connects the national transmission systems of the Member States,” which would exclude EU-UK interconnectors once the UK is no longer a Member State. This restrictive definition is identical to that in the Third Gas Directive,<sup>558</sup> which defines interconnectors as “a transmission line which crosses or spans a border between Member States for the sole purpose of connecting the national transmission systems of those Member States.”

The fact that UK interconnectors are not qualifying as interconnectors for the purposes of EU legislation could have implications for the ease with which UK interconnector projects may in future achieve PCI status.

It is also likely that the exemption regime pursuant to Article 17 of the Electricity Regulation and Article 36 of the Third Gas Directive (pursuant to which new infrastructure can be exempted from the ownership unbundling, revenue investment, third-party access, and revenue investment regimes) may no longer be available to new interconnectors.

Whilst technically, the EU unbundling regime introduced as part of the Third Energy Package will no longer apply in the UK, the relevant provisions have already been transposed in UK legislation, which will continue to apply unless Parliament makes the policy choice to amend it post-Brexit. This would appear to be unlikely given that the unbundling regime is a core element of the liberalisation of the British energy sector, and the EU regime is partly based on the UK model and is firmly rooted in the Electricity and Gas Acts as well as the relevant licensing regimes. The UK will be unable to relinquish itself entirely of EU energy legislation, and parts of the EU regime, particularly unbundling, will continue to impact the UK post-Brexit.

### 7.1 Projects of Common Interest (PCIs)

The PCI list was initially set out in 2013 in Annex I to Regulation 347/2013.<sup>559</sup> The revised list was published on 18 November 2015 and contained one hundred and

<sup>556</sup> Directive 2009/72/EC (n 25).

<sup>557</sup> Regulation (EC) No 714/2009.

<sup>558</sup> Directive 2009/73/EC.

<sup>559</sup> Regulation (EU) No 347/2013.



ninety-five (195) key projects that are seen as fundamental to achieving the energy objective of completing the Energy Union and of Europe benefitting from affordable, secure, and sustainable energy. Interconnectors feature heavily in this list as they are of fundamental interest in achieving the objective of an Energy Union. In particular, interconnectors support the low-carbon agenda by: (i) providing cheap access to low-carbon electricity, (ii) supporting the market viability of intermittent generation by facilitating market balancing, and (iii) reducing European decarbonisation costs.

PCIs, many of which are interconnectors, may benefit from:

- Accelerated planning and permit granting;
- A single national authority for obtaining permits;
- Aligned regulatory conditions; and
- Lower administrative costs due to streamlined environmental assessment processes.

In the UK, the NEMO, Greenlink, Viking, Icelink, NSI West Electricity, FAB, IFA2 and ElecLink interconnector, as well as the Moffat reverse flow projects, have obtained PCI status. Several other interconnector projects are understood to have applied for PCI status.<sup>560</sup>

Whilst it is not entirely clear whether an interconnector project will remain eligible for PCI status after the UK exits the European Union, a strong argument can be made in favour of maintaining that status in relation to the relevant projects on the basis that:

- It is located on the territory of one Member State (the relevant non-UK EU Member State, in relation to which there would be no change following Brexit); and
- The interconnector will have a “significant cross-border impact” because it will have the effect of increasing cross-border grid transfer capacity on the corridor by at least 500 MW, thus affecting the supply security of EU Member States.
- There are examples of PCIs connecting the EU with third countries, such as the EuroAsia Interconnector, which runs between Israel, Cyprus and Greece and includes three PCIs, one of which applies with regards to the interconnection

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<sup>560</sup> For a complete list of PCI projects as of 2015, please see Commission Delegated Regulation (EU) 2016/89 of 18 November 2015 amending Regulation (EU) No 347/2013 of the European Parliament and of the Council as regards the Union list of projects of common interest [2016] OJ L19/1 <[http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOL\\_2016\\_019\\_R\\_0001&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOL_2016_019_R_0001&from=EN)> This list is currently under review, with an updated list expected for late 2017.

between Hadera (Israel) and Kofinou (Cyprus).<sup>561</sup> As a result, there is a possibility that the UK's interconnectors could retain their PCI status post-Brexit.

## 7.2 European Project Funding

In addition to funding available for PCIs, the Commission also provides the indirect financial benefit of increased viability for investors and the direct benefit of access to the Connecting Europe Facility (CEF), which is a fund of €5.35 billion to be invested in connectivity projects covering the IEM by 2020. A variety of financial instruments are also used to fund projects, such as guarantees and project bonds, attracting private sector investment into the projects funded by the CEF.

The CEF estimates that the upgrading, development, and construction of adequate energy transmission infrastructure of European importance will require investments of about €140 billion for electricity and at least €70 billion for gas. The objective of the CEF is to facilitate this, and it is not the only source of European Funding that can be called upon.

It is likely that access to the CEF will fall away for UK projects in a “hard Brexit” scenario. In addition, there would be long-term funding implications for new projects, given that access to European Investment Bank loans may be cut off by Brexit. However, in relation to UK-EU interconnectors, there are good arguments that access to CEF support should be maintained even in a post-Brexit scenario, as the non-UK section of the interconnector continues to remain in the EU, and the relevant interconnector will continue to make a positive contribution to the internal energy market.

## 8 TARIFFS

If tariffs were to be imposed on electricity and gas by the UK and the EU, there would be economic consequences affecting both the physical supply of energy to and from the UK and the trading arrangements between the UK, the EU, and third-party countries.

In the UK and EU, gas and electricity markets would be affected, and the underlying economics of EU-UK interconnectors would need to be re-evaluated. It is likely that the consumer benefit analyses routinely undertaken at the request of national regulatory authorities for each interconnector project would be less positive than in a scenario without such a tariff or other trade barriers.

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<sup>561</sup> *ibid.*

## 8.1 Tariffs within the EU

As the UK is currently a member of the EU internal market and the customs union, UK goods benefit from tariff-free access to the EU market and vice-versa. The UK (together with all EU Member States) applies a common customs tariff to all third-country goods imported from outside the EU. Once third-country goods are admitted upon payment of the common customs tariff, these goods then benefit from tariff-free circulation within the EU, including between the UK and other EU Member States. The EU's common customs tariff is known as the EU's "MFN" tariff because, under the WTO rules, WTO members must apply the same most favourable tariffs to products from all other WTO Members. The position post-Brexit will depend on the parameters of the new UK/EU trade relationship.

If a "hard Brexit" scenario in which the UK also leaves the EU customs union were to occur without a new UK-EU free trade agreement (FTA), then:

- UK exports to the EU would become subject to the EU's MFN tariff;
- EU exports to the UK would become subject to the new MFN tariff that the UK adopts post-Brexit—on the basis of UK Government statements, it seems likely that the UK will seek to replicate the EU's MFN tariff as far as possible in order to minimise disruption;
- UK exports to the rest of the world (RoW) would become subject to the third country's applicable MFN tariff; and
- RoW exports to the UK would become subject to the UK's new MFN tariff.

## 8.2 World Trade Organisation Rules

At present, the EU cannot impose import duties on electricity as it (and its Member States, including the UK) has legally committed to a "bound" tariff rate of zero on electricity in its WTO goods schedule. A bound tariff rate is the highest tariff rate that can be imposed by a WTO Member without risking a finding of a legal violation and the related trade repercussions.

While bound rates define maximum tariff rates, they can change. Pursuant to Article XXVIII General Agreement on Tariffs and Trade (GATT),<sup>562</sup> WTO Members generally have a right to, *inter alia*, alter the bound rates contained in their goods schedules. In return, they have to provide benefits in other areas (e.g., reduce a tariff on another product of similar importance in trade terms) or face the modification or withdrawal of substantially equivalent concessions from certain other interested

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<sup>562</sup> General Agreement on Tariffs and Trade 1994.

WTO Members. In practice, the main participants in such a negotiation on electricity would be the EU and the UK since there is, at present little cross-border trade in electricity with other non-EU/EEA countries (with the possible exception of Switzerland).

It is worth noting that in a “hard Brexit” scenario, goods entering the UK or the EU from third countries will no longer benefit from free circulation between the UK and EU as part of the EU customs union.

At present, the EU and the UK share a single WTO goods schedule. Following Brexit, the UK will have to define a goods schedule for itself. It is likely that the UK will retain largely the same conditions (especially with regard to bound tariff rates) as contained in the current EU schedule. It is also likely that the EU will retain the fundamental aspects of its goods schedule, at least with respect to bound tariffs. If both the EU and the UK do not modify the current bound rate of zero on electricity, then they will be legally prohibited from imposing import duties on electricity.

### **8.3 Export duties**

Export duties are not bound in the EU WTO goods schedule, and they are permitted by Article XI:1 GATT. As a consequence, the EU is in principle, free to impose export duties. Following Brexit, the same right would likely apply to the UK (as it does to most WTO Members, with some exceptions).

### **8.4 Other import and export restrictions**

The ability to impose other import and export restrictions, such as quotas and other non-tariff measures, is mainly governed by Article XI:1 GATT. This provision prohibits all such restrictions on imports and exports (other than duties, taxes, or other charges). This legal obligation is in principle, not subject to negotiation and, therefore, would continue to apply in the same manner following any type of Brexit.

## **9 SUPPLY SECURITY**

In the following two subsections, I shall consider supply security in relation to first electricity and then gas.

### **9.1 Electricity**

Any disruption of electricity trade between the UK and the EU in the form of tariffs or as a result of diverging regulatory regimes is likely to lead to increased costs which

will, in turn, make it more difficult to insulate UK customers from higher utility bills. This is because the demand for electricity in the UK is increasing, reducing the UK's spare capacity and increasing the price of electricity. Interconnectors are vital to protect supply security and increase capacity.

Research by EnAppSys<sup>563</sup> has shown that, on the basis of last winter's electricity demand, there will be 85 hours this winter when there is less than 2 GW of spare capacity and about 12 hours when demand will exceed standard capacity, and last-resort measures, such as restarting large power plants that have been mothballed, starting up small, inefficient diesel and gas engines and even paying large consumers to use less at peak times, will be required.<sup>564</sup> Whilst such measures are rarely used, they are cost intensive. In 2015/2016, wholesale power prices rocketed to £2,500 per megawatt-hour, up from a going rate of £60, as a result of such measures being implemented. Restarting mothballed power plants this winter would cost at least £3,000 per MWh.<sup>565</sup> Interconnectors could help to reduce the need to use such measures. Electricity imported through subsea interconnectors has become an important source of power for the UK, accounting for 6.6% of supplies last year. As further interconnection projects come on stream, this proportion is expected to increase.

Interconnectors will also most likely play a part in lowering consumers' utility bills. In 2013, the then Department of Energy and Climate Change commissioned a study by Baringa that showed that, depending on the adopted scenario, the level of interconnection and countries to which the interconnection is made, GB consumers could see benefits to 2040 of up to £9 billion (net present value).<sup>566</sup>

## 9.2 Gas

As between the UK and the EU, gas markets are already physically well integrated through three interconnectors (IUK, BBL, and Moffat) with only small wholesale price differences and little congestion. Subject to any drastic changes in energy policy by the British government, the gas sector is, therefore, unlikely to suffer following Brexit.

<sup>563</sup> EnAppSys (n 438).

<sup>564</sup> Kiran Stacey, 'Britain told to brace itself for power shortages' (Financial Times, 13 June 2016) <[www.ft.com/content/2c1f71c6-2ef7-11e6-bf8d-26294ad519fc](https://www.ft.com/content/2c1f71c6-2ef7-11e6-bf8d-26294ad519fc)>

<sup>565</sup> EnAppSys (n 438).

<sup>566</sup> Department of Energy & Climate Change, 'More interconnection: improving energy security and lowering bills' (December 2013) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/266460/More\\_interconnection\\_-\\_improving\\_energy\\_security\\_and\\_lowering\\_bills.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/266460/More_interconnection_-_improving_energy_security_and_lowering_bills.pdf)>

The Brexit negotiations coincide with (a) the end of the initial long-term gas interconnector contracts (IUK 2018, BBL 2022) and, therefore, greater pressure on the NBP-TTF spread and (b) the EU's review of its gas security strategy.

When considering the replacement of the IUK and BBL contracts, whilst the NBP-TTF spread provides the direction for gas to flow, shippers will take other factors into account, such as the cost of the service provided by the IUK and BBL interconnectors compared to alternatives such as LNG.

The UK gas market is amongst the most mature and liquid gas markets in Europe. Brexit may, however, contribute to a shift towards other EU markets (particularly TTF in the Netherlands, which outranked the UK as the most liquid market in 2015) and change expectations in respect of future infrastructure investments.

As the EU is currently undergoing a review of its gas supply security arrangements, including Regulation 994/2010, Brexit could increase the UK's supply security risk, as the UK might be excluded from the "solidarity principles," in accordance with which European nations agree to supply gas to their neighbours in the event of a gas supply crisis. Conversely, as Ireland is largely dependent on GB gas imports (see below), it is possible that the EU may try to intervene in the form of a solidarity mechanism for Ireland.

## 10 IRELAND

Brexit will have an impact on the energy sector in Ireland. Since the Single Electricity Market (SEM) operating across Northern Ireland and the Republic of Ireland was established in 2007 to increase energy efficiency and competition throughout both Northern Ireland and the Republic of Ireland, the electricity market on the island of Ireland has been operating as an integrated market, largely on the basis of bespoke market rules contained in the Trading and Settlement Code (with which the market operator, system operators, generators, suppliers and interconnector owners, operators and users are obliged to comply) against the backdrop of the EU regulatory regime.

SEM is regulated by the Irish Commission for Energy Regulation (CER)<sup>567</sup> which, as the National Regulatory Authority for both the Republic of Ireland and Northern Ireland, is subject to the EU energy sector regime. A part of the UK would, therefore, continue to be subject to EU law if SEM is maintained post-Brexit.

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<sup>567</sup> In October 2017, after the submission of this chapter for publication, the CER was renamed Commission for the Regulation of Utilities ("CRU") in recognition of its regulatory role in the water sector as well as the energy sector.

Brexit would effectively reverse a decade of energy integration on the Irish island if it were not carefully managed and does not include a solution which specifically addresses the SEM issue. There are a number of possible post-Brexit arrangements and solutions to this issue:

- The first option is to designate Northern Ireland as a special zone such that it is understood that the all-Irish market will continue to be subject to EU law.
- The second option would be to create a special status for SEM which, whilst compliant with EU law, would not subject Northern Ireland to the jurisdiction of the European institutions (i.e., an “EU-compatible” solution).
- Finally, the third option would be to unwind SEM, although this is unlikely to be politically palatable in either the Republic or Northern Ireland.
- Irish gas supply security is heavily dependent on the UK and specifically on the Moffat interconnector. According to the winter outlook document produced by Gas Networks Ireland,<sup>568</sup> GB imports through the Moffat interconnector met 96.3% of annual Irish gas supply requirements in 2014/2015. Whilst the Corrib gas field is anticipated to improve Ireland’s security of supply, it is anticipated that even at full operational capacity, it will only meet approximately 56% of Gas Networks Ireland System forecasted demand annually, leaving Ireland’s supply security reliant on GB gas imports and accordingly exposed to Brexit risks.

The issue of Irish security of supply is, therefore, likely to be a key feature on the agenda during the energy sector-related Brexit negotiations as the current arrangements through the Moffat interconnector are the “cheapest way to provide security of supply to Irish consumers.”<sup>569</sup> It is possible that should it not be feasible to maintain the current arrangements in relation to the Moffat interconnector, Ireland may need to build a dedicated LNG terminal with a regasification facility.

Issues pertaining to the Irish energy market seem to be an important factor for the Government in considering the UK’s future relationship with the EU energy sector, as it is the only sector in relation to which the White Paper specifically states that the UK would explore “all options”<sup>570</sup> regarding its future relationship with the EU; not least to avert disruption to SEM as both Northern Ireland and Ireland rely on its functioning for their supply security.

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568 Gas Networks Ireland (n 453).

569 Thierry Bros (n 454).

570 HM Government (n 229).

## 11 TIME SPAN AND UNCERTAINTY

In the immediate future, we are unlikely to see any major changes to the current systems and regulations as the terms of Brexit will take a significant amount of time to negotiate. Once Article 50 has been triggered (currently anticipated on 29 March 2017), it is likely that the shape of the Brexit negotiations with the EU will develop with more clarity. However, it is unlikely that the result and impact of that result will be fully known before at least 2019.

As this is an unprecedented situation, it is likely to create prolonged uncertainty as to the regulatory regime that will apply to the operation of interconnectors and, more generally, access to the internal electricity market. This uncertainty is likely to be the source of some discomfort for investors, sponsors, and European regulators alike, and it may lead to delays in projects unless pragmatic long-term solutions are found. Investors are seeking more certainty at this point in time, and if this is not forthcoming, then it may trigger delays for interconnector projects. Commentators have said that projects that are already under construction or have reached financial investment decisions are likely to be less affected than those which have not yet reached such a point.<sup>571</sup>

## 12 APPROACHES BY EUROPEAN REGULATORY AUTHORITIES

European energy regulators are watching Brexit-related developments and their impact on the internal energy market closely. CRE, the French energy regulator, when conducting its consultation<sup>572</sup> on IFA2, specifically raised the issue of Brexit, stating “[t]he outcome of the British referendum hence raises two questions. First, one has to check that the project is interesting for the European electricity system, even in a situation where the United Kingdom would no longer be a member of the European Union and an active member of the internal market. Second, a specific analysis of the risks raised by the consequences of the British referendum, and the measures taken to mitigate such risks, is needed.”

In its decision in support of the IFA2 project, the CRE concluded that whilst “there is no visibility on the future operating conditions of these interconnectors

<sup>571</sup> Frontier Economics (n 425).

<sup>572</sup> Commission de Regulation de l’Energie: “Consultation by CRE regarding the interconnector “IFA2” between France and Great Britain”, <<https://www.cre.fr/en/Documents/Public-consultations/The-interconnector-IFA2-between-France-and-Great-Britain.>>



following the British referendum, the CRE considers that the treatment of these projects is an issue of European importance.”<sup>573</sup>

As the CRE also emphasized that it intended to engage Ofgem and other counterparts to develop a common understanding of UK-EU interconnectors, it can be inferred that European regulators seem willing to take a pragmatic approach to Brexit-related regulatory issues in order to find workable solutions for interconnectors.

### 13 IMPACT ON PROJECTS

It is likely that the effects of Brexit would be most keenly felt by existing and, in particular, future interconnectors, as the relevant regulatory framework in the EU would fall away from UK interconnectors. A reliable alternative regime would need to be negotiated, which will likely have an impact on both costs and the security of supply for the UK.

As the politics and policies around Brexit continue to evolve and are likely to continue to do so for the foreseeable future, operators and sponsors of interconnector projects will need to keep an active watching brief on the developments. To the extent that they engage in dialogue with the UK Government, they may wish to consider suggesting to the UK Government that remaining in the IEM is likely to provide more security not only for their relevant projects but also for the energy sector as a whole.

As parties to interconnector project agreements are unlikely to be able to provide for all future scenarios in their relevant documentation, they may wish to consider including a robust change-in-law clause with clearly defined triggers in order to give themselves the flexibility to cater for any Brexit-related developments.

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<sup>573</sup> CRE (n 427).



# CHAPTER 4:

## WITHDRAWAL OF THE UNITED KINGDOM FROM EURATOM

As for the other Constituting Manuscripts, the first section of this chapter offers a contextualisation of the Constituting Manuscript within the Brexit Process. Specifically, chapter 4 provides a general prospective view of the key risks of the UK's exit from Euratom at a point in time in which the Brexit negotiations were ongoing. Moreover, the contextualisation in section 1 is completed by a literature review concerning the main aspects within the Constituting Manuscript in section 2. This overarching literature completes the literature review provided in the Constituting Manuscript, which, due to word limitations accompanying its publication, needed to be focussed. The Constituting Manuscript, as previously published, starts in section 3 of this chapter.

### 1 OVERVIEW

Chapter 4 contains an article which was originally published by OGEL<sup>574</sup> and written in collaboration with Shekar Sumit. At the time of writing the article, Shekar and I were colleagues at Herbert Smith Freehills LLP and worked closely together on a number of nuclear issues and projects. Shekar and I contributed in equal measure to this article.

The purpose of this paper is to examine whether there was a legal requirement for the United Kingdom to withdraw from Euratom (at the same time as it withdrew from the European Union) and the risks of such an exit.

In contrast to the other Constituting Manuscripts written prior to the entry into force of the TCA, this article thus does not focus on the likely substantive impact of Brexit on the nuclear energy sector but on EU and Euratom governance aspects and whether or not Brexatom should have been considered a legal consequence of Brexit pursuant to EU law and/or Euratom.

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574 Silke Goldberg and Shekhar Sumit, 'Withdrawal of the United Kingdom from Euratom' (2017) OGEL 2 <[www.ogel.org/article.asp?key=3684](http://www.ogel.org/article.asp?key=3684)>.

This chapter concludes that there would be serious consequences to a Brexitom for the civil nuclear generation sector (and therefore consumers), potentially resulting in UK nuclear power stations being forced to close unless relevant agreements replacing the Euratom regime would be entered into by Euratom and the UK. This chapter also finds that remaining in Euratom whilst leaving the EU would have been undoubtedly complex but of a technical-legal nature: the consequences would have included negotiating and agreeing on the form, and funding arrangements, for the United Kingdom's participation in European institutions for the purposes of Euratom only.

However, by serving a notice pursuant to Article 106(a) of the Euratom Treaty in the same letter as its Article 50 Notice, the UK rendered this debate ultimately obsolete. Once the Article 106(a) Notice was served, the debate in the UK turned to the domestic and international measures the UK needed to put in place in order to manage the consequences of Brexitom.

## 2 KEY ISSUES AND LITERATURE

Euratom<sup>575</sup> and the UK's membership<sup>576</sup> in the same played virtually no role in the public debate pertaining to Brexit, and a potential exit from Euratom was not part of the Referendum question.<sup>577</sup> In fact, polls in 2017 suggested that the majority of voters in the UK preferred remaining in Euratom.<sup>578</sup> It is possible to suggest several reasons for this: general ignorance about Euratom is one possibility, and the other is that nuclear energy has generally a high degree of acceptance in the UK and as such, the Euratom membership was not seen critically.

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575 For a general introduction on Euratom, see e.g. Engstedt, Rasa., 2020. *Handbook on European Nuclear Law: Competences of the Euratom Community Under the Euratom Treaty*. Kluwer Law International BV or Schärf, Wolf-Georg. "Europäisches Atomrecht", in: *Europäisches Atomrecht*. de Gruyter, 2012. For a review of studies on Euratom, see also: Jakub Handrlica "Anna Södersten: 'Euratom at the Crossroads Edward Elgar 2018'" (book review) in: *European Journal of Legal Studies* Vol 11 No 12, 2019

576 For an historical overview of the UK's relationship with Euratom prior to the UK's membership of the EEC and Euratom, see Theaker, M. (2018). *Atomic Energy, the Cold War and the EEC, 1960–1962*. In: *Britain, Europe and Civil Nuclear Energy, 1945–62. Britain and the World*. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-319-73927-4\\_7](https://doi.org/10.1007/978-3-319-73927-4_7)

577 The Referendum question was: "Should the United Kingdom remain a member of the European Union or leave the European Union?" Possible responses were: "1) Remain a member of the European Union; 2) Leave the European Union" See e.g. <<https://ukandeu.ac.uk/the-facts/what-was-the-referendum-question/>>

578 <<https://www.euractiv.com/section/uk-europe/news/uk-supports-staying-in-euratom-nuclear-treaty-after-brexit/>>

However, leaving the EU also at least gives rise to the question as to whether the UK should also leave Euratom. It is this debate that chapter 4 addresses. Below I will further contextualise this and provide a brief literature review in relation to:

Institutional arrangements between EU and Euratom (subsection (A)), Changes due to the Treaty of Lisbon (subsection (B)), the Austrian Euratom debate (subsection (C)); and Brexatom (subsection (D)).

## 2.1 Institutional arrangements between EU and Euratom

The relationship between Euratom and the EU is, from an institutional perspective, complex. This complexity arises chiefly from the fact that Euratom was created by a separate Treaty to the EEC but “shared” the institutions of the EEC.<sup>579</sup> This “institutional sharing” was re-affirmed by the Treaty of Lisbon in that article 1(3) TEU provides that the EU shall be the legal successor to and replace the previous EC.<sup>580</sup> This successorship excludes Euratom, which therefore continues as a separate organisation, albeit in what Indlekofer has called a “symbiotic interaction”<sup>581</sup> given the institution-sharing arrangements. As Ptasekaite has observed, as a result of these arrangements, it is at times difficult to delineate the precise border between the EU and the Euratom treaties.<sup>582</sup>

## 2.2 Changes due to the Treaty of Lisbon

Concurrently with the adoption of the Treaty of Lisbon, Member States adopted Protocol No. 2 Amending the Treaty Establishing the European Atomic Energy

579 On the institutional arrangements between the EU and Euratom, see also: Fouquet Dörte, Nuclear Policy in the EU from a Legal and Institutional Point-of-View. The Technological and Economic Future of Nuclear Power’ (2019); Cremona Marise, *The two (or three) treaty solution: The new treaty structure of the EU* (2012).

580 “The Union shall replace and succeed the European Community” Art 1(3) TEU On the consequences of the Treaty of Lisbon for Euratom; Södersten Anna, ‘Explaining continuity and change: The case of the Euratom Treaty’ (2022) 20 (2) *International Journal of Constitutional Law* <<https://doi.org/10.1093/icon/moac041>>

581 “Symbiotisches Zusammenwirken” in the German original. See Indlekofer, M. – Schwichtenberg, K. Einführung: Euratom und Union, in: Vedder/Heintschel v Heinegg, *Europäisches Unionsrecht* (2012), S. 1319, Rz 5; G. Meier, “Die Beendigung der Mitgliedschaft in der Europäischen Gemeinschaft, NJW 1974, 391 (392)”. Whereas Indlekofer focusses on the positive interaction between the EU and Euratom, Meier viewed Euratom as leading a “shadow existence” behind the European Union.

582 See R. Ptasekaite, *The Euratom Treaty v. Treaties of the European Union: limits of competence and interaction*, Swedish Radiation Safety Authority, 2011

Community<sup>583</sup> which added to the new rules laid down by the Treaty on European Union and by the Treaty on the Functioning of the European Union, in particular in the institutional and financial fields.

On the basis of these amendments, Dehousse and Verhoeven have called the relationship between the EU and Euratom “more ambiguous since the entry into force of the Lisbon Treaty”<sup>584</sup> as prior to the TEU, the Treaty establishing the European Community (TEC) did not allow for derogations from the Euratom Treaty.<sup>585</sup> Whilst Article 305 (2) TEC did not survive into the TEU or TFEU, the substantive provisions of Article 305(2) in relation to Euratom were maintained in the new Article 106a (3) of the TEU. Regardless of the continuity of this provision, Dehousse and Verhoeven have argued that after the adoption of the Lisbon Treaty, it might be possible for the TFEU or TEU to create a derogation from Euratom.<sup>586</sup>

The relationship between Euratom and the EU also raises the question as to whether one would be conditional on membership in the other, which Circolo et al. have discussed in relation to Brexit.<sup>587</sup> However, this debate as to the conditionality and interdependence between memberships in the EU and Euratom has not arisen with Brexit.

### 2.3 In the EU but not in Euratom? The Austrian debate

Previously, this question has been of particular interest in Austria, given the constitutional prohibition on nuclear energy in Austria.<sup>588</sup> As Hummer notes, the Austrian

583 Annexed to the Lisbon Treaty, OJEU C 306 of 17 December 2007.

584 Dehousse Franklin and Didier Verhoeven, ‘The Legal Framework. The Nuclear Safety Framework in the European Union After Fukushima’ e.g. Mont Institute, (2014) JSTOR, <<http://www.jstor.org/stable/resrepo6690.6>>

585 See Article 305 (2) of the Treaty establishing the European Community (Nice consolidated version) which provided that “2. The provisions of this Treaty shall not derogate from those of the Treaty establishing the European Atomic Energy Community.” See T. Cusack, ‘A tale of two treaties: an assessment of the Euratom Treaty in relation with the EC Treaty’, 40 *Common Market Law Review* 117 (2003).

586 Dehousse and Verhoeven *ibid.*, page 11

587 See, e.g. Circolo Andrea, and Ondrej Hamulák, ‘Euratom and Brexit: Could the United Kingdom Maintain One Foot in the European Union? Current Scenarios and Future Prospects of British withdrawal from the EAEC’ (2018) 18(2) *International and Comparative Law Review*

588 See § 1 and 2 of Bundesverfassungsgesetz für ein atomfreies Österreich, Bundesgesetzblatt für die Republik Österreich of 13 August 1999, BGBl I Nr 149/1999. On this, see also; Leidenmühler, “Das Bundesverfassungsgesetz für ein atomfreies Österreich im Lichte des Europarechts”, in: ÖJZ 9/2000, 321ff., available here: <<https://rdb.manz.at/document/rdb.tso.L10005170058>>. An insight into the political debate regarding a possible Euratom exit can be obtained from the minutes of a debate in the Austrian federal parliament of 29 and 30 January 2010, page 327 ff, available here:

debate focused on whether it might be possible to leave Euratom without also having to leave the EU.

The Austrian debate is to some extent instructive in relation to the Brexatom debate, as it considers the possibility of membership in the EU or Euratom alone without having to be a Member State of the respective other organisation. However, the Austrian debate can also be distinguished from the Brexatom debate as it considers an exit from Euratom, not the EU.

Prior to the debate as to the scope of Brexit, the question as to whether an exit from the EU would automatically require an exit from Euratom had not been considered.<sup>589</sup>

Prior to the entry into force of the Lisbon Treaty, the dominant view in the legal literature was that an exit from Euratom without a concurrent exit from the EU would not be possible.<sup>590</sup> However, Geistlinger<sup>591</sup> has differed on this point and in his analysis as to whether membership in the EU would require membership in Euratom concluded that regardless of any explicit exit clause, an exit should be possible on the basis of Art. 56 (1) (b) of the Vienna Convention on the Law of Treaties<sup>592</sup> (VCLT) in the form of a termination notice. In addition, Geistlinger argued that the

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“Stenographisches Protokoll der 53. Sitzung des Nationalrates der Republik Österreich, XXIV. Gesetzgebungsperiode Freitag, 29., und Samstag, 30. Jänner 2010”, <[https://www.parlament.gv.at/dokument/XXIV/NRSITZ/53/SEITE\\_0327.html](https://www.parlament.gv.at/dokument/XXIV/NRSITZ/53/SEITE_0327.html)>

589 Hummer Waldemar, “Bewirkt der Brexit auch den automatischen Ausstieg des Vereinigten Königreichs aus EURATOM.” ÖGfE Policy Brief 29‘ (2016) available at <[https://www.oegfe.at/wp-content/uploads/2016/11/OEGfE\\_Policy\\_Brief-2016.29\\_Hummer-1.pdf](https://www.oegfe.at/wp-content/uploads/2016/11/OEGfE_Policy_Brief-2016.29_Hummer-1.pdf)>

590 See, for instance, Kumin, A. J. *Vertragsänderungsverfahren und Austrittsklausel*, in: Hummer/Obwexer (eds.), “Der Vertrag von Lissabon” (2009), S. 321 ff; see also: Obwexer, W. “Der Vertrag von Lissabon: Auswirkungen auf das öffentliche Recht Österreichs (2008) page 85 ff

591 Geistlinger, *Reflections on the possibility of a unilateral withdrawal from the EURATOM Treaty*‘ (2005) report prepared for the conference „Energy intelligence for Europe – The Euratom Treaty and future energy options: Conditions for a level playing field in the energy sector”, <[https://www.oekonews.at/netautor/napro4/wrapper/media.php?id=%2C%2C%2C%2CZmlsZW5hbWU9YXJjaGl2ZSUzRCUyRjE3LjAxLjIwMDclMkYxMTY5MDYzMDYzMDYzMjAzLnBkZiZybj1HZWlzdGxpbmldXzEucGRm](https://www.oekonews.at/netautor/napro4/wrapper/media.php?id=%2C%2C%2C%2CZmlsZW5hbWU9YXJjaGl2ZSUzRCUyRjE3LjAxLjIwMDclMkYxMTY5MDYzMDYzMjAzLnBkZiZybj1HZWlzdGxpbmldXzEucGRm)> Hummer (op cit at n581) references a similar legal opinion by Prof Rotter of the university of Linz in Austria, however, this was not identifiable from the available sources. As Prof Rotter is now deceased, it was not possible to contact him.

592 <[https://legal.un.org/ilc/texts/instruments/english/conventions/1\\_1\\_1969.pdf](https://legal.un.org/ilc/texts/instruments/english/conventions/1_1_1969.pdf)>

invocation of Art. 62 (1) VCLT might offer an additional way out of Euratom.<sup>593</sup> Wegener has concluded similarly.<sup>594</sup>

The legal provisions underpinning this debate changed with the entry into force of the Treaty of Lisbon, as the newly introduced Article 106a Euratom explicitly applies the exit provisions contained in Art. 50 TEU to the Euratom Treaty. Hummer has therefore concluded that this implies that there is a clear treaty basis for an exit from Euratom without a concurrent exit from the European Union.<sup>595</sup>

## 2.4 Brexatom

Whereas the Austrian debate focused on an exit from Euratom, the (relatively brief) British debate focused on staying in Euratom while leaving the EU.<sup>596</sup>

After the UK Government announced that it would leave Euratom and the EU, as the two organisations were “uniquely linked,”<sup>597</sup> the British debate at first focused on the fact that the question as to an exit from Euratom had not been included on the ballot paper in the Referendum.<sup>598</sup> The explanatory notes to the act<sup>599</sup> empowering the UK Government to trigger the Article 50 process explicitly confirm that the

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593 Art 56(1) provides that “[a] treaty which contains no provision regarding its termination and which does not provide for denunciation or withdrawal is not subject to denunciation or withdrawal unless: (a) it is established that the parties intended to admit the possibility of denunciation or withdrawal; or (b) a right of denunciation or withdrawal may be implied by the nature of the treaty.” Article 62 (1) provides that “[a] fundamental change of circumstances which has occurred with regard to those existing at the time of the conclusion of a treaty, and which was not foreseen by the parties, may not be invoked as a ground for terminating or withdrawing from the treaty unless the existence of those circumstances constituted an essential basis of the consent of the parties to be bound by the treaty; and (b) the effect of the change is radically to transform the extent of obligations still to be performed under the treaty”.

594 Wegener, Bernhard: “Die Kündigung des Vertrages zur Gründung der Europäischen Atomgemeinschaft (EURATOM): Europa-, völker- und verfassungsrechtliche Optionen der Bundesrepublik Deutschland”, <<https://www.naturfreunde.de/sites/default/files/attachments/gutachten-euratom-wegener-dewann.pdf>>

595 Hummer, op cit. n581

596 For a general overview of the position of the UK Government on Euratom in the context of the Brexit negotiations, see e.g. Hinson Suzanna, ‘House of Commons Briefing Paper, “Euratom” CBP 803’ (8 January 2019) <<https://researchbriefings.files.parliament.uk/documents/CBP-8036/CBP-8036.pdf>>

597 Department for Business, Energy & Industrial Strategy, ‘Euratom Exit Factsheet, Research and Development’ (GOV.UK, 18 June 2018) <<https://www.gov.uk/government/publications/nuclear-safeguards-bill-factsheets>>

598 Feldmann Ulrike, “Brexit means Brexit”. Also a British withdrawal of the EURATOM treaty?” *Atw. Internationale Zeitschrift fuer Kernenergie* 61’ (2016) 61 (8-9)

599 European Union (Notification of Withdrawal) Act 2017.



power to withdraw from the EU also included the power to withdraw from Euratom.<sup>600</sup>

Once the scope of Brexit was thus clarified, the British debate shifted to the impact of Brexatom,<sup>601</sup> which has, including the post-Brexatom regime in the UK, been considered in detail by Tromans and Bowden.<sup>602</sup>

The relevant issues ranged from concerns about the interruption of shipments of radioactive sources, e.g., medical isotopes,<sup>603</sup> to nuclear cooperation agreements entered into by Euratom and necessary replacement agreements for the UK, e.g., with Brazil, Argentina, Canada, Japan, and South Korea.<sup>604</sup>

Concerns from the scientific community focused on the UK's participation in EU nuclear research programmes and the shipment of medical isotopes (which are covered by Euratom).<sup>605</sup>

The nuclear safeguarding regime is at the centre of the discussions, given the need to produce a UK-safeguarding regime following Brexatom. As Tromans pointed out in 2018, the UK's "ability to obtain vital nuclear services, material and know-how will depend on the continuity of such arrangements, and, for countries such as the United States, it will be a precondition that the United Kingdom has in place an acceptable system of safeguards, which are currently provided by Euratom."<sup>606</sup>

Whilst the negotiations for a post-Brexatom regime took place largely away from the public eye, there were some who expressed concerns about the ability of the UK to negotiate and implement suitable replacement agreements during the negotiations, chiefly as these took place in a relatively short time span. During the negotiations, Leach and Cowen analysed the possible impact of Brexatom on the nuclear

600 Explanatory Notes to the European Union (Notification of Withdrawal) Act 2017, paragraph 10, available here: <<https://www.legislation.gov.uk/ukpga/2017/9/notes/division/6/index.htm>>

601 See, e.g. Feldman Ulrike, 'Brexit ante portas. UK exits the Euratom treaty as well' (2021) 66 (1) *International Journal of Nuclear Energy*

602 Stephen Tromans & Paul Bowden, "Brexit and Environmental Law: Exit from the Euratom Treaty and its Environmental Implications" (UK: UKELA, 2017) On the post-Brexatom challenges for the UK; Solacolu, Maria-Cristina, *The Relationship Between Euratom And The United Kingdom After Brexit. Challenges of the Knowledge Society* (2018).

603 See, e.g. McKee Martin, 'Why we must stay in the European Atomic Energy Community' *BMJ* (2017) 358 <<https://doi.org/10.1136/bmj.j3527>> (Published 26 July 2017); see also: Rooney, C.M., 2018. Brexit will affect UK's supply of radioisotopes. *BMJ*, 360.

604 See, e.g. Peel Ross and Caroline Jorant, 'Brexatom-The Nuclear Impacts of Brexit on the UK' (2018) <<https://nuclear-21.net/viewpoints/brexatom-nuclear-impacts-brexit-uk/>>

605 Gibney Elizabeth, 'Researchers shocked at UK's plan to exit EU nuclear agency' (2017) *Nature* <<https://www.nature.com/articles/nature.2017.21388>>

606 Tromans Stephen, 'Brexit, Brexatom, the environment and future international relations' (2018) <[https://www.cigionline.org/sites/default/files/documents/Brexit%20Series%20Paper%20no.9\\_1.pdf](https://www.cigionline.org/sites/default/files/documents/Brexit%20Series%20Paper%20no.9_1.pdf)>

liability regime and concluded that failure to negotiate the relevant replacement agreements in time would “risk[s] disruption of international nuclear cooperation and trade, including the provision of resources and know-how in support of the UK waste and decommissioning effort and international movement of waste for treatment.”<sup>607</sup>

Others, such as Callen et al., have expressed concerns about the nuclear safeguard and radiation protection regime and any risks to the same due to Brexit.<sup>608</sup> In their contribution during the Brexatom negotiations, Callen et al. conclude that “the UK has significant gaps in responsibility currently undertaken by Euratom (or other EU institutions) that need to be filled by UK bodies.” Which bodies will assume these responsibilities and what resources will be available remain open questions. Therefore, Callen et al. argue the UK needs to systematically prioritise the question of the safeguard and radiation protection regime “when filling the void of EU/Euratom institutions.”<sup>609</sup>

The role of international law in the regulation of the nuclear sector and its importance for the post-Brexatom relationship between Euratom and the UK has been highlighted by a number of authors, such as Lebedeva<sup>610</sup> and Södersten.<sup>611</sup>

Lebedeva highlights the role of international law in the global nuclear market and concludes that Euratom and Great Britain have laid the legal foundation for further bilateral cooperation in nuclear research, scientific development, exchange of information and technical data in the EU-UK Nuclear Agreement. She concludes that further development of relations between Britain and Euratom (and the continued participation of the UK in Euratom programmes) will be determined by the UK’s position and interests in the global nuclear market, which in turn is governed by international agreements.

Whereas Lebedeva focused on the global nuclear market for power generation purposes, Södersten focused on the consequences of Brexatom for the international nuclear proliferation regime. She concludes that Brexit may mean a significant downscaling of safeguards in the UK as the Euratom safeguards system will no longer apply. She notes that whilst the safeguard system of the International Atomic

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607 Leech Jonathan and Rupert Cowen, ‘Brexit, Euratom and Nuclear Liabilities-18643’ WM Symposia, Inc. (2018) PO Box 27646, 85285-7646 Tempe, AZ (United States).

608 Callen Jessica, Asako Takamasa and Hideki Toma, ‘Insights to the UK’s impending departure from Euratom: Case study of UK nuclear safeguards and radiation protection in light of Brexit’ (2019) *Energy Policy* 129

609 Ibid.

610 Yulia Lebedeva, “‘Brexatom и его правовые последствия’ (Brexatom and its legal consequences), *Vestnik Sankt-Petersburgskogo Universiteta Pravo*’ (2022) 13 (4) <<https://doi.org/10.21638/spbu14.2022.410>>

611 Sodersten Anna, ‘Brexit, Euratom and nuclear proliferation’ (2016) 47 *Nuclear L. Bull.* 98

Energy Agency will continue to apply to the UK, the scope of the IAEA safeguard system might not be as broad as that of Euratom. She concludes, however, that it would be “a clear overstatement to say that Brexit will lead to a risk for nuclear proliferation.”

Whilst Södersten has considered the likely legal effect of Brexatom before the EU-UK Nuclear Agreement entered into force, Truman has analysed the consequences of Brexatom for the United Kingdom after the entry into force of the EU-UK Nuclear Agreement. Truman agrees with both Lebedeva and Södersten on the importance of the international law framework for the nuclear sector post-Brexit. However, this is where the similarities end as Truman points not only to the international agreements the UK has concluded but also to the new British nuclear safeguard regime, which was introduced just prior to the UK leaving Euratom. Truman concludes that it is unlikely that the UK will significantly diverge from the Euratom regime, given the UK will remain bound by the same international nuclear laws and good practices which underpin the current Euratom legislative and regulatory framework.<sup>612</sup>

### 3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT

On 29 March 2017, the government of the United Kingdom formally provided the European Council with a notice (the “Withdrawal Notice”) setting out its intention to withdraw from the European Atomic Energy Community (Euratom) and the European Union. The Government had previously announced its intention to withdraw from the Euratom as well as the European Union—the European Union (Notification of Withdrawal) Act (the “Withdrawal Act”), which received Royal Assent on 16 March 2017, provided the Prime Minister the power to notify, under Article 50(2) of the Treaty on European Union, the United Kingdom’s intention to withdraw from the EU. The explanatory notes to the original bill introduced in the House of Commons on 26 January 2017 clarified that such power “*includes the European Atomic Energy Community (Euratom), as the European Union (Amendment) Act 2008 sets out that the term ‘EU’ includes (as the context permits or requires) Euratom.*”

Further, a policy paper titled “The United Kingdom’s Exit from, and New Partnership with, the European Union”:<sup>613</sup>

612 Truman Ian, *Brexit and Euratom. Brexit and Energy Law* (Routledge 2023)

613 HM Government (n 229).

- Noted “the Euratom Treaty provides the legal framework for civil nuclear power generation and radioactive waste management for members of the Euratom Community” and that “this includes arrangements for nuclear safeguards, safety and the movement and trade of nuclear materials both between Euratom Members such as France and the UK, as well as between Euratom Members and third countries such as the U.S.”; and
- Justified the United Kingdom’s exit from Euratom: “although Euratom was established in a treaty separate to EU agreements and treaties, it uses the same institutions as the EU including the Commission, Council of Ministers and the Court of Justice. The European Union (Amendment) Act 2008 makes clear that, in UK law, references to the EU include Euratom. The Euratom Treaty imports Article 50 into its provisions.”

The purpose of this paper is to examine whether there was a legal requirement for the United Kingdom to withdraw from Euratom (at the same time as it withdrew from the European Union) and the risks of such an exit.

The authors consider that the decision of the Government to withdraw from Euratom is one based on politics, not law, and presents an avoidable risk to the United Kingdom. The consequences for the United Kingdom of remaining in Euratom, post-Brexit, would have been undoubtedly complex but of a technical nature—the consequences would have included negotiating and agreeing on the form, and funding arrangements, for the United Kingdom’s participation in European institutions for the purposes of Euratom only. However, the United Kingdom giving the notice to withdraw from Euratom without having secured replacement arrangements presents a risk of no acceptable replacement arrangements being agreed upon within the two-year notice period,<sup>614</sup> which may affect the Government’s negotiating strength in the overall Brexit discussions and create uncertainty for the industry.

#### 4 OVERVIEW OF THE EURATOM TREATY

The Euratom Treaty was signed in March 1957 (at the same time as the treaty establishing the European Economic Community (EEC), which are together described as the Treaties of Rome), and the two treaties entered into force on 1 January 1958. The original signatories to the Euratom Treaty were Belgium, France, Germany, Italy, Luxembourg, and the Netherlands, and the principal purpose of the founding members was to coordinate resources for the use of nuclear energy for peaceful purposes

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<sup>614</sup> Treaty on European Union, Article 50(3).

and as a means of achieving energy independence (whilst at the same time ensuring the safety and security of supply).

The preamble to the Euratom Treaty notes the parties had resolved “...to create the conditions necessary for the development of a powerful nuclear industry which will provide extensive energy resources...” and Title I to the Euratom Treaty sets out the tasks entrusted to Euratom, which include, inter alia:

- Promotion of research and dissemination of technical information;
- Establishment of uniform safety standards to protect the health of workers and of the general public and ensure that they are applied;
- To make certain, by appropriate supervision, that nuclear materials are not diverted to purposes other than those for which they are intended;
- To exercise the right of ownership conferred upon it with respect to special fissile materials; and
- To ensure wide commercial outlets and access to the best technical facilities by the creation of a common market in specialised materials and equipment, by the free movement of capital for investment in the field of nuclear energy and by freedom of employment for specialists within the Community.

Detailed provisions relating to these aspects are set out in the Euratom Treaty.

No significant amendments have been made to the Euratom Treaty in the last sixty years that it has been in force. At a structural level today, Euratom shares the same institutions (and comprises the same members) as the European Union.<sup>615</sup> There are two additional bodies which perform duties specific to the Euratom Treaty:

- The Supply Agency: the Agency has a right of option on ores, source materials and special fissile materials produced in the territories of member states and an exclusive right to conclude contracts relating to the supply of ores, source materials and special fissile materials coming from inside Euratom or from outside; and
- The Safeguards Office: the Office ensures that there is no diversion of nuclear material from its intended use and that there is compliance with relevant safeguarding obligations in relation to nuclear material.

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<sup>615</sup> Note: Please see section 5.1 below.

## 5 RELATIONSHIP BETWEEN THE EUROPEAN UNION AND EURATOM AND THE MANDATE OF THE UNITED KINGDOM TO WITHDRAW FROM EURATOM

### 5.1 The Institutional Relationship between European Union and Euratom

Broadly speaking, the institutional framework of the Euratom Treaty is similar to that of the EU Treaties (i.e., the Treaty on European Union and the Treaty on the Functioning of the European Union) and uses the same institutions such as the Council, the Commission, the Parliament (and the European Court of Justice and the European Court of Auditors). However, legally speaking, Euratom is a separate institution (constituted under the Euratom Treaty) from the European Union (which is constituted under the Treaty on European Union), and they have separate legal personalities.

The competences of the various institutions referred to above are principally set out in the EU Treaties (in relation to the European Union) and the Euratom Treaty (in relation to Euratom). Instead of repeating the various relevant provisions on the institutional framework set out in the EU Treaties, the Euratom Treaty simply refers (at Article 106a) to the relevant provisions in the EU Treaties and notes that such provisions are applicable in the Euratom Treaty (meaning that such institutions exercise their powers in relation to Euratom on the basis of the competences provided under the Euratom Treaty).

For instance, Article 106a of the Euratom Treaty incorporates the mechanism set out in Article 50 of the Treaty on European Union—this means that if the United Kingdom wished to withdraw from Euratom, there is a separate process from Article 50 process, and the United Kingdom needed to provide a notice under Article 106a of the Euratom Treaty.

If the United Kingdom had decided to exit the European Union but remain a member of Euratom, in a technical sense, the United Kingdom would have continued to be subject to the same institutional framework as before (given the institutional framework for Euratom is derived from the Euratom Treaty to which the United Kingdom will still remain a member). However, from a practical perspective, this would have caused some institutional complexities (for instance, amendments may have been required to reduce bureaucratic and other processes to which the United Kingdom no longer needed to be subject owing to its withdrawal from the European Union<sup>616</sup>), but these institutional complexities would not have been insurmountable.

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616 Note: Please see section 6 below.

## 5.2 Mandate of the United Kingdom to Withdraw from Euratom

It is questionable whether the Government currently has the mandate to serve notice to exit Euratom on two grounds:

- Firstly, the question of leaving Euratom, which is legally separate from the European Union and has its own legal personality, was not expressly put to the British people in the Referendum (and nor are the authors aware of any references to Euratom in any relevant Government papers or consultations); and
- Secondly, as a matter of law, the European Union Referendum Act 2015 did not use the term “the EU” (which includes Euratom) but instead used the term “the European Union” (which does not extend to Euratom).

Additionally, in order for the United Kingdom to withdraw from Euratom, the United Kingdom needed to provide a notice under Article 106a of the Euratom Treaty (and not Article 50(2) of the Treaty on European Union, which is what the Withdrawal Act seeks to do). The wording of the Withdrawal Notice in this respect is not very clear either, as it appears to suggest that the operative provision underpinning such withdrawal is Article 50(2) of the Treaty on European Union, and this may potentially give rise to an argument that the Withdrawal Notice is not an effective notice for the purposes of the United Kingdom withdrawing from Euratom.

## 6 POTENTIAL CONSEQUENCES IF THE GOVERNMENT DECIDES TO WITHDRAW FROM EURATOM

The difference between difficulties caused to the nuclear industry by exiting Euratom and difficulties caused to other industries by Brexit (more generally) is that whilst for the latter, import and export may become more expensive and difficult, for the nuclear industry, import and export becomes illegal (if no seamless replacements are agreed). There are serious consequences for the civil nuclear generation sector (and therefore consumers), potentially resulting in, as evidenced before, the Business, Energy and Industrial Strategy Committee, UK nuclear power stations being forced to close.<sup>617</sup>

The creation of these risks may affect the government’s negotiating strength in the overall Brexit discussions and creates uncertainty for the industry especially

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<sup>617</sup> Business, Energy and Industrial Strategy Committee (n 455).

given that the process to agree on replacement arrangements are likely to be complicated.<sup>618</sup>

- Agreeing on a replacement arrangement between (i) the United Kingdom and Euratom requires a qualified majority (i.e., at least 55% of the members of the Council representing European Union member states comprising at least 65% of the total European Union population must vote in favour); (ii) the United Kingdom and a Euratom member state effectively requires the consent of Euratom; and (iii) the United Kingdom and non-Euratom countries (such as USA or Canada) requires the United Kingdom to satisfy the legal and policy requirements of those countries, such as in relation to the export of nuclear materials and equipment;
- In particular, the United Kingdom is likely to have to put in place an IAEA-approved safeguarding regime in order to satisfy the requirements of other countries (currently, the United Kingdom safeguarding regime is run and staffed by Euratom, and the United Kingdom does not have its own regime); and
- The “exit clock” starts ticking from the moment the United Kingdom serves a notice to exit Euratom — unless the European Council agrees to an extension, the United Kingdom will need to agree on replacement arrangements (and the new safeguard regime, which is likely to be the basis of the new arrangements) alongside, of course, negotiating all the trade arrangements as a result of Brexit, within a two-year window if it wishes to avoid any adverse impact.

In addition to the civil nuclear industry, there may also be an impact on other industries, such as the nuclear decommissioning industry, difficulties for nuclear medicine and equipment, and impact on industries that use radioactive materials, such as the automobile, aeronautics, and mining and petroleum industries (and the consequential loss of jobs in such sectors and impact on their supply chains).

## **7 POTENTIAL CONSEQUENCES HAD THE UNITED KINGDOM DECIDED TO REMAIN IN EURATOM?**

Had the United Kingdom decided to exit the European Union but remain a member of Euratom:

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<sup>618</sup> Note: Replacement arrangements will be required both in respect of other members of Euratom exporting materials to the United Kingdom as also in respect of the other countries which have agreements for nuclear exports with Euratom rather than with the United Kingdom.



- From a practical perspective, the United Kingdom would have needed to negotiate and make changes to the Euratom Treaty to reflect that the United Kingdom was subject to the institutional arrangements solely for the purposes of the Euratom Treaty;
- A format would have been needed for continued engagement of the United Kingdom with European Union institutions in relation to Euratom;
- As part of this discussion, the United Kingdom may have looked to revisit the basis on which the United Kingdom's representatives in the relevant institutions were elected or nominated, given that these persons would have had a role only in respect of the United Kingdom's membership in Euratom; and
- The financial arrangements could have been amended to allow the United Kingdom to contribute (as a non-European Union country) to the budget of Euratom. Arrangements for such a contribution by the United Kingdom to the Euratom budget would have been assisted by the fact that the Euratom budget is already separate today.

## 8 CONCLUSION

The authors consider that the risks outlined above (posed by the Government's decision to withdraw from Euratom) are unnecessary risks to run, especially at this stage of the negotiation process, and these risks could have been avoided even if the United Kingdom's policy position remained withdrawal from Euratom.

A potential solution which would have fulfilled the policy aim of the United Kingdom withdrawing from Euratom but would not have necessitated agreement of replacement arrangements with time ticking on the two-year notice period (and in the midst of the wider Brexit negotiations, with the United Kingdom politically vulnerable on this issue) would have been:

- To state in the Article 50 notice that exiting Euratom posed separate complex issues which needed to be explored and that no decision had yet been taken (echoing the words of the Secretary of State for Exiting the European Union, Mr David Davis, who noted in Parliamentary discussions that the Government will show flexibility and “*have the most open mind possible*” in its discussions relating to the exit of the United Kingdom from Euratom);<sup>619</sup>

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619 House of Commons, ‘European Union (Notification of Withdrawal) Bill, vol 620: debated on Tuesday 31 January 2017’ <[https://hansard.parliament.uk/commons/2017-01-31/debates/C2852E15-21D3-4F03-B8C3-F7E05F2276Bo/EuropeanUnion\(NotificationOfWithdrawal\)Bill](https://hansard.parliament.uk/commons/2017-01-31/debates/C2852E15-21D3-4F03-B8C3-F7E05F2276Bo/EuropeanUnion(NotificationOfWithdrawal)Bill)>

- To seek replacement arrangements with Euratom, relevant Euratom and non-Euratom countries (as the case may be); and
- When (and only when) replacement arrangements had been agreed upon, to provide notice to exit Euratom under Article 106a of the Euratom Treaty. The withdrawal could have been effective in less than two years, potentially at the same time as exit from the European Union.

Under this solution, the negotiations on the replacement arrangements could have taken place without the binding two-year window (and without the impacted industries enduring uncertainty until the new arrangements were successfully in place) and presented a practical route to balancing the Government's policy requirements with ensuring that there was no adverse impact on various industry stakeholders.

# CHAPTER 5:

## UK DE-COUPLED:

### BREXIT AND THE ENERGY MARKET

As for the other Constituting Manuscripts, the first section of this chapter offers a contextualisation of the Constituting Manuscript within the Brexit Process. Specifically, chapter 5 provides a general overview of the energy provisions in the TCA. Moreover, the contextualisation in section 1 is completed by a literature review concerning the main aspects within the Constituting Manuscript in section 2. This overarching literature completes the literature review provided in the Constituting Manuscript, which, due to word limitations accompanying its publication, needed to be focussed. The Constituting Manuscript, as previously published, starts in section 3 of this chapter.

#### 1 OVERVIEW

Chronologically, the constituting manuscript included as Chapter 5 of this dissertation is the first article which was written after the coming into force of the TCA. As such, it is the first of the Constituting Manuscripts to focus on the normative framework of the TCA and certain aspects of the EU-UK Nuclear Agreement and to consider the implementation of the provisions of the TCA in as far as they concern the energy sector.

This chapter was originally written following a presentation on Brexit and the energy sector given as part of the 2020 European energy law seminar of the Dutch Energy Law Association (“NeVER”) and first published in the *European Energy Law Report*.<sup>620</sup> It briefly contextualises the TCA by reference to other free trade models that would have been possible and therefore references the models for such trade agreements referenced in the articles constituting chapters 2 and 3 of this dissertation.

As this chapter is the first to consider the TCA, it provides a general legal overview of the same and is probably the widest ranging of the Constituting Manuscripts.

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<sup>620</sup> Silke Goldberg, ‘Brexit and the Energy Market: The UK Decoupled’ in Martha M Roggenkamp and Catherine Banet (eds), *European Energy Law Report Volume XIV* (Intersentia 2021) 11-29.

It acts as an “omnibus” article, which captures most of the major energy themes of the Brexit negotiations reflected in chapters 2-4.

It explains the TCA structure, its overall governance features, newly created institutions, and decision-making fora (e.g., the Joint Partnership Council or the Specialised Committee on Energy), as well as special features such as the “level-playing-field mechanism.”

It summarises some of the key elements of the TCA which impact the energy sector. In particular, it considers regulatory issues pertaining to energy market governance, such as the relationship between Ofgem, the British national regulatory authority for energy, and the EU Agency for the Cooperation of Energy Regulators as well as the future participation (or otherwise) of the relevant British companies in EU fora, such as the European Network of Transmission System Operators for Electricity and Gas.

Chapter 5 is the only of the Constituting Manuscripts to consider the climate change and carbon market provisions of the TCA in some detail, with special reference to the creation of the UK Emission Trading Scheme (ETS) following the exit of the UK from the EU ETS and related carbon pricing considerations. Whilst these matters are arguably not part of the “core” energy issues of the TCA, they are nonetheless important to the energy sector, as many British energy sector companies were subject to the EU ETS, and a clear transition to the UK ETS was essential so as not to cause any uncertainty in relation to the relevant compliance obligations of the companies on the one hand, and the climate change commitments made by the UK in the TCA on the other hand.

As the Single Electricity Market on the island of Ireland was one of the major themes identified in the Brexit negotiation phase, chapter 5 also considers the Ireland/Northern Ireland Protocol to the Withdrawal Agreement, which provides the basis for the continued operation of the Single Electricity Market after 1 January 2021.

In relation to the nuclear sector, the article briefly discusses the EU-UK Nuclear Agreement and new British legislation, which had become necessary as a result of Brexatom.

Chapter 5 concludes that whilst Brexit ‘did get done’ on 31 January 2020 in a formal sense, the UK will continue to negotiate various aspects of its relationship with the EU on a near-permanent basis. This is due to the TCA’s ‘skinny’ scope and its architecture which provides for a series of regular review dates and interim deadlines to negotiate further issues.

Chapter 5 also concludes that TCA is unprecedented compared to other free trade agreements in that it was, from the outset, designed as an agreement designed to facilitate the further separation and distancing of the two parties from a common basis, i.e., the *acquis communautaire*. The chapter also concludes that the TCA

brings uncertainty for the energy sector and highlights that the energy provisions of the TCA are to cease to apply on 30 June 2026 unless the Partnership Council decides on an annual basis that they should continue to apply.

Please note that this chapter was written prior to the “legal scrubbing” of the TCA; article references, therefore, reflect that version of the TCA and are different to those used in chapters 6 and 7.

## 2 KEY ISSUES AND LITERATURE

By way of an introduction to chapter 5 of this dissertation, this section briefly touches on key issues and literature pertaining to the TCA as adopted and entered into force. Chapter 5 discusses, in several instances, the necessary “implementation” of the TCA, and as such, it is appropriate to briefly discuss key issues pertaining to the implementation of the TCA in subsection (A) below.

As Chapter 5 is the only chapter which discusses the UK’s exit from the EU ETS and the creation of the UK ETS, subsection (B) highlights some of the key issues and literature pertaining to this topic.

### 2.1 Implementation of the TCA

The potential models for a post-Brexit agreement between the UK and the EU have been discussed in detail in chapter 2 and section 4 of this chapter. Following the adoption of the TCA, the question of its formal and practical implementation arises.

The TCA is an instrument of international law and, for EU law purposes, an Association Agreement. As Laffan et al. have argued, “negotiating and ratifying the treaties was just the beginning of a new and different phase of Brexit,”<sup>621</sup> and in international agreements, this phase requires ongoing mutual engagement by the relevant parties to manage the relationship and fill the treaties with life.<sup>622</sup>

Laffan et al. have noted that international agreements have to be transformed into a “living system.”<sup>623</sup> The first step in implementing international agreements and transforming them into such a living system is arguably their ratification, to the extent required by the relevant parties’ constitutions.

621 Laffan Brigid and Stefan Telle, *Brexit Is Far from Done: Implementation of the Agreements. The EU’s Response to Brexit: United and Effective* (Cham: Springer International Publishing 2023).

622 Cooley Alexander and Hendrik Spruyt, ‘Contracting states. Contracting States’ (Princeton UP 2009)

623 Laffan, *ibid*, p. 215

## 2.1 Ratification and transposition

### 2.2.1 In the EU

For the EU, there are two possibilities for entering into international agreements: jointly with its Member States in so-called “mixed agreements;” and alone in so-called “EU-only” agreements.<sup>624</sup>

The choice of whether an agreement is entered into as a “mixed agreement” or an “EU-only agreement” depends on the subject matter of the relevant agreement: if the subject matter of a part of an international agreement falls partly within the EU’s exclusive competence, and other parts of the relevant agreement fall within Member States’ reserved competence (that may be shared with the EU), then the relevant agreement is deemed to be a “mixed agreement,” and both the EU and the Member States enter into the same with the relevant third country.<sup>625</sup>

Mixed agreements require ratification by the EU Member States in order to enter into force. This is not the case with EU-only agreements, which become, from their entry into force, “an integral part of the European legal order”<sup>626</sup> and acquire the rank of EU law in Member States’ legal orders “without any act of national incorporation.”<sup>627</sup> As a result, EU-only agreements have supremacy over the domestic law of EU Member States, who in turn have to comply with the provisions of the relevant international agreement qua EU law.<sup>628</sup>

If the subject matter of an agreement falls within the exclusive competence of the EU, then the EU enters into the relevant agreement alone, as a mixed agreement is legally excluded. As van der Loo and Wessel have pointed out, such agreements may cover “a priori exclusive Union competences, identified by Article 3(1) TFEU, and/

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624 Wessel Ramses A, *The EU as a party to international agreements: shared competences, mixed responsibilities*. In *Law and practice of EU external relations: salient features of a changing landscape* (CUP 2008)

625 On mixed agreements as a source of EU law, see e.g. Neframi Eleftheria, *Mixed agreements as a source of European Union law*. In *International Law as Law of the European Union* (Brill Nijhoff 2012)

626 This principle extends to acts adopted by institutions created by such agreements as held in ECJ case law: see, e.g., Case 30/88, *Hellenic Republic v. Commission of the European Communities*, [1989] ECR 3711, at para. 13; case 181/73, *R. & V. Haegeman v. Belgian State*, [1974] ECR 449, and for customary international law Case C-162/96, *A. Racke GmbH & Co. v. Hauptzollamt Mainz* [1998] ECR I-3688; and Joined Cases 21–24/72, *International Fruit Company NV and others v. Produktschap voor Groenten en Fruit*, [1972] ECR 1272, at paras 4–6.

627 Francesca Martines, ‘Direct effect of international agreements of the European Union’ (2014) 25 (1) *European Journal of International Law* <<https://doi.org/10.1093/ejil/chuo07>>

628 Francesca Martines, *ibid.*

or supervening Union exclusive competences, through the operation of the so-called ERTA doctrine and Opinion 1/76 principles, enshrined in Article 3(2) TFEU.”<sup>629</sup>

As the TCA is technically an EU association agreement, and association agreements “are in practice almost always concluded as mixed agreements,”<sup>630</sup> it might have been expected that the TCA be concluded as a mixed agreement (although this is not a legal requirement, as Peers notes).<sup>631</sup>

However, the TCA was entered into as an “EU-only” agreement, as the Council Decision regarding its conclusion explains: “[i]n view of the exceptional and unique character of the Trade and Cooperation Agreement, which is a comprehensive agreement with a country that has withdrawn from the Union, the Council is hereby deciding to make use of the possibility for the Union to exercise its external competence with regard to the United Kingdom.”<sup>632</sup>

One can speculate as to the underlying political reasons for this — perhaps the EU wished to avoid a repeat of the Dutch Referendum on the EU-Ukraine association agreement<sup>633</sup> or the initial objection of the regional Walloon parliament against the agreement between the EU and Canada.<sup>634</sup> As Wessel has pointed out, the non-ratification of mixed agreements creates so-called “incomplete” mixed agree-

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629 Guillaume Van der Loo, Ramses A. Wessel, ‘The non-ratification of mixed agreements: Legal consequences and solutions’ (2017), 54, *Common Market Law Review* <<https://kluwerlawonline.com/journalarticle/Common+Market+Law+Review/54.3/COLA2017059>>

630 Steve Peers, ‘So close, yet so far: The EU/UK Trade and Cooperation Agreement’ (2022) 59 (1) *Common Market Law Review* <<https://kluwerlawonline.com/journalarticle/Common+Market+Law+Review/59.1/COLA2022004>>

631 *Ibid.*

632 Council Decision (EU) 2021/689 of 29 April 2021 on the conclusion, on behalf of the Union, of the Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland, of the other part, and of the Agreement between the European Union and the United Kingdom of Great Britain and Northern Ireland concerning security procedures for exchanging and protecting classified information, O.J. 2021, L 149/2, Recital 3.

633 In April 2016, over 61% of Dutch voters opposed the association agreement between the EU and the Ukraine in an advisory referendum. For more detail, see e.g. Van der Loo, Guillaume, “The Dutch Referendum on the EU-Ukraine Association Agreement Legal options for navigating a tricky and awkward situation” CEPS commentary, <<https://www.ceps.eu/wp-content/uploads/2016/04/PrtV%20GvdL%20Dutch%20Referendum.pdf>>

634 In October 2016, the Walloon parliament objected to EU-Canada agreement. See e.g. <<https://www.politico.eu/article/walloon-parliament-rejects-ceta-deal/>> For a detailed assessment of the implications of regional parliaments’ participation in the ratification of EU trade deals, see e.g. Bollen Yelter, Ferdi De Ville, and Niels Gheyle, *From Nada to Namur: National parliaments’ involvement in EU trade politics and the case of Belgium*. In: *The multilevel politics of trade* (University of Toronto Press, 2020)

ments with a number of legal difficulties in relation to their (delayed) entry into force.<sup>635</sup>

EU-only agreements require ratification by the European Parliament. In the case of the TCA, the relevant vote occurred on 27 April, and the TCA entered into force on 1 May 2021.<sup>636</sup>

TCA has been applied provisionally since 1 January 2021 to avoid any further uncertainty or disruption as a result of the European Parliament's period of scrutiny and deliberations in relation to the TCA.<sup>637</sup>

## 2.2.2 In the UK

In the UK, no parliamentary ratification is required as the conclusion of international agreements falls within the doctrine of the "Royal Prerogative"<sup>638</sup> and, therefore, within the vires of the government.

The Royal Prerogative is a key mechanism in UK constitutional law and practice. It is historically derived from prerogative powers inherently within the purview of the medieval king in his capacity as the head of the realm. Despite the Royal Prerogative being an established feature within UK legal and political life, it has no uniformly accepted definition, and its very existence and scope is a matter of common law, i.e., the question as to the existence of a prerogative power is ultimately for the courts to decide.<sup>639</sup>

Historically, Dicey referred to it as "the remaining portion of the Crown's original authority, and it is therefore ... the name for the residue of discretionary power left at any moment in the hands of the Crown, whether such power is in fact exercised by the King himself or by his Ministers."<sup>640</sup>

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635 Guillaume Van der Loo, Ramses A. Wessel, 'The non-ratification of mixed agreements: Legal consequences and solutions' (2017) 54 (3) *Common Market Law Review* <<https://kluwerlawonline.com/journalarticle/Common+Market+Law+Review/54.3/COLA2017059>>

636 "Parliament formally approves EU-UK trade and cooperation agreement", press statement of the European Parliament of 28 April 2021 <<https://www.europarl.europa.eu/news/en/press-room/20210423IPRO2772/parliament-formally-approves-eu-uk-trade-and-cooperation-agreement>>

637 On the role of the European Parliament in the Brexit process, see e.g. Lord Christopher, *The European Parliament and Brexit*. In *Handbook on the European Union and Brexit* (Edward Elgar Publishing 2023)

638 On the Royal Prerogative generally and a critical appraisal of the same, see Hazell, Robert and Timothy Foot, *Executive Power: The Prerogative, Past, Present and Future*. (Bloomsbury Publishing 2022).

639 Ministry of Justice, 'Review of the Executive Royal Prerogative Powers: Final Report' (2009) paras 26 & 27

640 A.V. Dicey, *An Introduction to the study of the Law of the Constitution* (10<sup>th</sup> Edn, 1959)



Wessel has pointed out that this method of ratification might seem to point to a democratic deficit.<sup>641</sup> This argument was raised in the debate as to whether the Article 50 Notice would fall within the remit of the Royal Prerogative or whether further parliamentary scrutiny was required for such an act and led to a legal challenge in the UK Supreme Court, in the case of *R (on the application of Miller) v. Secretary of State for Exiting the European Union*.<sup>642</sup> In this case, the Supreme Court judges defined the prerogative as encompassing the “residue of powers which remain vested in the Crown, and they are exercisable by ministers, provided that the exercise is consistent with Parliamentary legislation.”<sup>643</sup>

No similar challenge arose in relation to the ratification of the TCA by the UK Government in application of the Royal Prerogative. However, perhaps to ensure that no last-minute legal challenge in relation to the ratification of the TCA could arise, on 30 December 2020, the European Union (Future Relationship) Act 2020 (EUFRA)<sup>644</sup> was introduced to both the House of Commons and the House of Lords and adopted by both houses of Parliament, and Royal Assent was received on 31 December 2021.

### 2.3 (In-) Direct Effect of the TCA?

It is one of the central features and key innovations of EU law that its primary and secondary law can be invoked directly by private parties and create directly effective rights and obligations for private parties and that these rights and obligations, in turn, are enforceable in the domestic law of the relevant private party<sup>645</sup> (provided this domestic law is one of a Member State of the EU).<sup>646</sup> This principle laid the

641 On EU association agreements in the context of Brexit, see, e.g. Larik, Joris, and Wessel, Ramses: “The EU-UK Trade and Cooperation Agreement: forging partnership or managing rivalry”, in: Łazowski, Adam, and Cygan, Adam (eds.) “Research Handbook on Legal Aspects of Brexit”, Elgar 2022, page 127

642 *R (on the application of Miller and another) (Respondents) v Secretary of State for Exiting the European Union* (Appellant), [2017] UKSC 5 On appeals from: [2016] EWHC 2768 (Admin) and [2016] NIQB 85 The judgment is available here: < <https://www.supremecourt.uk/cases/docs/uksc-2016-0196-judgment.pdf>>

643 *Ibid*, para 47

644 European Union (Future Relationship) Act 2020, 2020 c 29, available here: <<https://www.legislation.gov.uk/ukpga/2020/29/introduction?timeline=false>>

645 On the enforcement of EU law in domestic courts, see e.g. Leczykiewicz Dorota, *Effectiveness of EU law before national courts: direct effect, effective judicial protection, and state liability* Oxford Handbook of European Union Law (OUP 2015), Oxford Legal Studies Research Paper 52 (2014).

646 *NV Algemene Transport- en Expeditie Onderneming van Gend & Loos v Netherlands Inland Revenue Administration* Case 26-62

foundation for an EU-level autonomous “legal order with more power than traditional treaties; and a system of individual rights and duties.”<sup>647</sup>

Direct effect and judiciability of EU law were important factors in creating certainty in that private parties can rely on the legal provisions and trust they will be enforced where necessary.<sup>648</sup> One of the fundamental principles behind this approach is the argument that EU secondary law would be deprived of its practical application (namely, its “effet utile”)<sup>649</sup> if Member States could delay or otherwise undermine its transposition and application.<sup>650</sup>

By contrast, the TCA states explicitly that its provisions are not directly applicable:

Article 5(1) of the TCA provides that “... *nothing in this Agreement or any supplementing agreement shall be construed as conferring rights or imposing obligations on persons other than those created between the Parties under public international law, nor as permitting this Agreement or any supplementing agreement to be directly invoked in the domestic legal systems of the Parties.*”

Article 5(2) reinforces this by stating that “*a Party shall not provide for a right of action under its law against the other Party on the ground that the other Party has acted in breach of this Agreement or any supplementing agreement.*”

In relation to the judiciability of the TCA provisions, Article 3 specifies explicitly that it does “not establish an obligation to interpret [the] provisions in accordance with the domestic law of either Party.” The only exemptions to this exclusion are certain provisions pertaining to social security and certain elements of cooperation between the EU and the UK in relation to the enforcement of criminal matters.<sup>651</sup>

Compared to the EU regime, this will be a change chiefly for the UK in that the legal provisions which govern its relations with the EU will no longer have a direct

647 Chalmers Damian and Luis Barroso, ‘What Van Gend en Loos stands for’ (2014) 12 (1) International journal of constitutional law

648 On direct effect and its judiciability, see e.g. Borchardt, Klaus Dieter, “Die rechtlichen Grundlagen der Europäischen Union”, UTB 2020. On direct effect, in particular the possibility of imposing legal obligations through this mechanism on private parties, see e.g. Squintani, Lorenzo and Justin Lindeboom, ‘The Normative Impact of Invoking Directives: Casting Light on Direct Effect and the Elusive Distinction between Obligations and Mere Adverse Repercussions’ (2019) Yearbook of European Law 38

649 On “effet utile”, see e.g. Liakopoulos, Dimitris, ‘Character of effet utile and interpretation of EU law through CJEU jurisprudence’ (2020) *Cadernos de direito actual* 13

650 See also Case C-188/89 *Foster v British Gas* [1990], <<https://curia.europa.eu/juris/liste.jsf?num=C-188/89>>

651 Article 3 TCA, see also Larik, Joris, and Wessel, Ramses: “The EU-UK Trade and Cooperation Agreement: forging partnership or managing rivalry”, in: Łazowski, Adam, and Cygan, Adam (eds.) “Research Handbook on Legal Aspects of Brexit”, Elgar 2022, page 129.

effect, but arguably, for the EU, the non-direct effectiveness of the TCA is not necessarily a change in direction compared to other free trade agreements which it has concluded.

Semertzi argues that the “explicit preclusion of direct effect is one of the most remarkable features” of the free trade or bilateral trade agreements the EU has concluded since 2008. From this perspective, the preclusion of any direct effect of the TCA would be in keeping with the EU’s recent approach.<sup>652</sup>

Eeckhout has likewise noted the absence of any direct effect of the TCA.<sup>653</sup> But argued that whilst Articles 3 and 5 might look to be conclusive as to the exclusion of any direct effect of the TCA, Section 29 (1), EUFRA might offer a way to apply the TCA directly.

Section 29(1) provides: “[e]xisting domestic law has an effect on and after the relevant day with such modifications as are required for the purposes of implementing in that law the Trade and Cooperation Agreement or the Security of Classified Information Agreement so far as the agreement concerned is not otherwise so implemented and so far as such implementation is necessary for the purposes of complying with the international obligations of the UK under the agreement.”

The interpretation of section 29 (1) is complex.<sup>654</sup> Eeckhout has posited that section 29 (1) might allow for an interpretation that would enable UK courts to give effect to the TCA, even when that means overriding any ‘existing domestic law’. This is debatable, as Craig<sup>655</sup> has stated. Arguably, section 29(1) EUFRA merely provides an interpretive direction and obligation to read UK law in line with the UK’s international law obligations flowing from the TCA. I agree with both Eeckhout and Craig that a wider reading of section 29 (1) EUFRA beyond a mere obligation to interpret UK law in line with the TCA is certainly possible; however, it is not certain that it would go as far as to imply any direct effect.

Given the complexity and vagueness of the drafting of this section (e.g., “implementation” is not a defined term), its exact meaning and impact on the UK interpretation of the TCA would need to be tested by the UK courts in due course. In any event, even if the UK courts were to find that Section 29 (1) EUFRA might be a legal basis for the direct application of the TCA, this is unlikely to have any bearing on

652 On the direct effect or otherwise of free trade agreements entered into by the EU, see e.g. Semertzi Aliko, ‘The preclusion of direct effect in the recently concluded EU free trade agreements’ (2014) 51 (4) *Common Market Law Review*

653 Eeckhout Patrick, ‘Brexit Sovereignty and its Dead Ends’ (2022) *Global Policy*, 13.

654 Craig Paul P, ‘Brexit a Drama, The Endgame-Part II: Trade, Sovereignty and Control.’ *The Endgame-Part II: Trade, Sovereignty and Control* (February 4, 2021) (2021).

655 Craig, *ibid*, page 27

the position of the EU, given both the wording of the TCA and the EU's recent practice in relation to bilateral free trade agreements.

## 2.4 Breathing life into the TCA?

Once an international agreement has been ratified and transposed into national law (to the extent required), the parties need to move to the next stage, the practical implementation, act in accordance with the relevant agreement and thereby “breathe life into it.”<sup>656</sup>

The Specialised Committees created by the TCA have a particular role in the implementation of the TCA.<sup>657</sup> However, it seems that the Specialised Committee has not yet found its stride: as of spring 2023, it has only met four times and not taken any substantive decisions. Its most recent decision (see also Section 8.7.2) is a recommendation that the parties request that their TSO deliver further information so that the (already behind schedule by over a year) work on the electricity trading arrangements can continue. The very formulation of the decision suggests that the working relationship between the EU and the UK is anything but smooth and easy.

As Laffan has noted, the UK and the EU are not pursuing a joint project, the TCA is not leading to further integration or the achievement of a common goal of the parties.

Therefore, implementation of the TCA might prove to be harder than expected as progress in the practical implementation cannot be expressed in measurable steps towards a common objective. Instead, the parties might understand the implementation of and compliance with the TCA as the “tracking and monitoring divergence and seeking compliance on the [Protocol].”<sup>658</sup>

This is arguably rooted in the very objective of Brexit—taking control and drawing a line under its membership in the EU (see section 2.3.3 above)—as a result of which the “United Kingdom resisted alignment” with the EU,<sup>659</sup> and in turn this resistance has led to “a shallow trade agreement”<sup>660</sup> the “thinness [of which] cannot be overstated.”<sup>661</sup>

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656 Laffan et al, op cit.

657 On the Specialised Committees and their role in the governance structure of the TCA, see e.g. Fella, S. and Butchard, P., 2021. *The UK-EU Trade and Cooperation Agreement: governance and dispute settlement*, and Laffan, et al, op. cit. p. 245

658 Laffan, op. cit.

659 Eeckhout Piet, ‘Brexit after the negotiation of the trade and cooperation agreement: who takes back control of what?’ (2021) 25 (68) *Revista de Derecho Comunitario Europeo*

660 Ibid.

661 Laffan, op. cit.

In addition, compliance with and the re-negotiation of the Protocol has been identified by several contributors as a particular obstacle to the implementation of the TCA<sup>662</sup> and the Withdrawal Agreement.<sup>663</sup>

Looking ahead and accepting for these purposes the posit that cooperation between the UK and EU was hampered by political disagreements in relation to the Protocol, it remains to be seen whether the adoption of the Windsor Framework<sup>664</sup> will change these dynamics and lead to better cooperation and ultimately implementation of the TCA.

## 2.5 The UK ETS

Many academic contributions to emissions trading come from the field of economics and policy, with some legal contributions concentrating on selected legal or regulatory topics in relation to emissions trading or the design of ETS.<sup>665</sup>

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662 Laffan, op cit. p. 247

663 Schiek, Dagmar G., Brexit and the Implementation of the Withdrawal Agreement (March 10, 2021). Brexit Institute Working Paper Series, No 9/2021, Available at SSRN: <<https://ssrn.com/abstract=3801909>> or <<http://dx.doi.org/10.2139/ssrn.3801909>>

664 The text of the Windsor Framework is available here: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1145694/Decision\\_of\\_the\\_Withdrawal\\_Agreement\\_Joint\\_Committee\\_on\\_laying\\_down\\_arrangements\\_relating\\_to\\_the\\_Windsor\\_Framework.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1145694/Decision_of_the_Withdrawal_Agreement_Joint_Committee_on_laying_down_arrangements_relating_to_the_Windsor_Framework.pdf)> For an early commentary on the same, see e.g. Marcin Szczepanski, ‘*The Windsor Framework, EPRS: European Parliamentary Research Service*. (2023) <<https://policycommons.net/artifacts/3495505/the-windsor-framework/4296102/>>

665 For a recent and concise introduction to emissions trading world-wide see e.g. Woerdman, E. and Y. Zeng (2021), ‘Electricity production and greenhouse gas emissions trading’, in: Roggenkamp Martha M., Kars J. de Graaf, and Ruven C. Fleming, eds, *Energy Law, Climate Change and the Environment* (Edward Elgar Publishing 2021). For an extensive overview of emissions trading design issues see e.g. Weishaar, S.E. ed., 2016. *Research handbook on emissions trading*. Edward Elgar Publishing, which contains a range of contributions from an economic, policy and legal perspective. For an early discussion of the legal nature of emission allowances, see e.g. Goldberg, S., Knox, J., van Angeren, J.R. and Stötzel, M., 2007. “The Legal Nature of CO<sub>2</sub> Allowances Under the European Union Emission Trading Scheme-A Multi-Jurisdictional Approach” in *Oil, Gas & Energy Law*, 5(2); for an update of this discussion see e.g. M. Ballesteros et al (2019), Legal nature of EU ETS allowances, Brussels: Milieu Ltd (prepared for the European Commission). For issues pertaining to regulatory competence in the EU ETS, see e.g. van Zeven, “The Allocation of Regulatory Competence in the EU Emissions Trading Scheme” Cambridge 2014.

Emissions trading has long been established as a policy tool to reduce greenhouse gas emissions,<sup>666</sup> and ETS has been a central element in implementing related emission reduction targets, for instance, under the Kyoto Protocol.<sup>667</sup>

Historically, the UK had its own ETS from 2003–2005.<sup>668</sup> This served as a pre-runner or trial run for the EU ETS, which is a key pillar of EU climate policy.<sup>669</sup> The UK was a very active participant in the EU ETS and “a large importer of emission permits,”<sup>670</sup> had one of the most active national registries,<sup>671</sup> and was “a crucial hub for the exchange of allowances in the market.”<sup>672</sup>

The UK’s role in the EU ETS (and its concurrent reliance on the same as a policy tool) translated into some concern pre-TCA that the UK might not be able to meet its climate change targets or that meeting the same would be more costly. Tol estimates the potential additional cost at 0.2 to 0.4 percent of the gross domestic product in addition to any transition costs arising from leaving the EU ETS and setting up a UK alternative.<sup>673</sup>

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666 On the emissions trading as a policy tool generally and the application of the same in Europe, see e.g. Woerdman Edwin, ‘Path-dependent climate policy: the history and future of emissions trading in Europe. *European Environment*’ (2004) 14 (5). On the concept of ETS from a legal perspective, see e.g. Stavang Juris Endre, ‘Property in emissions? Analysis of the Norwegian GHG ETS with references also to the UK and the EU’ (2005) 17 (5) *Environmental Law & Management*

667 On legal aspects of emissions trading as a tool for implementing the Kyoto Protocol, see e.g. Freestone David and Charlotte Streck eds., *Legal aspects of implementing the Kyoto Protocol mechanisms: making Kyoto work*. (OUP 2005). For a critical perspective on the efficiency of emissions trading see e.g. Woerdman Edwin and Andries Nentjes, ‘Emissions trading hybrids: the case of the EU ETS’ *Review of Law & Economics* (2019)15 (1).

668 On the historic UK ETS, see e.g. von Malmborg Fredrik and Peter A. Strachan, ‘Climate policy, ecological modernization and the UK emission trading scheme’ (2005) 15 (3) *European Environment*; Hill Malcolm, Laurie McAulay and Adrian Wilkinson, ‘UK emissions trading from 2002–2004: Corporate responses’ (2005) 16(6) *Energy & environment*.

669 For an introduction and critical overview of the EU ETS, see e.g. Verbruggen Aviel, Erik Laes, and Edwin Woerdman, ‘Anatomy of emissions trading systems: what is the EU ETS?’ (2019) *Environmental Science & Policy* 98

670 Tol, R.S., 2018. Policy brief—Leaving an emissions trading scheme: implications for the United Kingdom and the European Union. *Review of Environmental Economics and Policy*.

671 On the role of EU Members States in the EU ETS, see e.g. Squintani Lorenzo, Marijn Holwerda, and Kars de Graaf, *Regulating greenhouse gas emissions from EU ETS installations: what room is left for the Member States? Climate Law in EU Member States* (Edward Elgar Publishing 2012).

672 Borghesi Simone and Andrea Flori, ‘With or without U(K): A pre-Brexit network analysis of the EU ETS. *PLoS ONE*’ (2019) 14(9) e0221587. <<https://doi.org/10.1371/journal.pone.0221587>>

673 Tol, *ibid.*

Beyond the immediate issues arising for the UK post-EU ETS, there were some concerns as to the impact of Brexit on the wider climate policy, both in the EU,<sup>674</sup> and the UK,<sup>675</sup> due to the uncertainty and destabilising effect Brexit might have.

In June 2019, the UK legally committed to the reduction of greenhouse gas emissions to zero (“net zero”) by 2050, compared to 1990 levels.<sup>676</sup> Despite some discussions as to the use of a carbon tax in the UK, if only as a fall-back position,<sup>677</sup> the UK ETS was established pursuant to the Greenhouse Gas Emissions Trading Scheme Order 2020<sup>678</sup> and the Greenhouse Gas Emissions Trading Scheme (Amendment) Order 2020.<sup>679</sup>

The costs of setting up the UK ETS and the inefficiencies which might be caused as a result of the UK leaving the EU ETS led to some discussions as to a potential linking of the UK ETS to the EU ETS,<sup>680</sup> not least as the UK ETS initially led to a somewhat higher carbon price than the EU ETS.<sup>681</sup>

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674 See e.g. Curtin Joseph ‘The harder the Brexit the hotter it gets?’ Exploring Impacts for Climate Policy. Dublin: Institute for International and European Affairs’ (2017) or Dupont Claire and Brendan Moore, ‘Brexit and the EU in global climate governance’ (2019) 7 (3) Politics and Governance

675 Farstad Fay, Neil Carter and Charlotte Burns, ‘What does Brexit mean for the UK’s Climate Change Act?’ (2018) 89 (2) The Political Quarterly

676 Department for Business, Energy & Industrial Strategy and The Rt Hon Chris Skidmore, ‘UK Becomes First Major Economy to Pass Net Zero Emissions Law’ (27 June 2019) <[www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law](http://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law)> This commitment was enshrined into law with the adoption of the Climate Change Act 2008 (2050 Target Amendment) Order 2019.

677 See, e.g. <<https://sandbag.be/index.php/project/uk-carbon-pricing-after-brexit/>> and UK Government: The future of UK carbon pricing UK Government and Devolved Administrations’ response, July 2020, available at <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/889037/Government\\_Response\\_to\\_Consultation\\_on\\_Future\\_of\\_UK\\_Carbon\\_Pricing.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/889037/Government_Response_to_Consultation_on_Future_of_UK_Carbon_Pricing.pdf)>

678 The Greenhouse Gas Emissions Trading Scheme, Order 2020, SI 2020/1265.

679 The Greenhouse Gas Emissions Trading Scheme (Amendment), Order 2020, SI 2020/1557.

680 See, e.g. <<https://ukandeu.ac.uk/explainers/uk-eu-emissions-trading-schemes/>> for a general discussion on the advantages of linking the UK ETS to the EU ETS and a letter from institutional investors arguing in favour of such a link in 2021: <<https://www.iigcc.org/download/uk-eu-ets-linkage-joint-letter/?wpdmdl=4464&refresh=643d2241888421681728065>>

681 See <<https://www.euractiv.com/section/emissions-trading-scheme/news/brexit-decision-left-uk-firms-paying-10-more-than-eu-rivals-for-emissions/>> However, in early 2023, the price of EU ETS allowances is higher than UK ETS allowances, see: <<https://ember-climate.org/data/data-tools/carbon-price-viewer/>>



Borghesi et al. note that at one point during the Brexit negotiations, both the UK and the EU were in favour of linking the EU ETS with the yet to be established UK ETS and discussing some of the design issues in linking and de-linking ETS.<sup>682</sup>

Post-Brexit, there are few contributions to the UK ETS from a legal perspective. Stanič and Bowden discuss the impact of Brexit on UK climate policy from a legal point a view with a brief reference to the introduction of the UK ETS. They conclude that whilst the TCA commits the EU and the UK to giving “serious consideration” to linking the EU ETS and the UK ETS, this has not yet happened. Stanič and Bowden conclude that a potential advantage of linking the two systems would be that such a step would mean that the proposed carbon border adjustment mechanism<sup>683</sup> for certain carbon-intensive goods would not apply to the UK.<sup>684</sup>

### 3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT

In the UK, the years since the referendum of 23 June 2016 have been dominated by debates as to how and when Brexit should happen and what shape Brexit might take. This has caused significant political uncertainty throughout the country. Members of Parliament appear, more often than not, to be negotiating among themselves rather than with the European Union (EU).<sup>685</sup>

In the somewhat surprising early general election of 12 December 2019, Boris Johnson and the Conservative Party were handed a 80-seat majority in Parliament. It seemed that voters just wanted to “Get Brexit Done.” With such a majority, the

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682 Borghesi Simone and Tong Zhu, ‘Getting married (and divorced): A critical review of the literature on (de) linking Emissions Trading Schemes’ 8(2020) Strategic behavior and the environment. On the legal issues pertaining to linking ETS to the EU ETS generally, see e.g. Mace, M.J., Millar, I., Schwarte, C., Anderson, J., Broekhoff, D., Bradley, R., Bowyer, C. and Heilmayr, R., 2008. Analysis of the legal and organisational issues arising in linking the EU Emissions Trading Scheme to other existing and emerging emissions trading schemes. Study Commissioned by the European Commission DG-Environment, Climate Change and Air.

683 The European Commission, Proposal for a Reg of the European Parliament and of the Council establishing a Carbon Border Adjustment published on 14 July 2021, at <[https://ec.europa.eu/info/sites/default/files/carbon\\_border\\_adjustment\\_mechanism\\_o.pdf](https://ec.europa.eu/info/sites/default/files/carbon_border_adjustment_mechanism_o.pdf)>

684 Stanič, A. and Bowden, J., 2023. Brexit and UK’s Renewable Energy and Climate Change Policies: Implications and Opportunities. In *Brexit and Energy Law* (pp. 92-113). Routledge.

685 Transcripts of parliamentary debates in Westminster are published in the ‘Hansard’ and can be found here (House of Commons): <<https://hansard.parliament.uk/Commons>> and here (House of Lords): <<https://hansard.parliament.uk/search/Debates?house=lords>>; an example of Brexit debates can be found here: <<https://hansard.parliament.uk/search/Debates?endDate=2020-04-12&house=Commons&partial=False&searchTerm=Brexit&startDate=1800-01-01>>



Prime Minister pushed his Withdrawal Agreement<sup>686</sup> and Political Declaration<sup>687</sup> through Parliament and committed to an exit on 31 January 2020. To the surprise of many, and as a first of a kind in the UK's Brexit process, this deadline was actually met, and the UK left the EU on 31 January 2020 after 47 years of membership.

The UK is officially no longer a member state of the EU, and the transition period came to an end on 31 December 2020. Between 1 February and 31 December, the UK had a special status in that it continued to adhere to EU law, paid into the EU budget, was part of the single market and fell under the jurisdiction of the EU Courts while no longer being represented in the EU political bodies such as the EU Commission and the EU Parliament. During this transition period, the UK and the EU negotiated the agreement for the future relationship between the EU and UK.

This timeline was ambitious in comparison to other international free trade negotiations, but whilst the EU had conveyed a readiness to extend the transition period to avoid a no-deal Brexit, the UK Government had expressed in direct terms and anchored this in legislation that there would not be an extension to the transition period,<sup>688</sup> as Boris Johnson, the UK prime minister had won the UK general election of December 2019 on a platform which promised to “get Brexit done.”<sup>689</sup> Whilst this risked a no-deal Brexit or Hard Brexit (with several tense moments in the negotiations in November and December which suggested that this would be the most likely outcome)<sup>690</sup> under which the relationship between the UK and the EU would have to return to a space of international law and WTO trading rules,<sup>691</sup> the UK and the

686 See: HM Government, 'Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community' (19 October 2019) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/840655/Agreement\\_on\\_the\\_withdrawal\\_of\\_the\\_United\\_Kingdom\\_of\\_Great\\_Britain\\_and\\_Northern\\_Ireland\\_from\\_the\\_European\\_Union\\_and\\_the\\_European\\_Atomic\\_Energy\\_Community.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840655/Agreement_on_the_withdrawal_of_the_United_Kingdom_of_Great_Britain_and_Northern_Ireland_from_the_European_Union_and_the_European_Atomic_Energy_Community.pdf)>

687 HM Government, 'Political Declaration setting out the framework for the future relationship between the European Union and the United Kingdom' (19 October 2019) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/840656/Political\\_Declaration\\_setting\\_out\\_the\\_framework\\_for\\_the\\_future\\_relationship\\_between\\_the\\_European\\_Union\\_and\\_the\\_United\\_Kingdom.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840656/Political_Declaration_setting_out_the_framework_for_the_future_relationship_between_the_European_Union_and_the_United_Kingdom.pdf)> (the 'Political Declaration').

688 See Section 33 of the Withdrawal Act 2020.

689 See, for instance, Billy Perrigo, 'Get Brexit Done.' The 3 Words That Helped Boris Johnson Win Britain's 2019 Election' (time.com, 13 December 2019) <<https://time.com/5749478/get-brexit-done-slogan-uk-election/>>

690 See, for instance, Daniel Boffey and Heather Stewart, 'UK and EU say no-deal Brexit is now most likely outcome' (The Guardian, 11 December 2020) <<https://www.theguardian.com/politics/2020/dec/11/no-deal-brexit-likeliest-ursula-von-der-leyen-eu-leaders>>

691 For further information, see Silke Goldberg, 'Brexit and its Impact on the Energy Sector: Pulling

EU reached a last-minute deal on 24 December 2020 in the form of the Trade and Cooperation Agreement (TCA).<sup>692</sup>

Under EU law, the TCA is technically an Association Agreement: a type of agreement in accordance with its legal basis Article 217 TFEU, which provides that “the Union may conclude with one or more third countries or international organisations agreements establishing an association involving reciprocal rights and obligations, common action and special procedure.” The EU has more than 20 association agreements, mainly with its neighbours, from Morocco to Ukraine.

This chapter briefly contextualises the TCA by reference to other free trade models that would have been possible and the actual outcome of the negotiations and aims to summarise some of the key elements of the TCA which impact the energy sector and, in particular, the EU internal energy market. By way of conclusion, there is an outlook as to the future dynamic of the relationship between the UK and the EU as well as the further constitutional consequences of Brexit for the UK.

## 4 EU-UK RELATIONSHIP

### 4.1 The deals that could have been

In theory, the future relationship between the EU and the UK could have taken a variety of shapes, which are often discussed by reference to prior EU trade agreements.<sup>693</sup> In the UK debate, the Canada-EU Trade Agreement (CETA)<sup>694</sup> has played a prominent role as a comparator of the deal that the UK Government might like to achieve.

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the Plug?’ in Martha M Roggenkamp and Catherine Banet, *European Energy Law Report XII* (Intersentia 2018) p. 11ff.

692 Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland, of the other part. The full text of the UK EU Free Trade Agreement (the “FTA”) can be found here: <https://ec.europa.eu/transparency/regdoc/rep/1/2020/EN/COM-2020-857-F1-EN-ANNEX-1-PART-1.PDF>

693 A range of possible scenarios have appeared in the press under an even wider range of names. The list in this chapter is the interpretation of the possible scenarios by the author. For more details and background, see: European Parliament, Directorate-General for External Policies, ‘Future trade relations between the EU and the UK: options after Brexit’ EP/EXPO/B/INTA/2017/18 (March 2018) <<http://brexitlegal.ie/wp-content/uploads/2019/08/Future-Trade-Relations-Options.pdf>>

694 For more details on CETA, please see also: Hübner Kurt, Anne-Sophie Deman, and Tugce Balik, ‘EU and trade policy-making: the contentious case of CETA’ (2017) 39(7) *Journal of European Integration*.

One possibility was a deal scenario which was described as “Super Canada Plus.” For goods, such a deal would eliminate tariffs and quotas and commit both sides to taking further steps to reduce trade friction. For services, “Super Canada Plus” would build on the limited provisions in CETA, in particular, to provide for EU market access for the U’s financial services sector. Brexiteers see this deal as providing access to the EU’s market while also allowing the UK to leave the EU’s regulatory orbit with no role for the European Court of Justice (ECJ). The one drawback of “Super Canada Plus” is that the EU has not offered such a deal, and even if it were to do so, negotiations would take considerably longer than the currently anticipated term of the transition period.

In a step down from the Super-Canada-Plus scenario, a “CETA”-style deal, which is somewhat less comprehensive, would have been an option. For goods, it would eliminate tariffs and quotas, but it would not take further steps to reduce trade frictions. On services, it would provide similar provisions to CETA, but it would not go any further. With a “CETA”-style agreement, the UK would be able to diverge from EU rules. But, like “Super Canada Plus,” this deal will be hard to negotiate. In theory, “Canada” could be agreed by this time next year, but major issues, in particular, the Level Playing Field provisions that the EU are likely to demand the UK sign up to, could prevent a deal like this from being agreed upon.

A less comprehensive deal than CETA was sometimes referred to as a “skinny deal.” For goods, it would eliminate tariffs and quotas, but there would be no commitment to reduce trade frictions. Such a deal would be unlikely to include many provisions for services but would, in return, allow the UK to diverge from standards otherwise applicable in the EU with more limited agreements on rules and regulations. This option results in a limited common framework of regulation, especially in the case of services.

Further down the scale of possible deal scenarios was an agreement which was described as a “free trade agreement in name only.” Such a deal would be the least comprehensive. For goods, this deal would see the introduction rather than the removal of some tariffs. For services, it is likely that such an agreement would only include the bare minimum. Access to the EU’s market would be in reverse proportion to the extent to which the UK would diverge from the EU’s regulatory regime.

Finally, there was the possibility of no agreement being reached by the end of 2020, which would have implied the UK trading on WTO terms only with no arrangements specifically pertaining to the energy sector.

## 4.2 The Trade and Cooperation Agreement

### 4.2.1 Which deal model?

The outcome of the Brexit negotiations, which dominated British and, to a lesser degree, European politics since 2016, was a rather skinny free trade agreement, even if the sheer volume of the TCA might suggest otherwise.

At 1,259 pages, the volume of the text is certainly impressive; however, in terms of its substance, it can be characterised as a “skinny deal” that secures tariff-free and quota-free access to goods, but not much more. From a governance and implementation perspective, it is a complex deal that will take time for businesses, governments, and authorities to understand, implement, and make use of. Notwithstanding some exceptions (particularly the extensive unilateral phased transitional mitigations provided by the UK), new requirements and restrictions arising from the end of the status quo transition period will apply immediately. The TCA contains a number of governance, review and termination clauses which allow for the imposition of tariffs and quotas in the future and, in a worst-case scenario, a WTO exit; these arrangements ultimately render the TCA quite political and therefore unstable as the UK and EU will find themselves in ongoing negotiations for various aspects of their relationship.

### 4.2.2 Structure of the TCA

The TCA has seven parts:

- Part One sets out the governance provisions (see below for further detail); Part Two covers Trade, Transport, Fisheries and other arrangements; Part Three, law enforcement and judicial cooperation in criminal matters; Part Four sets out thematic cooperation between the parties; Part Five addresses the participation of the UK in Union programmes, sound financial managements and financial provisions; Part Six is dedicated to dispute resolution and horizontal provision; and Part Seven contains the final provisions.
- Each of these seven parts contains separate titles, which are sometimes further divided into chapters.
- Matters pertaining to the energy sector are addressed in Part Two, Title VIII. Clauses in part two of the TCA are preceded in each case by an indication as to which title they refer to. As such, clauses pertaining to energy are preceded by “ENER.”

### 4.2.3 Governance

The TCA can be described as a classic free trade agreement—at its heart, it provides for tariff and quota-free trade in goods. However, it also provides little more than that as it contains few provisions regarding mutual recognition of standards, qualifications, etc. and only very limited commitments pertaining to services. The governance provisions of the TCA are complex and include:

- A Joint Partnership Council with over 30 sub-councils;
- Automatic reviews of the agreement every five years; and
- The ability of either party to terminate the TCA on 12 months' notice.

In relation to the energy sector, Article INST.2 of Part One of the TCA creates the Specialised Committee on Energy, which will govern the relationship between the parties in relation to the energy sector.

The termination clause can be triggered by any side at any point. Once triggered, the two sides, absent reaching a new agreement, would leave the TCA after the 12-month notice period has elapsed, falling onto WTO terms. This scenario would effectively be a “delayed No Deal Brexit.”

There is also a specific review clause which concern the “level playing field” (LPF) provisions in the TCA (see below) which allows, after four years, for either side to request a review of the operation of the trade element of the agreement if either party believes the other has committed frequent breaches, or has adopted a measure with a material impact on UK-EU trade or investment for more than a year.

In a reflection of the final phase of the negotiations, which were said to be particularly difficult regarding the fisheries sector,<sup>695</sup> the TCA contains a fisheries-specific review clause which implies that disputes over fisheries can trigger sanctions in trade. If the fisheries agreement is terminated, which is possible with nine months' notice by either party, then the trade, energy, aviation, and road transport elements of the agreement also automatically fall away.

The TCA provides for some important mechanisms which allow for some flexibility regarding the energy sector: Article ENER.31 states that the Partnership Council may amend Annex ENER-1 and Annex ENER-3 and update Annex ENER-2 as necessary to ensure the operation of that Annex over time, whereas the Specialised Committee on Energy may amend Annex ENER-4 and make recommendations as necessary to ensure the effective implementation of the energy provisions of the TCA. In addition, Article ENER.32 directs the parties to establish a regular dialogue to facilitate meeting the objectives of the energy section of the TCA.

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695 dw.com, ‘Brexit talks stall over fishing rights’ (20 December 2020) <[www.dw.com/en/brexit-talks-continue-to-stall-over-fishing-rights/a-55999528](http://www.dw.com/en/brexit-talks-continue-to-stall-over-fishing-rights/a-55999528)>

In line with the automatic reviews, the provisions of the TCA related to energy are subject to an automatic review every five years, the first time on 30 June 2026. The Partnership Council may thereafter decide on an annual basis if it should continue to apply.

The TCA applies to the UK and the territories to which the EU treaties apply but does not apply to Gibraltar or other UK overseas territories.

#### 4.2.4 The level playing field provisions

While convergent trends in regulation equalise competitive conditions, divergent trends give rise to relative changes in competitive conditions. The EU feared that the UK, after leaving the EU single market framework, would be able to improve its competitive position while continuing to enjoy the level of market access that was judged appropriate when it had the same regulatory framework as the EU.

Therefore, the TCA contains “level playing field” (LPF) provisions covering competition, subsidies, state-owned enterprises, taxation, labour and social standards, environment and climate, and a portfolio of other trade and sustainable development objectives. The LPF provisions, therefore, address this divergence risk—in an inverted mirror image to customary free trade agreements, which ordinarily promote convergence of the parties, whereas the TCA needs, by necessity, to address a process by which the UK might seek to diverge from the established common harmonised norms of the *acquis communautaire* of the EU.

The solution that has been adopted in the LPF chapters of the TCA is, therefore, to provide for special dispute settlement mechanisms, including a provision for unilateral retaliation. In the case of provisions concerning subsidies and labour and social, environmental or climate protection, the TCA allows “rebalancing” where divergences arise that are consistent with the TCA and other international obligations which either party considers impact trade or investment between the Parties in a manner that changes the circumstances that have formed the basis for the conclusion of the TCA (Article 9.3).

### 4.3 The Regulatory Scaffolding of the new UK–EU Energy cooperation

The TCA establishes objectives regarding the energy market by providing, in Article ENER.1, that the TCA is to facilitate trade and investment between the parties in the areas of energy and raw materials and to support the security of supply and environmental sustainability, notably in contributing to the fight against climate change in those areas.

Below I will provide an overview of key aspects of the energy sector and how these are treated in the TCA. However, it is possible that further detail may be introduced if the UK or the EU introduce any new legislation or amendments to existing

legislation to implement their obligations under the TCA. The energy section of the TCA reflects the “skinny” nature of the TCA overall. Generally, the energy provisions are broad in nature and provide for a range of cooperation obligations and the prospect of their detailed arrangements to be made between the parties at specified times in the future.

## 5 THE INTERNAL ENERGY MARKET

On 27 April 2018, the EU issued a notice to stakeholders (generally understood to be the EU Member States as well as industry) on the UK’s withdrawal from the Internal Energy Market (IEM).<sup>696</sup> The notice sets out the implications of the UK leaving the EU (and as a consequence, the IEM) without the status quo transitional period envisaged in the draft Withdrawal Agreement. It not only provides an overview of the EU position but also contains an accurate description of how the UK will be treated as a third country in relation to energy if no further agreements are made. While the notice is close to three years old, its substantial provisions still apply as the TCA does not provide for the UK’s participation in the internal market of the EU and, by extension, the IEM.

Electricity and gas are goods, as is the equipment necessary to generate electricity. One of the key concerns in relation to the energy sectors was to avoid the introduction of tariffs; for instance, wind and solar projects could, in case of a No Deal Brexit, have been exposed to tariffs of up to 2.7% applicable to wind turbines and lithium-ion (for use in batteries) imported into the UK from the EU.<sup>697</sup> Whilst the TCA avoids the imposition of tariffs, the early weeks of implementing the TCA suggest that the impact of new customs formalities at the EU-UK border could also have cost implications for business generally and by extension also, energy projects as the UK supply chain struggles with the paper work arising from the new customs arrangements.<sup>698</sup>

696 European Commission, ‘Notice to Stakeholders – Withdrawal of the United Kingdom and the Internal Energy Market’ (27 April 2018) <<https://brexitlegal.ie/eu-withdrawal-note-internal-energy-market/>>

697 For an overview of customs rates for wind turbines in the UK, see United Nations Conference on Trade and Development (UNCTAD), ‘Trade Remedies: Targeting the Renewable Energy Sector’ (2014) <[https://unctad.org/en/PublicationsLibrary/ditcted2014d3\\_en.pdf](https://unctad.org/en/PublicationsLibrary/ditcted2014d3_en.pdf)>

698 See, for instance, Marcel te Lindert, ‘Growing concerns about impact of Brexit on supply chains’ (supplychainmovement.com, 4 December 2020) <<https://www.supplychainmovement.com/growing-concerns-about-impact-of-brexit-on-supply-chains/>> and Philip Georgiadis and George Parker, ‘UK and EU attempt to ease Brexit paperwork burden’ (Financial Times, 1 January 2021)

## 5.1 Regulatory and TSO Cooperation

With the aim of ensuring that the objectives of the TCA are met, the UK regulatory authority, i.e., Ofgem, and the Agency for the Cooperation of Energy Regulators (ACER) must develop contacts and enter into administrative arrangements covering, among others, electricity and gas markets, access to networks, offshore energy, the efficient use of electricity and gas interconnectors, and gas quality and decarbonisation.

In the area of safe and sustainable energy, both parties are required to promote energy efficiency and the use of energy from renewable sources and will promote cooperation in the development of international standards on energy efficiency and renewable energy.

In relation to transmission system operators, the parties commit to the establishing of technical procedures for transmission and frameworks for cooperation between the European Network of Transmission System Operators for Electricity and Gas, respectively (ENTSO-E and ENTSO-G) and the GB TSO.<sup>699</sup> The TCA clearly states that these frameworks for cooperation will not involve or confer a status comparable to membership in ENTSO-E or ENTSO-G by United Kingdom transmission system operators.

However, Article ENER.19 then commits the parties to ensure that “transmission system operators develop working arrangements that are efficient and inclusive in order to support the planning and operational tasks associated with meeting the objectives of this title, including, when recommended by the Specialised Committee on Energy, the preparation of technical procedures to implement effectively” the provisions of the TCA pertaining to:

- Article ENER.13 (Efficient use of electricity interconnectors);
- Article ENER.14 (Electricity trading arrangements at all timeframes);
- Article ENER.15 (Efficient use of gas interconnectors);
- Article ENER.16 (Network development); and
- Article ENER.17 (Cooperation on the security of supply).

The working arrangements between the GB TSOs and the ENTSOs are to encompass, as a minimum:

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 <[www.ft.com/content/481528e0-ee8b-4504-9652-69c19f9cb38b](http://www.ft.com/content/481528e0-ee8b-4504-9652-69c19f9cb38b)> regarding difficulties faced by companies.

<sup>699</sup> Article ENER.18.



- Electricity and gas markets;
- Access to networks;
- The security of electricity and gas supply;
- Offshore energy;
- Infrastructure planning;
- The efficient use of electricity and gas interconnectors; and
- Gas decarbonisation and gas quality.

At this early stage, the exact scope of these cooperation agreements is unclear, as is the detail of their implementation.

## 5.2 Third-party access and unbundling

Both third-party access (TPA) to the grid and unbundling were essential elements in the liberalisation of the European energy sector and core tenets in both British and EU energy legislation. The TCA retains both concepts and commits the parties to safeguarding the principals of TPA and unbundling, albeit at a high level.

The TCA includes in Article ENER.8 some broad obligations on the parties to ensure the implementation of a system of third-party access to their transmission and distribution networks. The key obligations set out in this Article are essentially equivalent to the third-party access principles established in Article 6 of Directive (EU) 2019/944 (the “EU Electricity Directive”), save, for example, provisions relating to the approval of tariffs. There is, therefore, little change in this regard to the previous regime.

Article ENER.9 of the TCA includes a broad obligation on the parties to implement arrangements to remove conflicts arising as a result of the same person exercising control over a transmission system operator (TSO) and a producer or supplier. Given the limited detail in the TCA, this obligation appears unlikely to add further restrictions in excess of the existing provisions in the EU Electricity Directive and the Electricity Act 1989. At the same time, the TCA does not reference the various unbundling models of the Third Energy Package.

## 5.3 Interconnectors

### 5.3.1 Use of interconnectors

The TCA commits the EU and UK to cooperate in relation to the timely development and interoperability of energy infrastructure connecting their territories (i.e., interconnectors).<sup>700</sup> As far as they relate to electricity interconnectors, the provisions

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<sup>700</sup> Article ENER.16(1) TCA.

of the TCA travel familiar ground in that they principally follow overarching principles set out in the existing EU legislation governing electricity infrastructure (e.g., third-party access, unbundling, congestion management). A form of exemption regime has been included, allowing the UK or the EU to decide not to apply the third-party access or unbundling provisions of the TCA (see below).

Importantly, the impact of these provisions on individual projects will depend on how they are implemented in UK and EU law. For example, the new “exemption” regime in the TCA allows the UK or the EU to decide not to apply third-party access and unbundling requirements in the TCA if the relevant conditions are met. However, it is not clear how a decision by the UK or the EU not to apply the provisions of the TCA would impact the application of the existing requirements of the UK and EU unless the relevant regulations are modified in order to implement the TCA.

### 5.3.2 Exemptions

Article ENER.11 of the TCA requires the parties to ensure that existing exemptions granted to UK-EU interconnectors continue to apply. This is of particular importance for any UK energy projects currently benefitting from an exemption pursuant to Article 63 of EU Regulation 943/2009 or Article 36 of EU Directive 2019/944/EU or Article 22 of Directive 2003/73/EU (the “electricity regulation” and the “gas directive,” respectively).

As regards new interconnectors, the UK or the EU may decide not to apply the provisions on third-party access<sup>701</sup> or system operation and unbundling of transmission network operators<sup>702</sup> to (i) emergent or isolated markets or systems; or (ii) infrastructure which meets the conditions in Annex ENER-3 of the TCA.<sup>703</sup> Annex ENER-3 effectively introduces a new exemption regime in relation to UK-EU interconnectors, where the EU or the UK may decide not to apply the third-party access or unbundling requirements if the conditions are met.

It should be noted that this new “exemption” regime only applies in respect of the third-party access and unbundling provisions in the TCA and is, therefore, narrower than the existing exemption regime in the EU Electricity Regulation<sup>704</sup> (which may also apply in respect of regulations relating to the use of congestion revenues and the approval of charging methodologies and access rules). The conditions for the grant of a new “exemption” under the Annex ENER-3 of the TCA are similar, but less onerous than those in Article 63 of the EU Electricity Regulation, as conditions

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701 Article ENER.8 TCA.

702 Article ENER.9 TCA.

703 Article ENER.10 TCA.

704 Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity [2019] OJ L158/54.

relating to charging have been removed, and a project is now only required to enhance competition or security of supply instead of enhancing competition is an absolute condition. Annex ENER-3 allows the parties (i.e., the UK and the EU) to decide not to apply the relevant provisions of the TCA.

It remains to be seen how (and if) this will be implemented in UK and EU law and also how this might interact with the existing regulations. In this regard, we note that Article 63 of the UK Electricity Regulation already provides an exemption regime for new interconnectors between GB and another country or territory. However, Article 63 of the EU Electricity Regulation presently only applies to new interconnectors between EU Member States. As the regime under Annex ENER-3 applies in respect of the obligations under the TCA, it does not also grant exemptions from restrictions in EU and UK law unless such an effect is specifically provided for in UK/EU law.

In addition, neither the UK nor the EU has as yet designated the authority that might grant such an exemption pursuant to the TCA. In relation to the UK, this is likely to be Ofgem as the NRA. In relation to the EU, this may be ACER, but it could also be the European Commission as the latter has a role in approving exemptions pursuant to the electricity and gas directives, or indeed an NRA of a Member State.

### 5.3.3 Congestion management and transmission costs

Consistent with Article 16 of each of the EU Electricity Regulation and the UK Electricity Regulation,<sup>705</sup> the parties are to ensure that capacity allocation and congestion management on electricity interconnectors is market-based, transparent and non-discriminatory and that the maximum level of capacity of electricity interconnectors is made available to the market.<sup>706</sup>

Article ENER.13(1)(f) of the TCA requires the coordination of capacity allocation and congestion management between EU and UK TSOs, involving the development of arrangements for all relevant timeframes (forward, day-ahead, intraday, and balancing). The parties are to ensure the conclusion between relevant TSOs of a multi-party agreement relating to the compensation for the costs of hosting cross-border flows of electricity. Such multi-party agreement shall aim to ensure that UK TSOs are treated on an equivalent basis to a TSO in a country participating in the inter-transmission system operator compensation mechanism. Until such time as this agreement is concluded, a transmission system use fee may be levied on scheduled imports and exports between the EU and the UK.<sup>707</sup>

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<sup>705</sup> Available at <[www.legislation.gov.uk/ukdsi/2019/9780111179772/contents](http://www.legislation.gov.uk/ukdsi/2019/9780111179772/contents)>

<sup>706</sup> Article ENER.13 TCA.

<sup>707</sup> Article ENER.13(3), (4) and (5) TCA.

## 5.4 Electricity trading

Following the end of the transition period, the UK will now be treated as a third country to the EU generally, and this includes the IEM.

As a result, the UK Transmission System Operators (TSOs) will not be parties to the Inter-Transmission System Operator Compensation Mechanism and will be required to pay transmission system usage fees.<sup>708</sup> At the same time, UK TSOs will require certification to continue activities within the EU<sup>709</sup> and will cease participation in EUPHEMIA,<sup>710</sup> the single allocation platform for forward interconnection capacity, the European balancing platforms such as TERRE and MARI,<sup>711</sup> and the single day-ahead and intraday coupling mechanisms.

This means the UK market is now de-coupled from the EU and has reverted to the situation which existed prior to market coupling in 2014.<sup>712</sup> This means, amongst other things, moving to new access rules and losing access to the Joint Allocation Office,<sup>713</sup> the single platform for allocation of long-term electricity transmission capacity to Transmission System Operators and short-notice electricity balancing.

In order for cross-border electricity trade to continue between the UK and the EU once the UK is a third country, new access rules for all interconnectors will need to be approved in the UK and with the relevant EU member state authorities. In preparation for this, all operational interconnectors between the UK and continental Europe (France, Belgium, and the Netherlands) have published their modified access rules for a no-deal, and Ofgem has approved the proposed modifications in each case.<sup>714</sup> Broadly this means moving from the implicit day-ahead allocation

708 European Commission *supra* n.228. For more information, see: Annex A, point 7, Commission Regulation (EU) No 838/2010 of 23 September 2010 on laying down guidelines relating to the inter-transmission system operator compensation mechanism and a common regulatory approach to transmission charging [2010] OJ L250/5.

709 European Commission *supra* n.228, point 4 in the text.

710 For a full description of EUPHEMIA, please see Nemo Committee, 'EUPHEMIA Public Description, Single Price Coupling Algorithm' (10 April 2019) <[www.nemo-committee.eu/assets/files/190410\\_Euphemia%20Public%20Description%20version%20NEMO%20Committee.pdf](http://www.nemo-committee.eu/assets/files/190410_Euphemia%20Public%20Description%20version%20NEMO%20Committee.pdf)>

711 The Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing (EBGL) [2017] OJ L312/6 lays down detailed rules for the integration of balancing energy markets in Europe. For more information, see ENTSO-E, 'Electricity Balancing in Europe' (November 2018) <[https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/Network%20codes%20documents/NC%20EB/entso-e\\_balancing\\_in%20\\_europe\\_report\\_Nov2018\\_web.pdf](https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/Network%20codes%20documents/NC%20EB/entso-e_balancing_in%20_europe_report_Nov2018_web.pdf)>

712 For more information on market coupling, see ENTSO-E, 'Single Day-ahead Coupling (SDAC)' <[www.entsoe.eu/network\\_codes/cacm/implementation/sadc/](http://www.entsoe.eu/network_codes/cacm/implementation/sadc/)>

713 For more information, see Joint Allocation Office (JAO), 'About us' <[www.jao.eu/about-us](http://www.jao.eu/about-us)>

714 Ofgem has approved 'No Deal' access rules separately for each interconnector: For IFA1, see

under the IEM to explicit day-ahead allocation under the revised (no-deal) access rules of the relevant interconnector.

As of 1 January 2021, EU-UK interconnection capacity is now allocated explicitly, which, according to the European Federation of Energy Traders (EFET), has led to increased costs of energy trading. One of the consequences, according to EFET, is that “cross-border capacity may not be optimally used because it will be priced too high or too low” on either side of the border between the UK and the EU.<sup>715</sup>

On electricity trading arrangements, the Specialised Committee on Energy will ensure that transmission system operators (TSOs) develop arrangements for technical procedures within specified timeframes — technical procedures must enter into force by 2022. The committee will keep the arrangements under review and, if not satisfied with the arrangements, can take decisions and make recommendations as necessary for each party to request its TSOs to prepare technical procedures in line with the timeframes.

The UK will continue to apply the EU’s REMIT regulation<sup>716</sup> (prohibiting insider trading and energy market manipulation and providing for market monitoring by regulators) in case of a no-deal Brexit, albeit with some amendments. This was confirmed by the British Parliament in the Electricity and Gas (Market Integrity and Transparency) (Amendment) (EU Exit) Regulations 2019.<sup>717</sup>

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Ofgem, ‘Approval of the updated Access Rules and Charging Methodology for the IFA interconnector to apply in case the UK leaves the EU without a deal’ (18 October 2019) <[www.ofgem.gov.uk/publications-and-updates/approval-updated-access-rules-and-charging-methodology-ifa-interconnector-apply-case-uk-leaves-eu-without-deal](http://www.ofgem.gov.uk/publications-and-updates/approval-updated-access-rules-and-charging-methodology-ifa-interconnector-apply-case-uk-leaves-eu-without-deal)>; for Eleclink, see Ofgem, ‘Approval of the modified Access Rules and the modified Charging Methodology for the ElecLink interconnector to apply in case the UK leaves the EU without a deal’ (13 December 2019) <[www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-and-modified-charging-methodology-eleclink-interconnector-apply-case-uk-leaves-eu-without-deal](http://www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-and-modified-charging-methodology-eleclink-interconnector-apply-case-uk-leaves-eu-without-deal)>; for BritNed, see Ofgem, ‘Approval of modified Access Rules for the BritNed interconnector to apply in the event that the UK leaves the EU without a deal’ (15 March 2019) <[www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-britned-interconnector-apply-event-uk-leaves-eu-without-deal](http://www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-britned-interconnector-apply-event-uk-leaves-eu-without-deal)>; for Nemo, see Ofgem, ‘Approval of modified Access Rules for the Nemo Link interconnector to apply in the event that the UK leaves the EU without a deal’ (15 March 2019) <[www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-nemo-link-interconnector-apply-event-uk-leaves-eu-without-deal](http://www.ofgem.gov.uk/publications-and-updates/approval-modified-access-rules-nemo-link-interconnector-apply-event-uk-leaves-eu-without-deal)>

715 Frédéric Simon, ‘Power flows with UK ‘less efficient’ since Brexit, EU says’ (euractiv.com, 7 January 2021) <[www.euractiv.com/section/energy/news/power-flows-with-uk-less-efficient-since-brexit-eu-says/](http://www.euractiv.com/section/energy/news/power-flows-with-uk-less-efficient-since-brexit-eu-says/)>

716 Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency [2011] OJ L326/1.

717 Electricity and Gas (Market Integrity and Transparency) (Amendment) (EU Exit) Regulations 2019

The changes are meant to “domesticate” the regime, with market participants facing the same transparency obligations and market integrity prohibitions as before. It is simply that the UK legislation can now only deal with the UK aspects of enforcement and regulation (and not the EU side). Market participants trading in wholesale energy products where delivery is within Great Britain are required to register with Ofgem. However, Ofgem has stated that it will issue a direction (after the EU exit), following which this requirement will not apply to market participants already registered with an EU regulatory authority (or the Northern Ireland utility regulator). It should also be noted that for Northern Ireland, the REMIT regulation will continue to apply as outlined in the Ireland/Northern Ireland Protocol to the Withdrawal Agreement.

Trade and fundamental data (as defined by REMIT) in connection to the British wholesale market for energy will now be collected by Ofgem instead of ACER. After an evaluation period, Ofgem will announce when the new reporting system will go live, after which market participants will have at least three months to prepare for the new requirements.

Neither party is required to permit capacity located in the territory of another party to participate in any capacity mechanism in its electricity markets.<sup>718</sup> Such provision may impact the possibility of overseas generation using interconnectors to bid into capacity markets (if, for example, the UK capacity market were to move towards allowing an overseas generation to participate instead of allowing interconnectors to participate directly).

## 5.5 The Single Electricity Market on the Island of Ireland (iSEM)

A consequence of the UK’s being de-coupled from the IEM is that in practice, Ireland would also be de-coupled from the immediate benefits of being in the IEM because Ireland is currently dependent on a single cross-border interconnector with the UK<sup>719</sup> (pending the construction of the Celtic interconnector between Ireland and France, which is anticipated to be commissioned in 2026).<sup>720</sup>

The iSEM is based on a bilateral cooperation agreement between the Irish and UK Governments<sup>721</sup> (rather than as a matter of EU legislation) covering both North-

718 Article ENER.6(3) TCA.

719 See: ‘Where does Ireland get its electricity’ <<http://ireland2050.ie/questions/where-does-ireland-get-its-electricity/>>

720 See ‘Celtic Interconnector’ <[www.celticinterconnector.eu/ga/?cn-reloaded=1](http://www.celticinterconnector.eu/ga/?cn-reloaded=1)>

721 Government of the United Kingdom of Great Britain and Northern Ireland, ‘Memorandum of Understanding between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of Ireland’ (2006).

ern Ireland and the Republic of Ireland. Brexit will, therefore, not have the effect of repealing or terminating this arrangement. However, the iSEM is subject to EU regulation for the energy sector because it is regulated by the Irish Commission for Energy Regulation (CRE) together with the Northern Irish regulator, who, as the regulator of an EU member state, are bound to apply EU regulations.

The EU has been mindful of the interests of Ireland (as an EU member state) in the negotiations and, in relation to energy, of the future of iSEM to avoid stranding Ireland from its supplies of electricity and gas. Article 194(1) TFEU, after all, provides that EU energy policy shall ensure supply security in the EU in a spirit of solidarity. As a result, the EU has requested that the UK Government “take[s] all possible measures to maintain [the iSEM].”<sup>722</sup>

In Northern Ireland, the Ireland/Northern Ireland Protocol to the Withdrawal Agreement provides the basis for the continued operation of the Single Electricity Market after 1 January 2021.<sup>723</sup> As part of the Withdrawal Agreement, the government committed to implementing the iSEM provisions in Article 9 and Annex 4 of the Protocol, which applies key elements of European energy law in Northern Ireland to enable the effective operation of the Single Electricity Market across the island of Ireland. In a sign of just how frayed the discussions between the UK and the EU had become during the negotiations, the government had at one point threatened to dis-apply the Northern Ireland Protocol in a way that the government admitted would have broken international law.<sup>724</sup>

## 6 CLIMATE CHANGE, RENEWABLE ENERGY, AND CARBON PRICING

### 6.1 Climate Change

In relation to climate change, more broadly, the TCA does not provide for any substantive new objectives. The United Kingdom reaffirms, in ENER.21 of the TCA, its commitment to the share of energy from renewable sources in gross final energy consumption in 2030 as set out in its National Energy and Climate Plan,<sup>725</sup> as well as

722 See Department for Business, Energy & Industrial Strategy, “Trading electricity with the EU” (31 December 2020) <[www.gov.uk/government/publications/trading-electricity-with-the-eu](http://www.gov.uk/government/publications/trading-electricity-with-the-eu)>

723 See Department for Exiting the European Union, ‘New Protocol on Ireland/Northern Ireland and Political Declaration’ (17 October 2019) <[www.gov.uk/government/publications/new-protocol-on-irelandnorthern-ireland-and-political-declaration](http://www.gov.uk/government/publications/new-protocol-on-irelandnorthern-ireland-and-political-declaration)>

724 Details as to this controversy can be found here: BBC News, ‘Northern Ireland Secretary admits new bill will ‘break international law’ (8 September 2020) <[www.bbc.co.uk/news/uk-politics-54073836](http://www.bbc.co.uk/news/uk-politics-54073836)>

725 The UK’s National Energy and Climate Plan is available here: Department for Business, Energy



its ambition for the absolute level of primary and final energy consumption in 2030 as set out in its National Energy and Climate Plan.

## 6.2 Renewable Energy

The TCA contains a number of provisions pertaining to renewable energy (as explained below) and commitments by the parties to maintain their current commitments in this regard (i.e., the commitments given under the relevant EU legislation and UK law, respectively). However, it does not create any common climate change objectives or any new targets for renewable energy sources between the UK and the EU. The UK merely restates its ambition for the share of energy from renewable sources in gross final energy consumption in 2030 as set out in its National Energy and Climate Plan. Instead, Article ENER.22 creates the bare regulatory minimum in terms of grid access and support for renewable energy sources.

In relation to renewable power, Article ENER.6 provides that the parties shall enable the integration of electricity from renewable energy sources and ensure the efficient and secure operation and development of the electricity system. In particular, the UK and the EU commit to ensuring that balancing markets are organised in such a way as to ensure that producers of renewable energy are accorded reasonable and non-discriminatory terms when procuring products and services.

In the same spirit, Article ENER.8 provides that the parties shall ensure that transmission system operators treat producers of renewable energy on reasonable and non-discriminatory terms regarding connection to and use of the electricity network.

The energy title of the TCA further provides, in Article ENER.21, that the parties commit to promoting energy efficiency and the use of energy from renewable sources and ensure that its rules that apply to licencing or equivalent measures applicable to energy from renewable sources are necessary and proportionate. At the same time, the parties committed to defining technical specifications which are to be met by renewable energy equipment and systems in order to benefit from support schemes.

Given the renewable energy potential in the North Sea, the parties will cooperate on establishing a specific forum for the development of renewable energy in the region and the development of an offshore grid. The parties' cooperation in relation to the development of renewable energy in the North Sea region will include hybrid and joint projects, sharing of information on new technologies, best practices on

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& Industrial Strategy, 'The UK's Draft Integrated National Energy and Climate Plan (NECP)' (January 2019) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/774235/national\\_energy\\_and\\_climate\\_plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/774235/national_energy_and_climate_plan.pdf)>



onshore and offshore grid planning and exchanges of best practices on rules, regulations, and technical standards.<sup>726</sup>

This is an area that will be of particular relevance for the development of multi-purpose interconnectors in the North Sea (e.g., HVDC cables linking wind farms in different countries) and an area in which innovations in both UK and EU law will be necessary in order to accommodate such projects.

### 6.3 ETS and Carbon Pricing

The UK's participation in the EU Emission Trade System (ETS) had been suspended since the Commission decided,<sup>727</sup> in coordination with Member States, to temporarily suspend the acceptance by the Union Registry of all processes for the UK relating to free allocation, auctioning, and the exchange of international credits as of 1 January 2019. Consequently, since 1 January 2019, the UK has not been able to auction allowances, allocate allowances for free to operators, or exchange international credits at the national or EU level.

The adoption of the Withdrawal Agreement meant that from 3 February 2020, all processes for the UK in the Union Registry had been reinstated.<sup>728</sup> In relation to climate change and carbon pricing, Paragraph 70 of the Political Declaration<sup>729</sup> adopted by the UK and the EU on 17 October 2019 merely provides that “[t]he Parties should consider cooperation on carbon pricing by linking a United Kingdom national greenhouse gas emissions trading system with the Union's Emissions Trading System.”

Whilst the end of the transition period means that the UK will leave the EU Emissions Trading System (EU ETS), UK participants in the EU ETS must still comply with their obligations under that system for the 2020 compliance year. The TCA, however, provides for the UK to introduce its own emission trading system (the “UK ETS”) from 1 January 2021. Whilst it was intended for the UK ETS to commence operation from 1 January 2021, it is not yet operational, and a number of technical questions still need to be clarified by the UK's Department for Business, Energy, and Industrial Strategy, who will run the scheme, such as the level of free

<sup>726</sup> Article ENER.23.

<sup>727</sup> European Commission, ‘Notice to Stakeholders – Withdrawal of the United Kingdom and the EU Emissions Trading System (ETS)’ (19 December 2018) <[https://industria.gob.es/es-es/brexit/DocumentosBrexit/Industrial/emissions-trading-system\\_en\\_dec18.pdf](https://industria.gob.es/es-es/brexit/DocumentosBrexit/Industrial/emissions-trading-system_en_dec18.pdf)>

<sup>728</sup> See European Commission, ‘Lifting the suspension of UK-related processes in the Union Registry of the EU ETS’ (31 January 2020) <[https://climate.ec.europa.eu/news-your-voice/news/lifting-suspension-uk-related-processes-union-registry-eu-ets-2020-01-31\\_en](https://climate.ec.europa.eu/news-your-voice/news/lifting-suspension-uk-related-processes-union-registry-eu-ets-2020-01-31_en)>

<sup>729</sup> See European Commission, ‘Revised Political Declaration’ (17 October 2019) <[https://commission.europa.eu/publications/revised-political-declaration\\_en#details](https://commission.europa.eu/publications/revised-political-declaration_en#details)>

allocations, how many UK ETS allowances should be auctioned, and how exactly the auctions will work, including the auction schedule. To date, the following elements about the UK ETS are known:

- Auctions will have a floor price of £15/tonne and are understood to commence in the second quarter of 2021;
- ICE Futures administer the auctions for UK ETS allowances and launch spot and futures contracts;
- The UK ETS will cover energy-intensive industries, power generators as well as aviation with a threshold of 20 MW thermal input.

In case of a no-deal Brexit, the UK Government had also previously stated that it might introduce a carbon tax of £16 per ton of CO<sub>2</sub>.<sup>730</sup> In a somewhat unexpected move, the UK Government announced on 12 February that it was going to increase the floor price for UK ETS allowances to £22.<sup>731</sup>

## 7 NUCLEAR ENERGY SECTOR

Withdrawing the UK from the Euratom Treaty required separate notice to be given under Article 106a of the Euratom Treaty. Even though the treaty was not relevant to the Brexit debate, the British government gave the required Euratom notice together with the “Article 50 Notice” at the very start of the Brexit negotiations.

This is relevant to continue the supply chains both between the UK and Euratom members, as well as to all the other countries with whom the UK’s trade in the nuclear sector is currently reliant on Euratom membership (e.g., U.S., Australia, and Japan).

### 7.1 New British Regulations

The Nuclear Safeguards Act 2018 addresses the UK’s departure from Euratom and enables the Government to establish a domestic nuclear safeguards regime regulated by the Office of Nuclear Regulation (ONR). A UK nuclear safeguards regime is an essential pre-cursor to the future trade of nuclear materials and cooperation with

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730 See HM Revenue & Customs, ‘Carbon Emissions Tax’ (29 October 2018) <<https://www.gov.uk/government/publications/carbon-emissions-tax/carbon-emissions-tax>>

731 Department for Business, Energy & Industrial Strategy, ‘Participating in the UK ETS’ <[www.gov.uk/government/publications/participating-in-the-uk-ets/participating-in-the-uk-ets](http://www.gov.uk/government/publications/participating-in-the-uk-ets/participating-in-the-uk-ets)>

other states on nuclear matters (previously done through the nuclear safeguarding regime of Euratom).

In May 2019, the Department for Business, Energy and Industrial Strategy (BEIS) published a quarterly update to Parliament on the UK's exit from the Euratom Treaty.<sup>732</sup> The report notes that the Government has now put in place all the necessary measures to ensure the continuity of the UK's nuclear industry, including a "no-deal" scenario.

To ensure the continuity of the UK's civil nuclear trade following withdrawal from Euratom, among other things, the following regulations were made in 2019:

- Nuclear Safeguards (EU Exit) Regulations 2019;<sup>733</sup>
- Nuclear Safeguards (Fissionable Material and Relevant International Agreements) (EU Exit) Regulations 2019;<sup>734</sup>
- Shipments of Radioactive Substances (EU Exit) Regulations 2019;<sup>735</sup> and
- Transfrontier Shipment of Radioactive Waste and Spent Fuel (EU Exit) Regulation 2019.<sup>736</sup>

## 7.2 Nuclear Cooperation Agreements

The UK also signed two new bilateral safeguards agreements with the International Atomic Energy Agency (IAEA) on 7 June 2018<sup>737</sup> to replace the existing trilateral arrangements between the IAEA, Euratom and the UK, which affirmed the UK's commitment to international safeguards and nuclear non-proliferation and provide the basis for civil nuclear trading arrangements. The agreements ensure that the IAEA retains the right to inspect all civil nuclear facilities and continues to receive safeguards reporting.

To ensure continuity of arrangements for the UK's nuclear industry in all scenarios, including a no-deal, the Government signed a nuclear cooperation agreement

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732 Department for Business, Energy & Industrial Strategy, 'Report to Parliament on the Government's Progress on the UK's Exit from the Euratom Treaty' (15 May 2019) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/801775/euratom-quarterly-update-jan-mar-2019.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/801775/euratom-quarterly-update-jan-mar-2019.pdf)>

733 Nuclear Safeguards (EU Exit) Regulations 2019.

734 Nuclear Safeguards (Fissionable Material and Relevant International Agreements) (EU Exit) Regulations 2019.

735 Shipments of Radioactive Substances (EU Exit) Regulations 2019.

736 Transfrontier Shipment of Radioactive Waste and Spent Fuel (EU Exit) Regulation 2019.

737 UK/IAEA: Agreement for Application of Safeguards in Connection with Treaty on the Non-Proliferation of Nuclear Weapons.

with the U.S. as well as with Australia and Canada. In February 2018, following the UK's exit from Euratom, the UK and Japan signed an Exchange of Notes confirming the terms of the EU's 1998 nuclear cooperation agreement with Japan.<sup>738</sup>

In addition to the TCA, the UK and the EU also entered into the EU-UK Agreement for cooperation on the safe and peaceful uses of nuclear energy (the "NCA"),<sup>739</sup> which sets out the future relationship between the UK and the European Atomic Energy Community (Euratom). The scope of nuclear cooperation under the NCA includes the facilitation of trade and commercial cooperation, the supply of nuclear and non-nuclear material and equipment, safe management of spent fuel and radioactive waste, nuclear safety and radiation protection, monitoring of levels of radioactivity in the environment, and nuclear safeguards and physical protection. The UK will continue to participate in EU research and development programmes such as the Euratom Research and Training programme.

Given the very technical nature of the Euratom exit and the need to agree on a replacement regime imminently to maintain nuclear safety and by that, supply security in the UK, the negotiations and implementation of the post-Brexit arrangements in the nuclear sector have been largely carried out in the background away from political discussion and can be considered successful.

## 8 DID BREXIT "GET DONE?" AN ATTEMPT OF AN OUTLOOK

In a formal sense, Brexit "did get done" on 31 January 2020 when the UK left the EU and the transition period commenced. The finalisation of the TCA just before the end of the transition period means that a hard Brexit has, for now, been avoided.

The TCA can justifiably be called unprecedented—the EU has concluded many trade agreements in the past and is likely to continue to enter into such agreements with other third countries in the future. However, all other trade agreements, bar the TCA, are predicated on the mutual desire to lower trade barriers, increase regulatory convergence and, generally, bring the relevant parties closer together. This is not the case with the TCA, which, from the outset was designed as an agreement designed to facilitate the further separation and distancing of the two parties from a common basis, i.e., the *acquis communautaire*.

Due to the TCA's "skinny" scope and its architecture, which provides for a series of regular review dates and interim deadlines to negotiate further issues, it is likely

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738 Agreement between the Government of Japan and the European Atomic Energy Community for Co-Operation in the Peaceful Uses of Nuclear Energy.

739 Trade and Cooperation Agreement (n 10).

that the UK will continue to negotiate various aspects of its relationship with the EU on a near-permanent basis.

Politically, Brexit might now fade into the background in the EU. However, in the UK, it is likely that the country's relationship with the EU will continue to feature on the political agenda for the foreseeable future; for instance, Chancellor Sunak has already announced that he might seek further negotiations with the EU to improve the TCA regime for financial services;<sup>740</sup> as the TCA does not compare favourably to other EU trade agreements on financial services as it does not cover regulatory cooperation but rather a non-binding commitment to establish a framework for such cooperation. The UK and the EU are already engaged in talks for a separate Memorandum of Understanding, it is currently understood that these talks are ongoing.<sup>741</sup>

From a constitutional perspective, the Brexit negotiations and the TCA may have long-term implications for the UK. Both the Scottish and Northern Irish assemblies voted against the TCA, which, whilst not having any impact on its ratification and implementation in the UK, signals opposition to the European position of the Westminster government and perhaps also a threat to the constitutional union that makes up the United Kingdom of Great Britain and Northern Ireland.<sup>742</sup>

The provisions of the TCA related to energy are to cease to apply on 30 June 2026, but the Partnership Council (to comprise representatives of the EU and the UK) may thereafter decide on an annual basis if it should continue to apply. The impact of the TCA energy provisions ceasing to apply will depend on how they are implemented by the EU and the UK; it is, therefore, too early to judge their full impact on the UK and EU energy markets.

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740 The Guardian, 'If Sunak can lobby for banks post-Brexit, he must do it for other services too' (3 January 2021) <[www.theguardian.com/business/2021/jan/03/if-sunak-can-lobby-for-banks-post-brexit-he-must-do-it-for-other-services-too](http://www.theguardian.com/business/2021/jan/03/if-sunak-can-lobby-for-banks-post-brexit-he-must-do-it-for-other-services-too)>

741 Sebastian Payne and Chris Giles, 'Boris Johnson admits Brexit deal is limited for financial services' (Financial Times, 27 December 2020) <[www.ft.com/content/3c07d219-b20a-4315-9f17-bad-b10a5279b](http://www.ft.com/content/3c07d219-b20a-4315-9f17-bad-b10a5279b)>

742 Severin Carrell and Rory Carroll, 'Holyrood and Stormont reject 'disastrous' Brexit trade deal' (The Guardian, 30 December 2020) <[www.theguardian.com/politics/2020/dec/30/scotland-holyrood-and-northern-ireland-stormont-reject-disastrous-brexit-trade-deal](http://www.theguardian.com/politics/2020/dec/30/scotland-holyrood-and-northern-ireland-stormont-reject-disastrous-brexit-trade-deal)>



# CHAPTER 6:

## THE IMPACT OF BREXIT ON EU MARKET ACCESS

As for the other Constituting Manuscripts, the first section of this chapter offers a contextualisation of the Constituting Manuscript within the Brexit Process. Specifically, chapter 6 discusses issues pertaining to access to the EU energy market for UK companies in light of the provisions of the TCA. Moreover, the contextualisation in section 1 is completed by a literature review concerning the main aspects within the Constituting Manuscript in section 2. This overarching literature completes the literature review provided in the Constituting Manuscript, which, due to word limitations accompanying its publication, needed to be focussed. The Constituting Manuscript, as previously published, starts in section 3 of this chapter.

### 1 OVERVIEW

This chapter was originally written for a book I co-edited with Ana Stanič on Brexit and the energy sector<sup>743</sup> and was written over several months in 2021 and 2022, i.e., with a little time distance since the entry into force of the TCA, which provided an opportunity for reflection as to the early impact of the TCA.

Whereas chapter 5 provides a more general overview of the energy provisions in the TCA, chapter 6 takes a thematic approach and explores issues relating to the access of UK companies to the EU energy market post-Brexit. This approach allows for a deeper analysis compared to a general overview and also allows us to draw out which areas the TCA is silent in relation to market access issues. There is some overlap with chapter 5, as, by necessity, the relevant aspects of the TCA regime need to be described again in chapter 6. As a result, chapter 6 can therefore be said to build on chapter 5.

Two aspects of market access are discussed in particular, and these refer back to the underlying questions and themes of the Brexit debate and negotiations as a whole:

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<sup>743</sup> Ana Stanič and Silke Goldberg, 'Brexit and Energy Law – Implications and Opportunities' (eds) Routledge 2023. The article in chapter 6 of this dissertation appeared as chapter 2 in the book on pages 22 – 41.

## 1.1 General Market Design

The general market design aspect pertains to the fundamental principles of regulatory oversight and fundamental principles relating to unbundling and third-party access. It applies to the UK market as a whole, as well as the EU. This includes issues such as the legal basis for market access, relationships between regulatory authorities, and rules of engagement for the future development of a common regulatory framework for the UK-EU energy market (if any).

## 1.2 Specific Regulatory Regime

The specific regulatory regime governs cross-border infrastructure and access to the EU and UK energy markets (i.e., the flow of electricity and gas between the UK and EU markets), trading arrangements, and the governance of the physical infrastructure linking the two markets (i.e., current and future electricity and gas interconnectors).

Chapter 6 concludes that access to the IEM has become more complex for UK companies, as new rules need to be created to replace the previously applicable tightly woven EU regime of regulations, directives, and network codes. It will take time for these new rules to be drawn up. In contrast to the EU regime, the TCA does not come with the “administrative scaffolding” of the established legal processes of EU regulations and directives, which in turn means that the implementation of the TCA will be a slow and tentative process.

Another conclusion of chapter 6 is that the TCA has made the governance of access to the IEM for UK companies more politicised and, therefore, more uncertain as the implementation of the TCA is dependent on the political will and, therefore, less predictable than the EU directives and regulations which are implemented on the basis of established legal rules. Chapter 6 notes the inherent uncertainty arising from the possible termination of the energy chapter of the TCA after 30 June 2026 (unless the UK and EU agree to an extension), which means that the new regime for the cross-border energy market has a more short-term outlook which in turn makes long-term investment decisions including to construct new interconnectors, more difficult and costly.

Finally, chapter 6 draws up a list of issues the UK and the EU ought to consider in order to provide for a functional and reliable market access regime, together with a brief discussion as to the consequences for the UK and EU energy sector should they fail to do so.



## 2 KEY ISSUES AND LITERATURE

In the literature on the TCA, access to EU markets for UK companies is chiefly discussed from a financial services perspective,<sup>744</sup> with few contributions from an energy perspective. The energy contributions in this area come predominantly from an economic perspective, with some policy-related publications.<sup>745</sup>

This section briefly highlights some of the key issues arising from the exclusion of the GB electricity market from Single Day Ahead Coupling (SDAC), i.e., electricity trading and clearance in the EU pursuant to Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (CACM),<sup>746</sup> as a result of Brexit. It also provides a brief update on the developments regarding electricity trading arrangements between GB and the EU.

Access in this context is interpreted as access to and participation in the CACM regime that governs the flow of electricity via cross-border infrastructure and related trading arrangements. Brexit and the terms of the TCA mean that the GB electricity market is no longer part of the IEM and hence does not participate in the CACM regime. Access to the EU electricity market is thus impaired.

Annex 29 of the TCA mandates the UK and the EU to establish “multi-region loose volume coupling” (MRLVC) to be introduced before April 2022 in order to facilitate trade between the GB electricity market and the IEM.

As discussed in chapter 6, electricity trading between the EU and the GB electricity market operates, in the absence of an agreement as to the MRLVC, on a “no deal” or “hard Brexit” basis, which means that interconnector capacity is allocated by an explicit day-ahead auction before the EU electricity auction and nominations after the EU results are known.

744 See, for instance Donnelly Shawn ‘Post-Brexit financial services in the EU’ (2022) *Journal of European Public Policy* or, in relation to reciprocal market access issues: Nättegård, Emil, ‘Equivalence Decisions in the EU and UK Financial Services Sectors Post-Brexit’ (2022) 33(3) *European Business Law Review*

745 For an early economic perspective on market coupling generally, see, e.g. Glachant Jean-Michel, ‘The achievement of the EU electricity internal market through market coupling’ (2010) <<https://cadmus.eui.eu/handle/1814/15189>> For a policy perspective, see e.g. Froggatt Antony, and Thomas Raines, ‘UK unplugged? The impacts of Brexit on energy and climate policy’ (2016).

746 CACM is available here: <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02015R1222-20210315&from=EN>> On Day-Ahead electricity markets in the EU and the role of market integration, see e.g. Lago Jesus, Fjo De Ridder, Peter Vranx, and Bart De Schutter, ‘Forecasting day-ahead electricity prices in Europe: The importance of considering market integration’ (2018) *Applied energy* 211. In relation to the functioning of SDAC more generally, see e.g. Fabian Ocker and Vincent Jaenisch, ‘The way towards European electricity intraday auctions—Status quo and future developments’ (2020) *Energy policy* 145.

A key advantage of market coupling lies in the efficiencies it creates compared to its counterfactual scenario of explicit trading. Newbery et al. have shown that SDAC has delivered substantial efficiencies and, consequently financial benefits, which they calculate to be around €1 billion to the EU; conversely, they estimated in 2016 that de-coupling the GB electricity market from the EU could cost up to €60 million per year.<sup>747</sup>

Post Brexit, the economic impact of the new, de-coupled trading arrangements between GB and the EU is not entirely clear: Geske et al. have estimated the consequences of uncoupling the GB electricity market and estimated that GB and French generator costs would increase by €692 million per year, in a scenario for which they have assumed a high proportion of renewable energy as part of the electricity mix and 10 GW of interconnector capacity between GB and France.<sup>748</sup> By contrast, Guo and Newbery estimate that the commercial cost of uncoupling is €31 million per year.<sup>749</sup> In evidence to the House of Lords, Matt Hinde of National Grid, the GB TSO estimated that the loss of efficiency arising from decoupling was difficult to estimate but “probably in the hundreds of millions.”<sup>750</sup> The UK Government seems to assume a similarly high number.<sup>751</sup>

The difficulties in estimating the economic costs of uncoupling aside, the Swiss experience suggests that there may be technical and supply security issues arising as a consequence of non-coupling: due to the Swiss withdrawal from the negotiations for an IFA, negotiations for a bilateral electricity agreement between Switzerland and the EU likewise terminated (see also section 8.3.2 above). Prior to these events, Hettich et al. have analysed the difficulties Switzerland is facing without such a bilateral electricity agreement and concluded that the expected advantages of such an agreement justify political compromises and entry into an IFA.<sup>752</sup> Even after the collapse of the negotiations, the Swiss federal government sees the integration of Switzerland

747 Newbery, David, Goran Strbac, and Ivan Viehoff, ‘The benefits of integrating European electricity markets’ (2016) 94 *Energy Policy* <<https://doi.org/10.1016/j.enpol.2016.03.047>>

748 Geske Joachim, Richard Green and Iain Staffell, ‘Elecxit: The cost of bilaterally uncoupling British-EU electricity trade’ (2020) *Energy Economics* 85

749 Bowei Guo and David Newbery, ‘The cost of uncoupling GB interconnectors’ (2021) 158 *Energy Policy* <<https://doi.org/10.1016/j.enpol.2021.112569>>

750 House of Lords, European Affairs Committee, *The future UK-EU relationship*, Corrected oral evidence of Tuesday 22 November 2022, <<https://committees.parliament.uk/oralevidence/12484/html/>>

751 Laffan Brigid and Stefan Telle, *Brexit Is Far from Done: Implementation of the Agreements. The EU’s Response to Brexit: United and Effective* (Cham: Springer International Publishing 2023) <<https://www.politico.eu/article/uk-accuses-eu-stalling-energy-cooperation-amid-crisis/>>

752 Hettich Peter, Simone Walther and Sabine Schreiber Tschudin. ‘Schweiz ohne Stromabkommen’ (2015) No. Bd. 1. Dike

in the EU electricity market as a “very important issue for the guarantee of supply security” in Switzerland,<sup>753</sup> not least as it is currently considering up to 80 measures with Swissgrid and other parties in order to counteract the impact of the absence of an electricity agreement.<sup>754</sup>

One of the key difficulties in relation to MRLVC is the delay in its introduction: at the timing of writing this chapter (spring 2023), MRLVC has not been introduced. It is understood that the EU and GB transmission system operators have concluded the initial phase of their work on the necessary cost-benefit analysis, the results of which are publicly available.<sup>755</sup> Even though this delay is seemingly in breach of the timetable set out in Annex 29 of the TCA, there is no publicly available record of any legal steps in relation to this breach.

Instead, the Specialised Committee on Energy, established as an EU-UK decision-making forum for energy-related matters in the TCA has adopted, on 7 February 2023, a recommendation that “that each Party requests its respective TSOs for electricity to provide the additional information as set out in Annex II to this Recommendation within five months of the date of request made by each Party,”<sup>756</sup> suggesting further delays for the introduction of MRLVC.

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753 “Die Einbindung der Schweiz in den europäischen Strommarkt bleibt weiterhin sehr wichtig für die Gewährleistung der Versorgungssicherheit” quoted as per <<https://www.uvek.admin.ch/uvek/de/home/energie/europaeischer-strommarkt.html>>. For an in-depth analysis of the impact of the absence of an electricity agreement between Switzerland and the EU; Frontier Economics, Analyse Stromzusammenarbeit CH-EU, Schlussbericht (September 2021) <<https://www.news.admin.ch/newsd/message/attachments/68913.pdf>>

754 ‘Bundesrat treibt Vorsorgeplanung für Stromversorgungssicherheit voran’ (13 October 2021) <<https://www.uvek.admin.ch/uvek/de/home/uvek/medien/medienmitteilungen.msg-id-85447.html>>

755 ENTSO-E, ‘Cost Benefit Analysis of Multi-Region Loose Volume Coupling (MRLVC) arrangements to apply between the UK and the bidding zones directly connected to the UK’ (16 May 2021) <[https://consultations.entsoe.eu/markets/cost-benefit-analysis-of-multi-region-loose-volume/supporting\\_documents/MRLVC\\_CBA\\_summary\\_report\\_April\\_2021\\_final\\_publication.pdf](https://consultations.entsoe.eu/markets/cost-benefit-analysis-of-multi-region-loose-volume/supporting_documents/MRLVC_CBA_summary_report_April_2021_final_publication.pdf)>

756 Recommendation No 1. 2023 of the Specialised Committee on Energy Established by Article 8(1) (l) of the Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland of other part of 7 February 2023, <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1141694/specialised-cttee-energy-recommendation-1-2023-uk-eu-electricity-trading-arrangements.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1141694/specialised-cttee-energy-recommendation-1-2023-uk-eu-electricity-trading-arrangements.pdf)>

### 3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT

This chapter explores issues relating to the access of UK entities to the EU energy market post-Brexit. The chapter focuses on the relevant provisions of the Trade and Cooperation Agreement (TCA), which establishes the basis for a relationship between the UK and the EU in the energy sector. However, given the broad nature of the TCA, any obligations it imposes on the parties are not as clearly defined as would be expected from fully termed legislation, with many provisions only setting out the applicable principles rather than giving any details as to their practical implementation.

Given the limited provisions of the TCA (compared to the EU regulatory regime applicable to the gas and electricity markets) in relation to the future interaction between the UK and EU energy markets, this chapter will also explore what the TCA does not stipulate in relation to market access issues and highlights the issues that will need to be addressed by them in due course in order to improve the workings of the energy market post-Brexit.

In this chapter, two aspects of market access are examined in turn:

- The general market design aspect, which pertains to the fundamental principles of regulatory oversight and fundamental principles relating to unbundling and third-party access, and which applies to the UK market as a whole, as well as the EU. This includes issues such as the legal basis for market access, relationships between regulatory authorities, and rules of engagement for the future development of a common regulatory framework for the UK-EU energy market (if any); and
- The specific regulatory regime which governs cross-border infrastructure and access to the EU and UK energy markets, respectively (i.e., the flow of electricity and gas between the UK and EU markets), trading arrangements, and the governance of the physical infrastructure linking the two markets (i.e., concurrent and future electricity and gas interconnectors).

Section 7 will conclude by seeking to draw up a list of issues the UK and the EU ought to consider in order to provide for a functional and reliable market access regime and discuss the implications/consequences for the UK and EU energy sector should they fail to do so.

## 4 GENERAL EU MARKET PRINCIPLES

With effect from 1 January 2021, the entire EU regulatory framework for the energy market fell away in the UK. It was replaced by the TCA and the “retained EU law,” i.e., EU law which has been transposed into UK law and, therefore, will continue to apply.

Retained EU law remains important for the UK energy sector as it allows for the retention of some key features of the EU’s energy market in relation to the energy regulatory framework within Great Britain (GB) (the regulatory settlement for the energy market in Northern Ireland is separate; see also Chapter 11). However, retained EU law’s status as such does not equate to it being recognised by the EU as EU *acquis* or EU-equivalent legislation, not least because it is subject to the UK legislative process only and as such, is subject to amendment through that process.

One example of such retained EU law is Regulation (EU) 2019/943<sup>757</sup> (the EU Electricity Regulation), which has been retained in UK national law with certain amendments effected by the Electricity and Gas (Internal Markets and Network Codes) (Amendment etc.) (EU Exit) Regulations 2020/1006 (the EU Exit Regulations, the amended version of the EU Electricity Regulation retained in UK law being the UK Electricity Regulation).

Below, I will explore the fundamental market principles which will continue to apply post-Brexit, the role of UK and EU regulatory authorities, and cooperation between transmission system operators (TSOs), as well as post-Brexit market access issues which arise in relation to individual national markets within the EU.

### 4.1 Market Principles

Both third-party access (TPA) to the grid and the unbundling of transmission systems from the generation and supply of electricity played a key role in the liberalisation of the energy industry, first in the UK and later in the EU. They remain core tenets and hallmarks of liberalised and mature electricity and gas markets and have been anchored in both UK and EU legislation. In this regard, the TCA provides continuity as it retains both concepts and commits the parties to safeguarding the principles of TPA and unbundling, albeit at a high level and without reference to criteria for the exact practical implementation of the same.

From a market access perspective, adherence to these principles is essential for UK companies, not only in relation to legal compliance with UK legislation but also in terms of their investments or investment plans in the EU. This is because compliance with these principles is expressed in EU legislation as a key criterion for invest-

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<sup>757</sup> Regulation (EU) 2019/943.

ments, for instance, in grid companies and for the relevant certification of such companies.

#### 4.1.1 Third-Party Access

Article 306 TCA imposes obligations on the UK and the EU to ensure the implementation of a system of TPA in their transmission and distribution networks. The key obligations set out in this Article are essentially equivalent to the TPA principle set out in Article 6 of Directive (EU) 2019/944 (the EU Electricity Directive), save, for example, the provision relating to the approval of tariffs. There is, therefore, little change between the new rules on market access in this regard as compared to the previous EU regime.

#### 4.1.2 Unbundling

Article 307 of the TCA imposes a broadly drafted obligation on the parties to implement arrangements to remove conflicts arising as a result of the same person exercising control over a TSO and a producer or supplier. Given the limited detail in the TCA, this obligation appears unlikely to impose restrictions in excess of the provisions set out in the EU Electricity Directive and the UK Electricity Act 1989.

In this area, it is unlikely, at least for the time being, that any access issues will arise for UK companies as there do not seem to be any immediate plans by UK legislators to change the current TPA and unbundling regime. However, given that the TCA does not commit the parties to the EU set of unbundling models (as established by the Electricity and Gas Directives, respectively), it may be possible for a divergence to arise in the future.

## 5 REGULATORY AUTHORITIES

### 5.1 Cooperation between ACER and Ofgem

Article 318 TCA provides that the UK and the EU commit to ensuring that the EU Agency for Cooperation of Energy Regulators (ACER) and the national regulatory authority (NRA) for the UK, Ofgem, develop contacts and enter into administrative arrangements to facilitate meeting the objectives of the TCA.

The working scope of the future arrangements will include access to networks, offshore energy, the efficient use of electricity and gas interconnectors, gas quality and decarbonisation, infrastructure planning, and cooperation between TSOs.<sup>758</sup>

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<sup>758</sup> Article 318 TCA.

While the cooperation between ACER and Ofgem is helpful, the TCA makes clear that the arrangements are not intended to confer upon Ofgem a status comparable to formal participation in ACER.<sup>759</sup>

It is understood that Ofgem and ACER are in the process of developing these contacts as well as a memorandum of understanding that would form the basis of their future cooperation.

As the TCA does not provide a time limit for the establishment of the contacts and administrative arrangements, it may be some time before the relevant arrangements are in place. For issues pertaining to market access and, in particular, modalities for the efficient use of existing interconnectors and the planning of future interconnectors, this could imply delays in the decision-making process and, therefore, delays for the relevant projects.

## 5.2 Cooperation between TSOs

Cooperation between TSOs, in particular in the frameworks of the European Network of Transmission System Operators for Electricity (ENTSO-E) and the European Network of Transmission System Operators for Gas (ENTSO-G), is an important part of the regulatory regime applicable to the EU energy market. The ENTSOs were established pursuant to Regulation (EC) 714/2009 on conditions for access to the network for cross-border exchanges in electricity, and Regulation (EC) 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No. 1775/2005, respectively. The two regulations set out the ENTSOs' respective responsibilities in enhancing the cooperation between their TSO members (from within the EU) and observers (from outside the EU). Broadly, these include a mandate to:

- Ensure the secure and reliable operation of the increasingly complex cross-border electricity and gas network;
- Facilitate cross-border network development;
- Develop EU network codes for electricity and gas networks, respectively; and
- In relation to ENTSO-E, the integration of renewable energy sources and work to assist with the completion of the Internal Energy Market (IEM).

In the electricity sector, the tasks of ENTSO-E also encompass work on the Inter-TSO Compensation Mechanism set up pursuant to Regulation (EU) 838/2010 on guidelines relating to the Inter-TSO Compensation Mechanism. This mechanism establishes the methodology for compensation of TSOs when hosting cross-border

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<sup>759</sup> Article 318(2) TCA.

flows of electricity, with the aim of incentivising the hosting of cross-border electricity.

In addition, ENTSO-E and ENTSO-G also contribute to the process of drawing up the list of Projects of Common Interest (PCIs) pursuant to Regulation (EU) 347/2013 on guidelines for trans-European energy infrastructure (the TEN-E Regulation) through the Ten-Year Network Development Plan, which forms the basis for the selection of PCIs and their work on a cost-benefit methodology for the assessment of electricity and gas transmission infrastructure projects, respectively.<sup>760</sup>

Membership and participation in the ENTSOs are, therefore, key mechanisms for TSOs to participate in the shaping of the European energy market and to contribute to the development not only of the energy networks but also of the rules pertaining to the investment in the same.

Post-Brexit, the membership in the ENTSOs ceased for the British TSOs; as such, they are now excluded from the relevant EU decision-making processes. This is relevant as, with the exception of the offshore transmission owners (known as OFTOs), British TSOs will either operate interconnectors or have interconnection points with interconnectors within the area they serve.

The TCA provides for an alternative engagement for British TSOs by obligating the UK and the EU to ensure that their TSOs develop working arrangements that are efficient and inclusive to support the tasks associated with meeting the objectives of the relevant sections of the TCA, “including, when recommended by the Specialised Committee on Energy, the preparation of technical procedures to implement effectively.”<sup>761</sup>

Such working arrangements are to include frameworks for cooperation between ENTSO-E and the TSOs for electricity in the UK and are to cover a number of areas, including

- The efficient use of electricity interconnectors;<sup>762</sup>
- Electricity trading arrangements at all timeframes;<sup>763</sup>
- Efficient use of gas interconnectors;<sup>764</sup>
- Network development;<sup>765</sup> and
- Cooperation on security of supply.<sup>766</sup>

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<sup>760</sup> Article 11 of Regulation (EU) No 347/2013

<sup>761</sup> Article 950 TCA.

<sup>762</sup> Article 944 TCA.

<sup>763</sup> Article 945 TCA.

<sup>764</sup> Article 946 TCA.

<sup>765</sup> Article 947 TCA.

<sup>766</sup> Article 948 TCA.



Despite this framework for cooperation between the TSOs, the TCA also makes clear that it shall not involve, or confer a status comparable to, membership in ENT-SO-E to UK TSOs.<sup>767</sup>

At the time of writing this book, the exact scope and modalities of these cooperation arrangements are unclear, as are the details of their implementation. The work undertaken in relation to the relevant arrangements is, however, understood to have commenced.

## 6 NATIONAL-LEVEL ACCESS ISSUES

Whilst access issues in relation to individual EU Member State energy markets as a consequence of Brexit are beyond the scope of the chapter, they will be referenced here for completeness. There is no EU-wide licensing regime for energy trading, nor is there a passport regime comparable to the passport regime in place for the financial service industry.<sup>768</sup> Any authorisation (to the extent required) for the generation, supply, transmission, or trading of electricity and/or gas is granted by the relevant national regulatory authority or ministry of the EU Member State.

For instance, the French licensing regime contained in Article L333-1 of the Energy Code provides that any supplier of electricity (including entities wishing to sell electricity to consumers or TSOs) must obtain a licence from the relevant French ministry. In some EU Member States, such as France, a licence can only be granted to companies that are incorporated in the EU or in countries which have an agreement regulating this matter with France. As the UK does not have an agreement with France (or the EU for that purpose), UK companies cannot currently obtain a licence and therefore do not have access to the French electricity market.

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<sup>767</sup> Article 317(1) TCA.

<sup>768</sup> In the Financial Services sector, such passporting rights are available under, for instance, Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC [2013] OJ L176/338 or Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU [2014] OJ L173/349. The passporting regime under these directives allows companies which are authorised for financial services purposes in one EU Member State to ‘passport’ that authorisation and rely on it in another EU Member State to carry out the same activity there.

## 7 CROSS-BORDER INFRASTRUCTURE

Access to the EU energy market requires, apart from the regulatory framework and any necessary authorisations, the necessary cross-border infrastructure (i.e., interconnectors) and reliable rules governing the same.

Electricity and gas are goods for the purposes of the TCA, as is the equipment necessary to generate, transmit, distribute, and supply electricity and gas. One of the key Brexit concerns in relation to the energy sector was the avoidance of tariffs on these goods. Whilst the TCA avoids these, the early post-Brexit phase has shown that the impact of the new customs formalities at the EU-UK border has cost implications for business generally and, by extension, for energy projects. Specifically, the UK supply chain has struggled with the paperwork arising from the new customs arrangements.<sup>769</sup>

This section considers the provisions of the TCA which are relevant to the development of new infrastructure for electricity and gas connecting the UK with EU Member States as well as the governance and management of such existing infrastructure and any access issues arising as a result of Brexit, including the position in respect of PCIs (for both electricity and gas). It will also focus on the electricity trading arrangements between the UK and the EU. Article 314 of the TCA provides that the parties are to “cooperate to facilitate the timely development and interoperability of energy infrastructure connecting their territories.” The term *energy infrastructure* in this context refers, in the first instance, to electricity and gas interconnectors. The TCA defines an *electricity interconnector* as a “transmission line: (i) between the Parties, excluding any such line wholly within the single electricity market in Ireland and Northern Ireland; [and] (ii) between Great Britain and the single electricity market in Ireland and Northern Ireland that is outside the scope of point (i);”<sup>770</sup> whereas the definition of *gas interconnector* is a “transmission line which crosses or spans the border between the Parties.”<sup>771</sup>

The definition of electricity interconnectors under the TCA is wider than the definition of an interconnector in the EU Electricity Regulation (which is limited to a transmission line between EU Member States). Electricity interconnectors take greater prominence and are accorded more detailed provisions in the TCA than gas interconnectors. This is largely due to the fact that the integration of the EU electricity market is further advanced than that of the gas market. Accordingly, the regula-

769 See, for instance, Peter Foster and Daniel Thomas, ‘Business after Brexit: Teething problems become permanent pain’ (Financial Times, 30 June 2021) <[www.ft.com/content/3a4ef128-91e0-4189-abda-db9b54fa8891](http://www.ft.com/content/3a4ef128-91e0-4189-abda-db9b54fa8891)>

770 Article 300(f) TCA.

771 Article 300(i) TCA.

tion of the EU electricity market is tighter and more complex, not least regarding the coupling of the national electricity markets and the related implicit trading arrangements. By contrast, the EU gas market is somewhat less integrated, and consequently, the TCA dedicates fewer provisions specifically to the post-Brexit governance of gas interconnectors.

## 7.1 PCIs

The importance of cross-border energy infrastructure and the need to support such projects has long been recognised within the EU. The TEN-E Regulation establishes a framework for the identification, planning, and implementation of PCIs, which are required to implement the nine strategic geographical energy infrastructure priority corridors identified in the fields of electricity, gas, and oil and the three EU-wide energy infrastructure priority areas for smart grids, electricity highways, and carbon dioxide transportation networks.<sup>772</sup>

The TCA is silent as to the treatment of PCIs. Whilst the (now revised) TEN-E Regulation will continue to apply in relation to relevant UK projects. Following the entry into force of the revised TEN-E Regulation,<sup>773</sup> the new category of “Project Mutual Interest” is now more likely to apply to UK-EU projects, as the criteria for PCIs are harder to meet for projects involving third countries.

The revised TEN-E Regulation prescribes that projects between a Member State and the UK (as a country that is not an EU Member State or a European Economic Area country) may still be regarded as a PCI project as it “is located in the territory of one Member State” provided it has a significant cross-border impact.<sup>774</sup> For electricity transmission projects, a significant cross-border impact means that the project increases the grid transfer capacity between that Member State and other Member States by at least 500 MW.<sup>775</sup> Alternatively, a project may meet the criteria by involving “at least two Member States by directly crossing the border between two or more Member States.”<sup>776</sup>

Whilst cross-border projects between the UK and the EU were in principle eligible to be awarded PCI status, all hitherto UK interconnector PCIs lost their PCI

772 For further detail on PCIs, see also <[https://energy.ec.europa.eu/topics/infrastructure/projects-common-interest\\_en](https://energy.ec.europa.eu/topics/infrastructure/projects-common-interest_en)>

773 Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022 on guidelines for trans-European energy infrastructure, amending Regulations (EC) No 715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944, and repealing Regulation (EU) No 347/2013 (the ‘revised TEN-E Regulation’) [2022] OJ L152/45.

774 Article 4(1)(c)(ii) revised TEN-E Regulation.

775 Annex IV.1 revised TEN-E Regulation.

776 Article 4(1)(c)(i) revised TEN-E Regulation.

status in the fifth PCI list (expected to come into force in spring 2022).<sup>777</sup> As no reasons for the final decision as to whether or not a project is included in the PCI list are published, it is not in all circumstances clear whether this was the case.

While PCIs may, in future PCI lists, exist between Member States and the UK, it is not clear how certain provisions of the TEN-E Regulation would be applied in relation to such projects. For example:

- In accordance with Article 12 of the TEN-E Regulation, a PCI may submit an investment and cross-border cost allocation request. However, in the case of an interconnector PCI between a Member State and a non-Member State, it is not clear how such an application would be decided by the NRA of the non-Member State (which would not be bound by the TEN-E Regulation);
- Article 12(1) of the TEN-E Regulation suggests that efficiently incurred investment costs not recovered from congestion rents will be paid for through network user tariffs in the relevant Member States, which appears to suggest Member States could subsidise UK costs the UK; and
- The UK would not be subject to the jurisdiction of ACER, which is to decide on any such investment request where the NRAs are unable to reach an agreement (or on referral).

The European Commission proposed an amendment to the TEN-E Regulation on 15 December 2020.<sup>778</sup> This proposal includes a new category of projects of “mutual” interest for projects between a Member State and a third country (such as the UK) which (i) increase the grid transfer capacity with other Member States and (ii) contribute significantly to sustainability and either market integration or security of supply.

Should the EC’s proposal be adopted, the threshold for inclusion of a project as a “project of mutual interest” will, therefore, be lower than that for PCIs under the existing regulation. This should make it easier for UK-EU interconnectors to meet the criteria for this new category. However, it is not clear as yet whether the status of a “project of mutual interest” will provide project sponsors with access to the same permitting advantages and funding opportunities as the PCI status. The revised

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777 Annex to Commission Delegated Regulation (EU) .../... amending Regulation (EU) No 347/2013 of the European Parliament and of the Council as regards the Union list of projects of common interest, C(2021) 8409 final (19 November 2021).

778 European Commission, ‘Proposal for a regulation of the European Parliament and of the Council on guidelines for trans-European energy infrastructure and repealing Regulation (EU) No 347/2013’ COM(2020) 824 final (15 December 2020).

TEN-E Regulation is likely to apply from 2023, and the sixth list of PCIs will probably be decided in autumn 2023.

## 7.2 Exemptions for Interconnectors

The TCA provides for two scenarios: New exemptions for interconnectors (i.e. exemptions granted to interconnectors after the entry into force of the TCA and exemptions that pre-date the TCA. In this section 7.2, I shall consider new exemptions pursuant to the TCA in subsection 7.2.1 and exemptions pre-dating the TCA in subsection 7.2.2 below.

### 7.2.1 New exemptions for interconnectors

Annex 28 TCA effectively introduces a new exemption regime in relation to UK-EU interconnectors. The UK or the EU may decide not to apply Article 306 (third-party access) and/or Article 307 (system operation and unbundling of transmission network operators) to (i) emergent or isolated markets or systems or (ii) infrastructure which meet the conditions set out in Annex 28 TCA.<sup>779</sup>

This new “exemption” regime only applies in respect of the TPA and unbundling provisions in the TCA, and it is, therefore, narrower than the existing exemption regime in the EU Electricity Regulation (which may also apply in respect of regulations relating to the use of congestion revenues and the approval of charging methodologies and access rules).

The conditions for the grant of a new “exemption” under Annex 28 TCA are similar to, but less onerous than, those in Article 63 of the EU Electricity Regulation. Conditions relating to charging have been removed, and a project is now only required to enhance competition or security of supply instead of enhancing competition being an absolute condition.

It remains to be seen how (and whether) this will be implemented in UK and EU law and also how this provision might interact with the existing regulations. Article 63 of the UK Electricity Regulation already provides an exemption regime for new interconnectors between GB and another country. However, Article 63 of the EU Electricity Regulation presently only applies to new interconnectors between EU Member States. Consequently, the UK-EU interconnectors do not fall within the scope of this exemption.

As the TCA exemption regime pursuant to Annex 28 applies in respect of the obligations under the TCA only, it cannot grant exemptions from restrictions in EU and English or Scottish law unless such an effect is specifically provided therein (which is currently not the case).

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<sup>779</sup> Article 308 TCA.

## 7.2.2 Existing exemptions

Article 309 of the TCA requires the UK and the EU to ensure that existing exemptions granted to UK-EU interconnectors continue to apply.

The energy-related provisions of the TCA are time-limited and will cease to apply on 30 June 2026 unless otherwise determined. The implications on UK-EU interconnectors which have been granted an exemption, either pre-TCA under the EU exemption regime, will depend on how Articles 309 and 310 of the TCA are implemented in practice by the EU and the UK regulatory authorities. This uncertainty itself is likely to render the planning of UK-EU infrastructure more difficult going forward.

# 8 MARKET COUPLING AND ELECTRICITY TRADING ARRANGEMENTS

## 8.1 EU Market Coupling

Market coupling is a mechanism intended to harmonise different systems of electricity exchanges and reduce price differences between so coupled markets.

The EU has adopted a target model for the day-ahead timeframe on the basis of a price coupling mechanism (European Price Coupling, or EPC), which simultaneously determines volumes and prices in all relevant zones. EPC works on the basis of implicit auctions in which each TSO sends their cross-border transport capacities to a Market Coupling Operator (MCO), which is the interface between the TSOs and the power exchanges.

The MCO operates centrally and independently; its function is “the task of matching orders from the day ahead and intraday markets for different bidding zones and simultaneously allocating cross-zonal capacities.”<sup>780</sup> The actual coupling takes place on the relevant electricity exchanges, where supply and demand are settled using an algorithm. All TSOs then need to compare their capacity values once again before publication.<sup>781</sup> In the EU, Nominated Electricity Market Operators (NEMOs) carry out the MCO function. According to ACER, progress in the integration of the European electricity market has been significant as “the development and introduction of market coupling ensure that the available cross-zonal capacities,

<sup>780</sup> ENTSO-E, ‘Governance of the Market Coupling Operation Functions: Transmission System Operators’ Perspective’ Policy Paper (July 2016) <[https://eepublicdownloads.entsoe.eu/clean-documents/Publications/Position%20papers%20and%20reports/entsoe\\_pp\\_MCO\\_web%20\(002\).pdf](https://eepublicdownloads.entsoe.eu/clean-documents/Publications/Position%20papers%20and%20reports/entsoe_pp_MCO_web%20(002).pdf)>

<sup>781</sup> Next Kraftwerke, ‘Market Coupling: How the European electricity market is linked’ <[www.next-kraftwerke.com/knowledge/market-coupling](http://www.next-kraftwerke.com/knowledge/market-coupling)>

as calculated by transmission system operators (TSOs), are allocated in the most efficient manner.”<sup>782</sup>

## 8.2 UK De-Coupled

Since 1 January 2021, the UK market has been de-coupled from the EPC and has reverted to the situation which existed prior to the EU’s market coupling efforts in 2014.<sup>783</sup> This means, amongst other things, moving to new access rules and losing access to the Joint Allocation Office,<sup>784</sup> the single platform for allocation of long-term electricity transmission capacity to TSOs, and short-notice electricity balancing. It also means that interconnection capacities are allocated explicitly rather than implicitly, making it less efficient, as market participants have to first buy transmission capacity from interconnector operators. Then, in a separate process, they have to secure the quantities of electricity they wish to dispatch over the interconnectors. Broadly, this means moving from the implicit day-ahead allocation under the EPC mechanism to explicit day-ahead allocation under the revised (no-deal) access rules of the relevant interconnector. As a result, cross-border capacity will not be optimally used as it will be priced too high or too low.

In order for cross-border electricity trade to continue between the UK and the EU post-Brexit, new access rules for all interconnectors had to be approved by the UK and the relevant EU Member State authorities. In preparation for this, all operational interconnectors between the UK and continental Europe (France, Belgium, and the Netherlands) published their modified access rules in case of a no-deal scenario, and Ofgem approved the proposed modifications in each case.<sup>785</sup>

According to the European Federation of Energy Traders (EFET), the return to explicit capacity auctions has led to increased costs of electricity trading. Post-Brexit, EFET argues that “cross-border capacity may not be optimally used because it will be priced too high or too low” on either side of the border between the UK and the EU.<sup>786</sup> On a practical level, the UK’s exit from market coupling arrangements has had the following consequences for the European electricity markets: from 31 December 2020, Nord Pool’s day-ahead auction has a new gate closure time of 09:50 GMT with results available no later than 10:00 GMT; in Ireland, the SEM-GB intraday auctions

782 ACER, ‘Report on the result of monitoring the margin available for cross-zonal electricity trade in the EU in the second semester of 2020’ (2 June 2021) <[https://documents.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Publication/ACER%20MACZT%20Report%20S2%202020.pdf](https://documents.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%20MACZT%20Report%20S2%202020.pdf)>, p.13.

783 For more information on market coupling, see ENTSO-E (n 128).

784 For more information, see JAO (n 713).

785 See Ofgem (n 714).

786 Frédéric Simon (n 715).

(IDA1 & IDA2) continue to operate with shared order books between power exchanges, offering implicit capacity between the island of Ireland and GB. Explicit capacity auctions will be staggered throughout the morning, starting with the BritNed interconnector, followed by IFA1, IFA2, and finally Nemo Link, as shown in the illustration.<sup>787</sup>

### 8.3 Market Arrangement Mandate in the TCA

Annex ENER-4 to the Joint Declaration by the EU and the UK,<sup>788</sup> which accompanies the TCA, specifically provides that arrangements for electricity trading should be “as efficient as possible and should, under normal circumstances, result in flows across electricity interconnectors being consistent with the prices in the Parties’ day-ahead markets.”<sup>789</sup>

The Specialised Committee on Energy (SCE), established under the TCA, has been tasked to ensure that TSOs develop arrangements for the necessary technical procedures.<sup>790</sup>

Pursuant to Article 312 of the TCA, the SCE will keep the arrangements under review and, if not satisfied with the arrangements, can take decisions and make recommendations as necessary for each party to request its TSOs to prepare technical procedures in line with the following timeframes (each from the coming into force of the TCA):

- Within three months, the TSOs need to prepare the cost-benefit analysis and outline of proposals for technical procedures;
- Within 10 months, the TSOs need to make a proposal for technical procedures;
- Within 15 months, the relevant arrangements will enter into force.

Practically, this means that the technical procedures must enter into force in early 2022, which has not occurred.

Annex 29 of the TCA provides that the new trading arrangements between the UK and the EU will be established on the basis of multi-region loose volume coupling (MRLVC) with the objective to “maximise the benefits of trade.”

<sup>787</sup> Source: BritNed, <<https://www.britned.com/brexit/auctions/>>.

<sup>788</sup> ‘Joint Declaration by the Union and the United Kingdom on Annex ENER-4’ <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/948105/EU-UK\\_Declarations\\_24.12.2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/948105/EU-UK_Declarations_24.12.2020.pdf)>, p.7 (henceforth Joint Declaration on Annex ENER-4).

<sup>789</sup> *ibid.*

<sup>790</sup> Article 945 TCA.



## 8.4 Volume Coupling

Volume coupling is an alternative system of coupling to the integrated price coupling used in the EU electricity market.<sup>791</sup> It is a two-step process whereby, firstly, cross-zonal volumes are determined using energy bids in the energy markets. These are then matched with those energy markets, forming the relevant price.<sup>792</sup> This makes it more operationally complex than price coupling, which involves a single step since it involves three separate computations with coordination between them.<sup>793</sup>

Volume coupling can either be tight or loose:

- **Tight volume coupling:** In this model, the traded volumes between countries or regions are determined before individual power exchanges calculate their own prices,<sup>794</sup> which means that the prices are calculated on the basis of all relevant information.
- **Loose volume coupling:** In this model, the volume traded between the different countries or regions is determined, and the prices are calculated separately.
- **Tight volume coupling** is thought to offer a better degree of full price convergence and is therefore seen as better for capacity optimisation.<sup>795</sup>

The main advantage of volume coupling over price coupling is that it allows the linkage of electricity markets with different regulatory regimes and governance provisions without requiring the harmonisation of products and price determination rules, which are needed for price coupling, whilst also avoiding the inefficiencies of explicit allocation. As such, it may offer a solution for cross-border trades at the GB-EU border.

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791 Volume coupling has been the basis for previous phases of European market coupling. For more detail on this and the challenges of volume coupling, see also: Tanguy Janssen, Yann Rebours, and Philippe Dessante, 'Tight Volume Coupling: Analytical model, adverse flow causality and potential improvements' EUI RSCAS 2012/09.

792 The EU and UK TSOs MRLVC group, 'Cost Benefit Analysis of Multi-Region Loose Volume Coupling (MRLVC)' (April 2021) <[https://consultations.entsoe.eu/markets/cost-benefit-analysis-of-multi-region-loose-volume/supporting\\_documents/MRLVC\\_CBA\\_analytical%20results\\_April\\_2021\\_final\\_publication.pdf](https://consultations.entsoe.eu/markets/cost-benefit-analysis-of-multi-region-loose-volume/supporting_documents/MRLVC_CBA_analytical%20results_April_2021_final_publication.pdf)> accessed 19 March 2023, slide 23.

793 *ibid*, slide 102.

794 Janssen, Rebours and Dessante (op cit. n791).

795 EU and UK TSOs MRLVC group (op cit. n792).

#### 8.4.1 MRLVC at the GB–EU border

The establishment of MRLVC arrangements will effectively involve the development of a market coupling function to determine the net energy positions (implicit allocation) between:

- bidding zones established in accordance with the EU Electricity Regulation, which are directly connected to the UK by an electricity interconnector; and
- the UK.

The net energy positions over electricity interconnectors will then be calculated via an implicit allocation process by applying a specific algorithm to:

- Commercial bids and offers for the day-ahead market timeframe from the bidding zones established in accordance with Regulation (EU) 2019/943, which are directly connected to the UK by an electricity interconnector;
- Commercial bids and offers for the day-ahead market timeframe from relevant day-ahead markets in the UK;
- Network capacity data and system capabilities determined in accordance with the procedures agreed upon between transmission system operators; and
- Data on expected commercial flows of electricity interconnections between bidding zones connected to the UK and other bidding zones in the EU, as determined by EU transmission system operators using robust methodologies.

However, the envisaged changes to the arrangements in place do not mean that the GB electricity market will return to being part of the EU internal energy market. The TCA is clear that whilst the MRLVC process needs to produce results sufficiently in advance of the operation of the EU and GB respective day-ahead markets (for the EU, this is single day-ahead coupling established in accordance with Commission Regulation (EU) 2015/1222) in order that the relevant outcomes may be used as inputs into the processes which determine the results in those markets. The GB market will remain distinct from the EU electricity market. Annex 29 of the TCA specifically provides that the envisaged algorithm will be distinct and separate from that used in single day-ahead coupling established in accordance with Regulation (EU) 2015/1222.

The UK Secretary of State issued guidance<sup>796</sup> on the post-Brexit electricity trading arrangements in January 2021. At a high level, it covers the expected roles and

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796 Department for Business, Energy & Industrial Strategy, ‘Electricity trading arrangements: Guidance from the Secretary of State for Business, Energy and Industrial Strategy to transmission system operators and relevant electricity market operators’ (January 2021) <<https://assets.publish->

responsibilities of UK TSOs during the development process, the cooperation of relevant electricity market operators with one another and with TSOs for the purpose of enabling TSOs to develop the arrangements, and the issue of cost sharing, allocation, and recovery for the plans. As expected, Ofgem was granted the regulatory powers to make decisions on the allocation, recovery, and assessment of costs through Electricity Trading Statutory Instruments. It has already been granted the power to determine cost mechanisms relating to the development and implementation of technical procedures.<sup>797</sup> Further legislation is expected to include the scope of regulatory powers for Ofgem in relation to the operation of the mechanisms.

On 26 May 2021, Ofgem published a consultation on the proposed approach to the allocation, recovery, and assessment of both development and operational costs for the MRLVC trading arrangements.<sup>798</sup> The deadline for this was 24 June 2021, with a report expected in due course, which was not yet available at the time of writing.

#### 8.4.2 A single GB clearing price and two MRLVC options

In the early part of 2021, the UK and EU TSOs worked on the technical aspects of MRLVC. This included a cost-benefit analysis carried out by CEPA on behalf of the UK and EU TSO group, the results of which were published in April (the CBA).<sup>799</sup> The CBA considers two MRLVC options, a “common order books” option and a “preliminary order books option.”

For the common order books option,<sup>800</sup> the EU and GB market participants submit their orders prior to gate closure. Then follows a simultaneous process whereby the NEMOs and the GB power exchanges lace the order books into the MRLVC system and into the MCO calculation. The algorithm makes the calculation, which is then validated.

In the preliminary order books option,<sup>801</sup> the MRLVC system will start earlier using whatever order books it has received by 11:45 A.M. (an indicative time, which will depend on the processing time and speed with which results can be transferred to the SDAC MCO). This option would require a GB gate closure at 11:45 and a later

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ing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/958195/secretary-of-state-electricity-trading-arrangements-guidance.pdf>

797 The Electricity Trading (Development of Technical Procedures) (Day-Ahead Market Timeframe) Regulations 2021.

798 Ofgem, ‘Consultation on the proposed approach to costs for the multi-region loose volume coupling trading arrangements under the EU–UK TCA’ (26 May 2021) <[www.ofgem.gov.uk/publications/consultation-proposed-approach-costs-multi-region-loose-volume-coupling-trading-arrangements-under-eu-uk-tca](http://www.ofgem.gov.uk/publications/consultation-proposed-approach-costs-multi-region-loose-volume-coupling-trading-arrangements-under-eu-uk-tca)>

799 EU and UK TSOs MRLVC group (op cit 785).

800 *ibid* 9.

801 *ibid* 101.

SDAC gate closure, e.g., at 12:00 P.M. As this option would operate on incomplete order books, there is a risk that it may lead to price distortions and, therefore, market inefficiencies.

The CBA recommends that MRLVC should be as tight as possible, as, in its view, loose coupling can lead to adverse flows and transmission capacity not being fully utilised, even though price differences between the two markets would be supportive of better utilisation of transmission capacity.<sup>802</sup> The CBA also considers detailed design options for the development of MRLVC.<sup>803</sup>

The GB electricity market currently has no single clearing price. In this regard, the CBA noted that a single GB clearing price would be highly desirable for the effective implementation of MRLVC. The CBA further recommended a single GB clearing price as a common feature in all MRLVC design options.<sup>804</sup>

A consultation to implement a single GB clearing price by the UK Department of Business, Enterprise and Industrial Strategy was held (with a closing date of 28 October 2021) to support the efforts to create the MRLVC mechanism.<sup>805</sup> Results of the consultation are expected in due course.

On the basis of the CBA, it can be said that implementation of MRLVC might not be straightforward, at least within the timeframe stipulated in the TCA, both from an economic and a legal perspective:

- From an economic perspective, as noted above, MRLVC might not be immune to market inefficiencies, which might lead to a loss of socio-economic welfare<sup>806</sup> and high price discrepancies.
- From a legal perspective, the CBA highlights a potential need to amend the gate closure times for the SDAC process in order to fully realise the benefits of

802 EU and UK TSOs MRLVC group (op cit n 792).

803 *ibid* 86.

804 *ibid* 30.

805 Department for Business, Energy & Industrial Strategy, 'GB Wholesale Electricity Market Arrangements, Re-coupling GB auctions for cross-border trade with the EU at the day-ahead timeframe' (September 2021) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1022065/power-exchange-consultation-gb-wholesale-electricity-market-arrangements.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1022065/power-exchange-consultation-gb-wholesale-electricity-market-arrangements.pdf)>

806 The socio-economic welfare of interconnectors relates to their wider societal impact, such as their contribution to the improvement of supply security, the cost to meet electricity demand, or improvements in which electricity from renewable sources is integrated into the overall energy system. For a detailed discussion of the socio-economic impact of interconnectors, please see: Pöyry, 'Costs and Benefits of GB Interconnection, A Pöyry report to the National Infrastructure Commission' (February 2016) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/505222/080\\_Poyry\\_CostsAndBenefitsOfGBInterconnection\\_v500.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/505222/080_Poyry_CostsAndBenefitsOfGBInterconnection_v500.pdf)>

low-volume coupling. This might be quite complex as SDAC gate closures are codified by the Commission Regulation (EU) 2015/1222 of 24 July 2015, establishing a guideline on capacity allocation and congestion management,<sup>807</sup> the amendment of which is a long and drawn process which would be difficult to achieve by the TCA deadline of April 2022. Apart from the timing difficulties, such an amendment would also require political support to change an EU Regulation in order to accommodate a third country. Against the backdrop of the continued war of words on the Northern Ireland Protocol,<sup>808</sup> the political will to do so might be hard to come by.

Until the MRLVC mechanism is implemented, electricity will be traded between the GB and EU markets on the basis of the current no-deal access rules, with all the trading inefficiencies this implies. The impact of the absence of market coupling could be felt particularly keenly during the early autumn of 2021, when Europe as a whole was experiencing high gas prices.<sup>809</sup> Whilst electricity prices spiked as a result in both the EU, prices in the GB market were often significantly higher than on the continent, as shown in the table.<sup>810</sup>

	10 September	18 September	2 October
GB	£660.53	£153.39	£159.45
Germany	€144.48	€94.10	€40.96
Netherlands	€150.94	€106.10	€111.59
France	€135.33	€98.59	€64.53

According to the power market analyst EnAppSys, high spikes in the GB day-ahead power prices could be observed throughout September. On 6 September, day-ahead auctions cleared at £731/MWh during the evening peak.<sup>811</sup> For 14 September, day-ahead prices peaked at £1,675.30/MWh on the EPEX power exchange and at

807 Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (Text with EEA relevance) [2015] OJ L197/24.

808 For more detail on the Northern Ireland Protocol and the positions of the UK and EU, respectively, see also Joe Marshall and Jess Sargeant, 'Northern Ireland protocol: ongoing UK-EU disagreements' (14 October 2021) <[www.instituteforgovernment.org.uk/explainers/northern-ireland-protocol-disagreements](http://www.instituteforgovernment.org.uk/explainers/northern-ireland-protocol-disagreements)>

809 For more background on this, see, for instance Mehreen Khan, 'The EU's electricity market and why soaring gas prices are driving bills higher' (Financial Times, 14 October 2021) <[www.ft.com/content/f37d2a36-4609-4b3e-9795-064b6d459676](http://www.ft.com/content/f37d2a36-4609-4b3e-9795-064b6d459676)>

810 All data in the table taken from Epex day-ahead data, as published on <<https://www.epexspot.com/en/market-data>>, on the indicated dates.

811 Molly Lempriere, 'Power prices spike to record highs amidst 'perfect shoulder month storm''

£1,750/MWh on the Nordpool power exchange. Previous record prices were £1,500/MWh and £1,499.62/MWh on 14 January 2021 and 13 January 2021 for EPEX and Nordpool, respectively.<sup>812</sup>

There are a number of possible causes for such high prices. A shortage of generation and low wind generation are often being cited, as well as some gas-fired power stations being offline and some generators preferring to trade in the high-priced GB balancing mechanism (where prices reached a record £4,037.80/MWh on 9 September and the baseload imbalance price reached £960/MWh on the same day).<sup>813</sup> Notwithstanding, the uncoupled trading arrangements between the GB and EU power markets also played an important role. EnAppSys has gone on record to state that [these] “high prices are due to the trading arrangements as a result of Brexit”<sup>814</sup> as the previous implicit market coupling arrangements would have softened the GB electricity price significantly. This view is supported by Ofgem data for the year up to September 2021, which also show that GB power prices in the wholesale day-ahead-market have steadily risen since January 2021.<sup>815</sup> It also confirms the view submitted by Energy UK, a trade association for the energy sector, to the House of Lords’ EU Committee to the House of Lords that “[l]eaving the IEM on 1 January ... [led] the legislation that supported the coupling of the Day-Ahead market in GB to fall away. This means GB power exchanges no longer share order books to deliver a single day-ahead price. This has led to the two-day ahead auctions often clearing at different prices, leading to additional risk for market participants (especially renewable generators) and ultimately additional cost for customers.”<sup>816</sup>

For completeness, it should be noted that after the Russian invasion of Ukraine on 24 February, electricity prices across Europe have risen due to soaring gas prices. The trading inefficiencies between GB and the EU, however, remain a significant concern.

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(current-news.co.uk, 6 September 2021) <<https://www.current-news.co.uk/news/the-perfect-shoulder-month-storm-power-prices-spike-to-record-highs>>

812 Alice Grundy, ‘Record-breaking day-ahead power prices shoot to £1,750/MWh’ (current-news.co.uk, 13 September 2021) <<https://www.current-news.co.uk/news/record-breaking-day-ahead-power-prices-shoot-to-1-750-mwh>>

813 *ibid.*

814 *ibid.*

815 Ofgem, ‘Wholesale market indicators’ <[www.ofgem.gov.uk/energy-data-and-research/data-portal/wholesale-market-indicators](http://www.ofgem.gov.uk/energy-data-and-research/data-portal/wholesale-market-indicators)>

816 Article 311 TCA.

## 8.5 Congestion Management and Transmission Costs

Consistent with Article 16 of each of the EU Electricity Regulation and the UK Electricity Regulation, Article 311 of the TCA requires the UK and the EU to ensure that capacity allocation and congestion management on electricity interconnectors is market-based, transparent, and non-discriminatory and that the maximum level of capacity of electricity interconnectors is made available to the market.<sup>817</sup>

The TCA does not specify a threshold for the minimum capacity that must be made available to the market (unlike Article 16(8) of the EU Electricity Regulation, which requires that a minimum of 70% of capacity be made available), this discrepancy between the TCA and the EU Electricity Regulation may lead to inefficiencies in the capacity allocation. Article 311(1)(f) of the TCA requires the coordination of capacity allocation and congestion management between EU and UK TSOs, involving the development of arrangements for all relevant timeframes (forward, day-ahead, intraday, and balancing).

Article 311 of the TCA also requires the UK and the EU to ensure that relevant TSOs conclude a multi-party agreement relating to the compensation for the costs of hosting cross-border flows of electricity. Such a multi-party agreement should aim to ensure that UK TSOs are treated on an equivalent basis to a TSO in an EU Member State (which will automatically participate in the inter-transmission system operator compensation mechanism). Until such time as this agreement is concluded, a transmission system use fee may be levied on scheduled imports and exports between the EU and the UK.<sup>818</sup> At the time of writing, the mechanism stipulated in the TCA is not yet in place.

## 8.6 Capacity Markets

A capacity market is a mechanism which has been introduced in many power markets to help stabilise power markets as more intermittent renewable energy comes on stream. Whilst the design of such capacity markets varies from jurisdiction to jurisdiction, typically, power generator companies can bid for capacity market contracts, often several years ahead, to offer the capacity to the market when it might be needed. In turn, they receive fixed payments based on the amount of MW they offer, again typically by the TSO.

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<sup>817</sup> House of Lords European Union Committee, 'Beyond Brexit: food, environment, energy and health' HL Paper 247 (23 March 2021) <<https://publications.parliament.uk/pa/ld5801/ldselect/lducom/247/247.pdf>>

<sup>818</sup> Article 311(3), 311(4) and 311(5) TCA.

Article 304 of the TCA provides that neither the UK nor the EU is required to permit capacity located in the territory of the other to participate in its capacity mechanisms.<sup>819</sup> This has the effect of limiting the access of companies on both sides of the Channel to such capacity markets. This provision will impact the possibility of overseas generation using interconnectors to bid into capacity markets, which in turn will likely impact GB power prices further.

## 9 CONCLUSION

By way of conclusion, it can be said that access to the EU energy market for UK companies (and, conversely, access to the UK market by EU companies) has, post-Brexit, become, for the time being, both more complex and less efficient as well as more politicised, more short-term focused, and less predictable.

It is more complex, as new rules need to be created to replace the previously applicable tightly woven EU regime of regulations, directives, and network codes. It will take time for these new rules to be drawn up. In contrast to the EU regime, the TCA does not come with the “administrative scaffolding” of the established legal processes of EU regulations and directives, which in turn means that the implementation of the TCA will be a slow and tentative process.

It is less efficient, especially as it concerns cross-border trading of electricity, since it currently operates on a no-deal basis until such time as the MRLVC is implemented. The system will remain less efficient even after the proposed coupling mechanism is put in place compared to the price coupling applicable in the EU. This has already been shown to have contributed to higher electricity prices in the UK.

It is more politicised, as the implementation of the TCA is dependent on the political will and, therefore, less predictable than the EU directives and regulations, which are implemented on the basis of established legal rules.

Given that the provisions in the TCA could cease to be in force after 30 June 2026 (unless the UK and EU agree to an extension), the new regime for the cross-border energy market has a more short-term outlook, which in turn makes long-term investment decisions, including whether or not to construct new interconnectors, more difficult and costly.

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<sup>819</sup> Article 304(3) TCA.



# CHAPTER 7:

## THE IMPACT OF BREXIT ON THE EU'S SUPPLY SECURITY

As for the other Constituting Manuscripts, the first section of this chapter offers a contextualisation of the Constituting Manuscript within the Brexit Process. Specifically, chapter 7 discusses the impact of Brexit on the EU's energy supply security. Moreover, the contextualisation in section 1 is completed by a literature review concerning the main aspects within the Constituting Manuscript in section 2. This overarching literature completes the literature review provided in the Constituting Manuscript, which, due to word limitations accompanying its publication, needed to be focused. The Constituting Manuscript, as previously published, starts in section 3 of this chapter.

### 1 OVERVIEW

Like chapter 6, this chapter was originally written for the book I co-edited with Ana Stanić<sup>820</sup> and takes a thematic approach. However, whereas chapter 6 is written from the perspective of UK companies, chapter 7 takes the perspective of the EU: it explores the impact of Brexit on the EU's energy supply security by first suggesting a working definition of supply security by reference to the concepts of “availability” and “deliverability” used in the definition of supply security in the relevant EU legislation. Energy security was one of the main policy concerns raised in the Brexit debate, albeit often from a UK perspective. This chapter flips this perspective and discusses the contribution of the UK to the EU's supply security from the latter's perspective.

The chapter provides an overview of the physical reality of the EU's import dependency and the growth in renewable energy sources (RES) and addresses the availability aspects of supply security in the EU post-Brexit. It does so, first, by setting out the details of the EU's import dependency as regards fossil fuels and ambitions to increase the share of RES in its overall energy mix as part of its decarboni-

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<sup>820</sup> Stanić, A. and Goldberg, S. eds., 2023. *Brexit and Energy Law: Implications and Opportunities*. Taylor & Francis. The chapter appeared in the book as chapter 3 on pages 42-59.

sation strategy, and second, by providing a brief overview of the relevant EU legislation and TCA provisions, together with an appraisal of the likely impact of the TCA arrangements.

A detailed analysis of the concept of “deliverability” follows, starting with a brief overview of the many layers of both the concept and its application in EU law, followed by an examination of the relevant provisions of the TCA and an impact assessment of the same.

The chapter concludes that the implications of the UK’s departure from the EU on energy security within the EU are, for twenty-six of twenty-seven Member States limited as far as the availability and deliverability of fossil fuels are concerned. The exception to this is Ireland which has particular challenges in relation to both availability and deliverability security, as she does not currently seem prepared to deal with a major supply shock on her own in the absence of any solidarity measures from the UK. The speed of investments in the relevant energy infrastructure, whilst forthcoming, at least in relation to electricity, seems to suggest that this situation is likely to persist for several years. Should a supply crisis arise, pragmatic solutions will be required.

Chapter 7 also concludes that the development of cross-border EU-UK offshore energy infrastructure projects in the North Sea was hitherto based on the EU regulatory regime, which TCA does not replicate. Therefore, there is a regulatory gap which causes uncertainty for such projects. The chapter concludes that pragmatic solutions which transcend the mere letter of the TCA will need to be found.

## 2 KEY ISSUES AND LITERATURE

Energy security featured in the Brexit debate and negotiations, albeit usually from a UK perspective and in the context of an anticipated Hard Brexit.<sup>821</sup>

By way of an introduction to chapter 7 of this dissertation, this section briefly touches on key issues and literature pertaining to EU supply security (section 8.8.2 (A)), EU supply security and Brexit (section 8.8.2 (B)), the impact of Brexit on the supply security on the island of Ireland (section 8.8.2 (C)); and the impact of Brexit on supply security – UK perspectives (section 8.8.2 (D))

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821 See, for instance, Shaun Connolly, ‘No-deal Brexit could trigger Northern Ireland energy crisis with electricity generators on barges in sea’ (11 July 2018) <<https://www.independent.co.uk/news/uk/politics/brexit-latest-no-deal-northern-ireland-eu-withdrawal-electricity-energy-crisis-barge-irish-sea-a8443181.html>>

## 2.1 EU Supply Security

There is substantial literature on the topic of supply security in the EU and the EU's policy regarding the same.<sup>822</sup>

Article 194 TFEU mandates the EU to enact an energy policy which ensures the “security of energy supply in the Union.”<sup>823</sup> The TFEU does not provide a definition of the concept of supply security and leaves it to the EU legislators to fill out this concept in more detail. The Second Electricity Directive and the Second Gas Directive introduced, respectively, for the first time, a definition of supply security into EU secondary legislation.<sup>824</sup> In relation to electricity, this definition was maintained until it was replaced by the Risk Preparedness Regulation<sup>825</sup>, which provides in Article 2(1) provides that “security of electricity supply” means the “ability of an electricity system to guarantee the supply of electricity to customers with a clearly established level of performance, as determined by the Member States concerned.” In relation to gas, the definition of supply security has not changed since the Second Gas Directive.

Given the import dependency of the EU, it is perhaps unsurprising that the EU's energy security is perceived from a *supply* security point of view,<sup>826</sup> i.e., from an availability perspective. However, given the policy efforts regarding the integration

822 For a history of EU supply security policies, see, e.g. Langsdorf Susanne, ‘EU Energy Policy: from the ECSC to the Energy Roadmap 2050’ (2011) Green European Foundation: Brussels, Belgium. A general overview of in particular gas supply security in the EU is available in Szulecki Kacper ed., *Energy security in Europe: Divergent perceptions and policy challenges*. (Springer 2017). For a more recent discussion of EU supply security in the context of the geopolitical challenges, see e.g. De Rosa, M. Gainsford, K. Pallonetto F. and Finn, D.P, ‘Diversification, concentration and renewability of the energy supply in the European Union’ (2022) *Energy* 253. On EU supply security in the context of decarbonisation, see Rabbi Mohammad Fazle, József Popp Domicián Máté, and Sándor Kovács. ‘Energy Security and Energy Transition to Achieve Carbon Neutrality’ (2022) 15 (21)

823 On Art 194 TFEU and its supply security mandate, see e.g. Ehrlicke Ulrich and Daniel Hackländer, *European Energy Policy on the basis of the New Provisions in the Treaty of Lisbon* (Handbook Utility Management 2009).

824 Article 2 (28) of the Second Electricity Directive defines “security” as “security of supply and provision of electricity, and technical safety”, whereas article 2 (32) of the Second Gas Directive defines “security” to mean “security of supply of natural gas and technical safety.” As such, the definition in the Second Electricity Directive is somewhat wider as it concludes a reference to the “provision” of electricity. Both definitions are somewhat circular.

825 Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC (Text with EEA relevance.) PE/73/2018/REV/1 OJ L 158, 14.6.2019, p. 1–21

826 Dicle Korkmaz, ‘Internal and external dynamics of European energy security’ [2010] 5th Pan-European Conference on EU Politics 2015.

of the IEM and concurrent decarbonisation of the EU energy mix, the ability to have electricity flow between EU Member States through relevant infrastructure and to ensure that it is delivered to the relevant consumers is likewise of critical importance. Therefore, chapter 7 uses both the lens of availability and that of deliverability in its analysis of the impact of Brexit on EU supply security.

Aspects of availability-related issues in EU supply security have been discussed, mostly from a policy and in particular foreign/external policy perspective, by a number of scholars, including Konstadinides et al. who have analysed the link between the EU's Common and Foreign Security Policy and energy (supply) policy,<sup>827</sup> and Mišík who admonishes the EU to work on its external energy security, given the geopolitical uncertainties to which it is exposed and the move towards decarbonisation. Mišík argues the EU should lend support to Member States' energy security during the transition towards low-carbon energy sources until such time as domestic low-carbon energy sources can provide supply security.<sup>828</sup> Rodriguez et al. similarly discuss energy adequacy in the context of the energy transition with particular reference to the impact of the Ukraine war on the EU gas sector.<sup>829</sup>

By contrast, Hancher et al. take a multi-disciplinary perspective on the availability of energy within the EU and the use of capacity mechanisms as a tool for resource adequacy,<sup>830</sup> whereas Fleming focuses on changes to the EU legal framework of gas supply security and changes introduced by Regulation (EU) 2017/1938<sup>831</sup> in relation to the classification of geographical risk groups and solidarity mechanisms between Member States.<sup>832</sup>

Member States have, due to history, resource profile and energy policy outlook, different perceptions of energy security and, as a result, different policy priorities. This is discussed by Mata Pérez et al. who highlight that such differences lead to a multi-speed energy transition which in turn poses a challenge to the Energy Union.<sup>833</sup>

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827 Konstadinides, Theodore and Despoina Mantzari, *The nexus between Common Foreign and Security Policy and energy policy*. In *Research Handbook on the EU's Common Foreign and Security Policy* (Edward Elgar Publishing, 2018)

828 Mišík Matúš, 'The EU needs to improve its external energy security' (2022) *Energy Policy* 165

829 Rodriguez-Fernandez Laura, Ana Belén Fernández Carvajal and Victoria Fernández de Tejada, 'Improving the concept of energy security in an energy transition environment: Application to the gas sector in the European Union' (2022) *The Extractive Industries and Society* 9

830 Hancher, Leigh, Adrien De Hauteclocque, Kaisa Huhta, and Malgorzata Sadowska eds. *Capacity mechanisms in the EU energy markets: law, policy, and economics* (OUP 2022).

831 Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Reg (EU) No 994/2010, OJ L 280, 28.10.2017

832 Fleming Ruven, 'A legal perspective on gas solidarity' (2019) *Energy Policy* 124

833 María de la Esperanza Mata Pérez, Daniel Scholten, Karen Smith Stegen, 'The multi-speed energy

Various aspects of the concept of deliverability have been elucidated by academic publications, mostly from an economic or policy perspective. As deliverability is closely linked to the infrastructure necessary to deliver electricity and/or gas to consumers, the regulation and condition of this infrastructure are often at the centre of such contributions.

In an early contribution, Joskow considered supply security in a competitive market and the role of network regulation in relation to the same. Drawing mainly on U.S. and UK examples, Joskow concludes that the liberalisation of the energy sector does not appear to cause a significant supply security problem, provided it “has followed the right path and has had the opportunity to mature and stabilize” with an appropriate regulatory regime.<sup>834</sup> Jamasb and Pollitt take this argument a step further and conclude that network regulation can play a significant role in increasing the security of the supply of future energy systems.<sup>835</sup>

As discussed above and in Chapter 7 in more detail, energy networks are key to the delivery of supply security in strategic terms. They also have an important role in the provision of short-term operational reliability and security, i.e., the robust short-term ability of the relevant transmission and distribution systems to physically balance supply and demand. This “operational reliability”<sup>836</sup> is required to ensure the reliability of supply for all consumers. In turn, operational reliability needs good data on the usage of the relevant grids, which in turn requires predictive models for the supply and demand of both gas and electricity. Van der Linden et al. have modelled such data and concluded that they deliver insights into the critical parts of the networks and can be used for the improved design of the networks.<sup>837</sup>

Typically, such data are based on “business as usual” operations. In case of a crisis situation, such as a decrease or shut down of gas flows, electricity and gas systems need to be able to react quickly in order to activate an appropriate response. For

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transition in Europe: Opportunities and challenges for EU energy security’ (2019) 26 Energy Strategy Reviews <<https://doi.org/10.1016/j.esr.2019.100415>>

834 Joskow, Paul L., “Supply Security in Competitive Electricity and Natural Gas Markets”, p.6. Paper prepared for the Beesley Lecture in London on October 25, 2005. <<https://economics.mit.edu/sites/default/files/inline-files/Supply%20Security%20in%20Competitive%20Electricity%20and%20Natural%20Gas%20Markets.pdf>>

835 Jamasb, Tooraj and Pollitt, Michael, “Security of supply and Reg of energy networks”, Energy Policy 36 (2008), page 4584.

836 Roggenkamp, Martha: Re-Regulating Energy Supply in the Netherlands: A Balancing Act between Energy Security and Energy Liberalisation” in Barton, Barry; Redgwell Catherine, Rønne Anita and Zillman, Donald N eds, ‘Energy Security: Managing Risk in a Dynamic Legal and Regulatory Environment’ (Oxford 2004).

837 van der Linden, Ruud Ryvo Octaviano, Huib Blokland and Tom Busking ‘Security of supply in gas and hybrid energy networks’ (2021) 14 (4) Energies

quick responses, an early warning system is helpful. Monforti et al. have analysed the European model for early warning systems and concluded that the model, based on a Monte Carlo approach, has been shown to reliably provide early warnings.<sup>838</sup>

Against this background, Leal-Arcas et al. provide a (rare) legal perspective and conclude that the integration of energy networks in the EU are particularly important to maintain supply security, especially in light of more diversified energy sources and that further improvements to the EU's energy trading system would ensure greater energy security and more efficient energy markets.<sup>839</sup>

All of the above elements point to the need for a strong regulatory framework which includes the sharing of data between TSOs. The aforementioned contributions also show that an integrated European energy system will be key to better supply security. This means that cross-border infrastructure (whether for electricity or gas) will, by definition, play an important role in securing and maintaining supply security. In the EU, the cooperation of TSOs and NRAs in relation to cross-border energy infrastructure is enshrined in legislation and interconnection points between national gas and electricity grids are regulated on the basis of European network codes. Post-Brexit, the UK is no longer part of this cooperation and coordination even though such coordination and cooperation with the EU in relation to cross-border infrastructure would be advantageous for the supply security of the UK and also Ireland. As discussed in chapters 5 and 7, the TCA only provides a limited framework for such cooperation.

## 2.2 EU Supply Security and Brexit

The impact of Brexit on EU supply security generally has been analysed in a small number of academic contributions, mainly from a policy perspective. However, there are few, if any, dedicated contributions on this topic from a legal perspective. To the extent discussants analyse the impact of EU supply security, the focus tends to be on the impact of Brexit on the supply security of Ireland (see section 8.8.2 (C) below). Chapter 7 of the dissertation is, therefore, a new contribution to this field.

Policy analyses on the topic include Hadfield's contribution, which focuses on the governance aspects of the EU's Energy Union<sup>840</sup> post-Brexit and the extent to which the UK and the EU might cooperate strategically.

838 Monforti F and Szikszai A 'A MonteCarlo approach for assessing the adequacy of the European gas transmission system under supply crisis conditions' (2010) 38 (5) Energy Policy

839 Rafael Leal-Arcas, Juan Alemany Ríos, Costantino Grasso, 'The European Union and its energy security challenges' (2015) 8(4) The Journal of World Energy Law & Business <<https://doi.org/10.1093/jwelb/jwv020>>

840 The Energy Union comprises five dimensions: energy security, solidarity and trust; the internal

Gaventa likewise focuses on the impact of Brexit on the Energy Union and argues that “decisions taken through the Brexit negotiations and related reform processes have the potential shape the future not only of the future UK-EU relationship on energy but also the position of third countries in the Energy Union more generally and the role of energy and climate in the future of Europe itself.”<sup>841</sup>

Fredriksson et al.<sup>842</sup> by contrast, argue in a study for the European Parliament that Brexit will have a limited impact on the EU's energy system. Whilst they predict that the EU will be able to complete its market, achieve its climate and energy targets and maintain supply security, they recommend that particular attention be paid to the impact of Brexit on the Irish energy system.

In this context, chapter 7 offers a new perspective on EU supply security by taking considering both the availability and deliverability aspects of the same from a legal perspective in the context of Brexit.

### 2.3 The Impact of Brexit on the Supply Security on the Island of Ireland

Whilst chapter 7 discusses the impact of Brexit on the supply security of Ireland only in passing, this was an important topic in the Brexit debate and negotiations. Ireland's supply dependency on the UK, in particular in relation to gas, is a long-standing issue and cause for debate which pre-dates Brexit. The Irish and UK/GB energy markets are so interlinked that Purdue has described the Irish market as “in effect a regional extension to the British energy market.”<sup>843</sup>

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energy market; energy efficiency as a contribution to the moderation of energy demand; decarbonisation of the economy; and research, innovation and competitiveness. On the Energy Union more generally, see Röben Volker, *Towards a European energy Union: European energy strategy in international law* (CUP 2018)

841 Gaventa Jonathan, *Brexit and the EU Energy Union: Keeping Europe's Energy and Climate Transition on Track*. (E3G 2017) <<https://www.e3g.org/publications/brexit-and-eu-energy-union-keeping-europes-energy-and-climate-transition/>>

842 Fredriksson Gustav, Alexander Roth, Simone Tagliapietra, and Georg Zachmann. *The Impact of Brexit on the EU Energy System*. Bruegel Report, November 2017' (2017) <<http://aei.pitt.edu/93151/>>; Tagliapietra's presentation on the topic: Tagliapietra Simone, 'The Impact of Brexit on the EU Energy System' (2018) <<https://www.bruegel.org/sites/default/files/wp-content/uploads/2018/05/Introduction-Brexit-and-Energy-Policy-3.pdf>>

843 Purdue David, Hansi Huang, 'Economics. Brexit and its Impact on the Irish Economy' (2015) National Treasury Management Agency, Dublin



In the context of Brexit, contributions on this topic have typically highlighted the dependency of Ireland on UK gas deliveries<sup>844</sup> and Brexit as a potential threat to the iSEM,<sup>845</sup> as well as consequentially higher electricity costs for Northern Ireland.<sup>846</sup>

Various contributors have highlighted the issue and argued that a change in Irish energy policy is required.<sup>847</sup> Lynch has argued that whilst supply security concerns are important, Irish energy policy requires an overhaul following Brexit and should not neglect other issues, such as climate policy.<sup>848</sup>

Prior to the TCA coming into force, Cormacain voiced concern that Brexit might negatively impact Northern Ireland's participation in the iSEM and that despite general agreement on the importance of the iSEM, detailed policies, codes, regulations, and practices required to underpin the electricity market on the island.<sup>849</sup>

Froggatt et al. have discussed the importance of existing energy market integration between Northern Ireland and the Republic of Ireland and emphasised the supply security benefits derived from interconnections.<sup>850</sup>

Mathieu et al. have argued that in light of Irish supply security concerns and Brexit, Irish energy policy should focus on building a new interconnector between Ireland and France to increase social welfare in both countries and to improve the connectivity of Ireland to the rest of the IEM;<sup>851</sup> whereas Do et al. have argued that further interconnectedness between the GB and Irish electricity markets will be

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- 844 See, e.g. Devine Mel T and Marianna Russo, 'Liquefied natural gas and gas storage valuation: Lessons from the integrated Irish and UK markets' (2019) *Applied Energy* 238 or Glynn James, Alessandro Chiodi and Brian O. Gallachoir, 'Energy security assessment methods: Quantifying the security co-benefits of decarbonising the Irish Energy System' (2017) *Energy Strategy Reviews* 15
- 845 Cormacain Meabh, *An electric fence? Assessing the impact of Brexit on the single electricity market in Ireland* (LSE European Politics and Policy (EUROPP) Blog 2018).
- 846 Thomas Muinzer, 'Electricity bills could rise if Brexit threatens Northern Ireland's unique energy agreement with Ireland' (28 November 2018) <[https://aura.abdn.ac.uk/bitstream/handle/2164/14632/Muinzer\\_Electricity\\_Bills\\_Brexit\\_s\\_threat\\_to\\_Northern\\_Ireland\\_s\\_Energy\\_Agreement\\_with\\_Ireland.pdf?sequence=1](https://aura.abdn.ac.uk/bitstream/handle/2164/14632/Muinzer_Electricity_Bills_Brexit_s_threat_to_Northern_Ireland_s_Energy_Agreement_with_Ireland.pdf?sequence=1)>
- 847 See, e.g. Korneyeva Kateryna, Brian P. Ó. Gallachóir and Eamon J. McKeogh. 'Security of Energy Supply in Ireland-A Key Driver for Renewable Energy. Proceedings of the 2nd International Conference of Renewable Energy in Maritime Island Climates' (2006) 26.
- 848 Lynch Muireann, 'Re-evaluating Irish energy policy in light of brexit, Research Notes RN20170201 (2017) Economic and Social Research Institute (ESRI)
- 849 Cormacain Meabh, 'An electric fence? Assessing the impact of Brexit on the single electricity market in Ireland' (2018) LSE European Politics and Policy (EUROPP) Blog <<https://blogs.lse.ac.uk/euoppblog/2018/08/09/an-electric-fence-assessing-the-impact-of-brexit-on-the-single-electricity-market-in-ireland/>>
- 850 Froggatt Antony and Thomas Raines. 'UK unplugged? The impacts of Brexit on energy and climate policy' (2016)
- 851 Mathieu Carole, P. Y. E. Steve and Paul DEANE, 'Brexit, Electricity and the No-Deal Scenario: Perspectives from Continental Europe, Ireland and the UK' (2018) Retrieved from <<https://poli->



required in order to maintain supply security against the backdrop of an increasingly decarbonised energy mix.<sup>852</sup>

By contrast, Farrelly and Collins have concluded that it should be possible to mitigate the impact of Brexit on the energy sector on the island of Ireland.<sup>853</sup>

## 2.4 The impact of Brexit on Supply Security – UK Perspectives

Whilst the scope of chapter 7 does not extend to the impact of Brexit on the UK energy market, it is interesting to briefly consider the relevant literature on this topic.

The UK perspective has been explored in a number of academic contributions, mainly from a prospective view point (i.e., prior to the entry into force of the TCA) and from policy and economic perspectives, e.g., by Ifelebuegu et al. who have emphasised the uncertainty Brexit would bring to the UK's supply security.<sup>854</sup> Similarly, Bros stresses the uncertainty arising from Brexit and place it in the context of declining UK North Sea gas production and technical issues with Rough, the biggest UK gas storage facility. Bros predicts that these issues will render the Brexit negotiations “even more difficult as far as gas is concerned.”<sup>855</sup>

Bradshaw sketches out policy options in relation to gas supply security in the post-Brexit UK and concludes that “future gas security could be challenged by the medium-term prospect of increasing import dependence, due to declining domestic production, and the longer-term prospect of falling demand due to climate change policy,” leading to uncertainty which is being reinforced by Brexit which in turn is likely to lead to higher gas prices over time.<sup>856</sup>

Andreasson, in a thesis on the legal aspects of Brexit and supply security, considers that Brexit “threatens the security of the UK's gas supply, as the current legal framework governing gas security in the UK, which follows the European Internal

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cycommons.net/artifacts/1406241/brexit-electricity-and-the-no-deal-scenario/2020510/ on 10 Apr 2023. CID: 20.500.12592/nkrkkc>

852 Do Hung Xuan, Rabindra Nepal, and Tooraj Jamasb, ‘Electricity market integration, decarbonisation and security of supply: Dynamic volatility connectedness in the Irish and Great Britain markets’ (2020) *Energy Economics* 92 <<https://www.sciencedirect.com/science/article/pii/S0140988320302875>>

853 *ibid* 398

854 Ifelebuegu Augustine O., Kenneth E. Aidelojie and Elijah Acquah-Andoh, ‘Brexit and Article 50 of the Treaty of the European Union: Implications for UK Energy Policy and Security’ (2017) 10(12) *Energies*

855 Bros, Thierry. “Brexit and security of supply for UK and Ireland.” (2017), <<https://www.jstor.org/stable/pdf/resrep33901.pdf>>

856 Bradshaw Michael, ‘Future UK Gas Security: A Position Paper’ (2018) <[https://warwick.ac.uk/fac/soc/impact/future\\_uk\\_gas\\_security\\_-\\_a\\_position\\_paper\\_wbs\\_ukerc.pdf](https://warwick.ac.uk/fac/soc/impact/future_uk_gas_security_-_a_position_paper_wbs_ukerc.pdf)>

Energy Market (IEM), will be terminated upon withdrawal”<sup>857</sup> and argues in favour of a compromise between continued IEM and membership and a Hard Brexit.

Judge takes a more optimistic approach and finds that the UK has a robust set of arrangements for preventing gas supply disruptions which are linked to, but independent of, EU-level arrangements. He concludes that Brexit would not significantly increase the risk of gas supply disruptions.<sup>858</sup>

Recently, Hallas has discussed supply security in the UK from a post-Brexit perspective and concluded that the “direct impact of Brexit on UK energy supply security to date has been detrimental but not yet highly material” as the Brexit effect has been drowned out by the impact of geopolitical events which have led to an “exceptionally tight global gas market.”<sup>859</sup>

### 3 INTRODUCTION TO THE CONSTITUTING MANUSCRIPT

This article explores the impact of Brexit on the EU’s energy supply security by analysing the prevalent elements of “availability” and “deliverability” used in the definition of supply security in the relevant EU legislation.

Section 4 of this chapter briefly defines both of these elements, Section 5 summarises the physical reality of the EU’s import dependency and the growth in renewable energy sources (RES), and Section 6 addresses the availability aspects of supply security in the EU post-Brexit, first by setting out the details of the EU’s import dependency as regards fossil fuels and ambitions to increase the share of RES in its overall energy mix as part of its decarbonisation strategy, and second by providing a brief overview of the relevant EU legislation and TCA provisions and an appraisal of the likely impact of the TCA arrangements. Section 7 discusses aspects of deliverability, starting with a brief overview of the many layers of both the concept and its application in EU law, followed by an examination of the relevant provisions of the TCA and an impact assessment of the same. Section 8 concludes and considers the future of supply security-related issues in the EU.

It comes as no surprise that the EU Member State most affected by Brexit is Ireland, due both to the fact that it is the only EU Member State to share a border with

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857 Andreasson Malin, ‘The United Kingdom’s Security of Gas Supply Post Brexit: Comparing the Legal Aspects of Potential Options, Master’s Thesis at the University of Gothenburg’ (2017) <<https://gupea.ub.gu.se/handle/2077/52183>>

858 Judge Andrew, ‘Brexit and Crisis Management: Gas Supplies’ (2019) <<https://eprints.gla.ac.uk/177638/>>, op. cit.

859 Hallas Paul, *UK Security of Supply Post-Brexit*. In: *Stanič and Goldberg, Brexit and Energy Law* (Routledge 2023)

the UK and the particular constitutional arrangements in relation to Northern Ireland. There are additional specific, energy-related issues as well: the electricity market on the island of Ireland encompasses both Ireland and Northern Ireland, Ireland is dependent on the UK for its gas supply, and the UK is the only country to which Ireland is connected in terms of both electricity and gas interconnectors. Post-Brexit energy supply security is, therefore, a particular concern for Ireland. The specific post-Brexit considerations in relation to the Irish energy sector are outside the scope of this article and are discussed in detail in Chapter 11 of this book.<sup>860</sup>

#### 4 WHAT IS SUPPLY SECURITY?

At the outset of this chapter, it is opportune to clarify what is meant by the term *energy security*. As Paul Hallas points out in Chapter 4 of this book,<sup>861</sup> there are many different definitions of energy security. Most of them contain at least two constitutive elements, the first of which refers to the physical availability of “sufficient energy to meet all reasonable demands for it” and the second of which relates to the affordability of energy supply as expressed in energy price levels both in the wholesale and retail market.

In the context of the EU, given the import dependency of the EU, it is perhaps unsurprising that the EU's energy security is perceived from a *supply* security point of view.<sup>862</sup>

The EU does not have a uniform definition of energy or supply security in its relevant regulations or directives. In relation to electricity, the current EU definition of “security of electricity supply” refers to “the ability of an electricity system to guarantee the supply of electricity to customers with a clearly established level of performance, as determined by the Member States concerned.”<sup>863</sup> In relation to gas, the most recent definition of *security* refers to “both security of supply of natural gas and technical safety” without defining either concept.<sup>864</sup> Given these definitions,

<sup>860</sup> *ibid* 398

<sup>861</sup> Hallas, P., 2023. UK Security of Supply Post-Brexit. In: Stanič and Goldberg, Brexit and Energy Law, Routledge 2023, pp.60-77.

<sup>862</sup> Dicle Korkmaz, ‘Internal and external dynamics of European energy security’ (2010) 5th Pan-European Conference on EU Politics 2015.

<sup>863</sup> Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC [2019] OJ L158/1, Article 2(10) (Risk Preparedness Regulation).

<sup>864</sup> Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010 [2017] OJ L280/1 (“Gas Regulation”). Definition of *security* by reference to Directive

it is appropriate to examine the impact of Brexit on the EU's supply security through the lens of *availability*, meaning the physical availability of energy, and *deliverability*, meaning the ability to ensure the delivery of energy through relevant infrastructure.

## 5 THE PHYSICAL REALITY: IMPORT DEPENDENCY AND RENEWABLE EXPANSION

### 5.1 The EU's Fossil Fuel Import Dependency

In relation to fossil fuels, the energy import dependency of the European Union is well documented.

According to Eurostat, in 2019, almost two-thirds of the extra-EU's crude oil imports came from Russia (27%), Iraq (9%), Nigeria and Saudi Arabia (both 8%), and Kazakhstan and Norway (both 7%). A similar analysis shows that almost three-quarters of the EU's imports of natural gas came from Russia (41%), Norway (16%), Algeria (8%), and Qatar (5%), while over three-quarters of solid-fuel (mostly coal) imports originated from Russia (47%), the United States (18%), and Australia (14%).<sup>865</sup>

These trends continued in 2020 and in the first trimester of 2021, the latest period for which figures were available at the time of writing, with Russia being the largest supplier of natural gas to the EU (46.8%) both in 2020 and in the first semester of 2021.<sup>866</sup> The only other partners with a significant share in total extra-EU imports were Norway (26.5%) and, at some distance, Algeria (11.6%).<sup>867</sup> In the same period, gas imports from the UK into the EU amounted to 3.7% of the total import value of gas into the EU.

The EU's import dependency on oil and gas is, however, unevenly distributed among the EU's Member States. In the first semester of 2021, more than 75% of

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2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC [2009] OJ L211/94, Article 2(32).

865 Eurostat, 'From where do we import energy?' <[866 Eurostat, 'EU imports of energy products – recent developments' <\[https://ec.europa.eu/eurostat/statisticsexplained/index.php?title=EU\\\_imports\\\_of\\\_energy\\\_products\\\_recent\\\_developments#-Main\\\_suppliers\\\_of\\\_natural\\\_gas\\\_and\\\_petroleum\\\_oils\\\_to\\\_the\\\_EU\]\(https://ec.europa.eu/eurostat/statisticsexplained/index.php?title=EU\_imports\_of\_energy\_products\_recent\_developments#-Main\_suppliers\_of\_natural\_gas\_and\_petroleum\_oils\_to\_the\_EU\)>](https://ec.europa.eu/eurostat/cache/infographs/energy/bloc2c.html#:~:text=Russia%20is%20the%20main%20EU,gas%20and%20solid%20fossil%20fuels&text=In%202019%2C%20almost%20two%20thirds,and%20Norway%20(both%207%20%25)></a>></p>
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867 *ibid.*

imports of petroleum oils from Bulgaria, Slovakia, Hungary, and Finland came from Russia. During the same time, Bulgaria, Czechia, Estonia, Latvia, Hungary, Austria, Romania, Slovenia, Slovakia, and Finland imported more than 75% of their natural gas imports from Russia.

## 5.2 Expansion of RES in the EU

It would be wrong to limit an assessment of energy security to fossil fuel availability. Given the EU's climate and decarbonisation objectives,<sup>868</sup> its energy mix and associated electricity generation profile are undergoing a major structural shift towards energy from RES.<sup>869</sup>

In 2020, the share of RES in the EU's gross final energy consumption was 22.1%; this is just over two percentage points above the 20% target set out in the 2009 Renewable Energy Directive,<sup>870</sup> compared with 9.6% in 2004.

According to Eurostat, Sweden (60%) had by far the highest share among the EU Member States in 2020, ahead of Finland (44%) and Latvia (42%). At the opposite end of the scale, the lowest proportions of renewables were registered in Malta (11%), followed by Luxembourg (12%) and Belgium (13%).<sup>871</sup>

As such, conventional power plants' share of the generation landscape in the EU is declining, and with it, the reliance on fossil fuels. This shift in the generation profile brings its own supply security challenges, such as the intermittent and often decentralised nature of RES increases, as well as increased risks to the energy system through cyberattacks and the reliance on "metals and minerals that are in tight supply or whose production is dominated by a limited number of nations."<sup>872</sup>

868 European Commission, 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Empty, 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality' COM (2021) 550 final.

869 IEA, 'Energy security – Reliable, affordable access to all fuels and energy sources' <<https://www.iea.org/topics/energy-security>>

870 Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC [2009] OJ L140/39.

871 Eurostat, 'Renewable energy statistics' <[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Renewable\\_energy\\_statistics#:~:text=In%202020%2C%20renewable%20energy%20sources,and%2033%20%25%2C%20respectively](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Renewable_energy_statistics#:~:text=In%202020%2C%20renewable%20energy%20sources,and%2033%20%25%2C%20respectively)>

872 IEA (n 867).

As part of the proposals<sup>873</sup> to amend the recently recast Renewable Energy Directive<sup>874</sup> in the context of the Fit for 55 Package tabled by the European Commission in July 2021, the overall minimum renewable energy target is proposed to be increased to 40% from the previous 32%.

Specific sub-targets aim to replace 50% of grey hydrogen (produced from natural gas) used in the EU with green hydrogen (produced from renewables) by 2030 and aim for 2.6% of the energy demand from the transport sector (which will not only include road and rail but also maritime and aviation) to be covered by RES. These two targets alone require 500 TWh of renewable energy generation,<sup>875</sup> which is more than the entire electricity consumption of France in 2020 (at 449.51 TWh).<sup>876</sup>

Coupled together, these targets will have a noticeable impact on renewable power demand, raising questions about the possible effect on energy prices over the coming years.

## 6 AVAILABILITY IN EU LEGISLATION

It is useful to briefly set out and summarise the EU legislation in relation to supply security in order to then contrast it with the provisions of the TCA and the consequences of the latter. Energy security as a policy aim is anchored in Article 194(1) TFEU, which provides that “[EU] policy on energy shall aim, in a spirit of solidarity between Member States, to: ... (b) ensure the security of energy supply in the Union.”<sup>877</sup> As such, supply security is a major theme that runs through the EU’s energy policy; however, there is no single legislative framework for it. Instead, security of supply features directly or indirectly in most EU energy directives and regulations. Below is a brief summary of those EU legislative acts which specifically

873 European Commission, ‘Proposal for a Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652’ COM (2021) 557 final.

874 Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources [2018] OJ L328/82.

875 Transport & Environment, ‘A clean shift for EU transport fuels?, T&E recommendations for the RED review’ (November 2021) <<https://www.transportenvironment.org/wp-content/uploads/2021/11/TE-Briefing-RED-II-review-Autumn-2021-Final-22.11.2021.pdf>>

876 IEA, ‘France Key energy statistics 2020’ <<https://www.iea.org/countries/france>>

877 Consolidated Version of the Treaty on the Functioning of the European Union [2012] OJ C326/47, Article 194.

address the availability (or otherwise) of energy in the EU and measures to counter-act acute shortages.

## 6.1 Electricity

The 2019 Risk Preparedness Regulation<sup>878</sup> sets out a common framework of rules on how to prevent, prepare for and manage electricity crises, bringing more transparency in the preparation phase and during an electricity crisis and ensuring that measures are taken in a coordinated and effective manner.<sup>879</sup>

It establishes a regime for the identification of regional and national crisis scenarios,<sup>880</sup> requires Member States to prepare risk-preparedness plans and detail their contents,<sup>881</sup> and sets out exactly what is required of Member States should a connected Member State request assistance (to cooperate in a spirit of solidarity in order to prevent electricity crises).<sup>882</sup>

It also requires that Member States “act and cooperate in a spirit of solidarity in order to prevent or manage electricity crises,” implying a more proactive approach and cooperation between Member States without specifying how such an approach might look in practice. Arguably, to some extent, this cooperation takes place in EU fora such as the ENTSO-E, whose Steering Group on Operational Frameworks counts “ensuring supply security” amongst its tasks;<sup>883</sup> however, the 2019 Risk Preparedness Regulation also assigns monitoring tasks to the electricity coordination group established by a Commission decision in 2012.<sup>884</sup>

## 6.2 Gas

The 2017 Gas Supply Regulation<sup>885</sup> seeks to ensure the continued security of gas supply during a crisis, its objective being “to ensure that all the necessary measures are taken to safeguard an uninterrupted supply of gas throughout the Union, in

878 Risk Preparedness Regulation (n 825).

879 *ibid* Recital 6.

880 *ibid* Articles 6–7.

881 *ibid* Articles 10–13.

882 *ibid* Articles 15–16.

883 For more detail on the Steering Group, see ENTSO-E, ‘System Operations Committee’ <<https://www.entsoe.eu/about/system-operations/>>

884 European Commission, Commission Decision of 15 November 2012 setting up the Electricity Coordination Group [2012] OJ C353/2.

885 Regulation (EU) 2017/1938 (n 822).





States have to ensure sufficient accessible oil/petroleum reserves equal to at least 90 days of net imports or 61 days of consumption, whichever is higher.<sup>893</sup> While the 2009 Stockpiling Directive recognises that indigenous production can offset the need to stockpile somewhat, Member States with indigenous oil production still have to comply with a 61-day stockpiling requirement.<sup>894</sup> Importantly, such stocks need to be maintained at all times in the EU.<sup>895</sup>

Member States must send the European Commission a statistical summary of their stocks at the end of each month, setting out the number of days of net imports or consumption that the stocks represent.<sup>896</sup> In case of a supply crisis, the Commission is to arrange for consultation between Member States. Generally, no withdrawals from the stockpiled reserves may be made prior to this consultation except in a very urgent situation.<sup>897</sup>

Article 17 sets up a Coordination Group for oil and petroleum products to assist with the analysis of the supply security situation as far as oil and petroleum products are concerned. This group also facilitates the coordination and implementation of any relevant measures.

#### 6.4 Non-Fuel-Specific Provisions

In addition to the provisions of the fuel-specific EU legislation set out above, the Energy Union Governance Regulation<sup>898</sup> contains general provisions pertaining to energy security in the EU. As supply security constitutes one of the pillars of the EU's Energy Union strategy, the Energy Union Governance Regulation obligates Member States to report on energy security as part of their integrated national energy and climate progress reports, including information on the implementation of:

- “(a) national objectives for the diversification of energy sources and supply; (b) where applicable, national objectives with regard to reducing energy import

893 *ibid* Article 3.

894 *ibid*.

895 *ibid*.

896 *ibid* Article 14.

897 *ibid* Article 20.

898 Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council [2018] OJ L328/1 (“Energy Union Regulation”).

dependency from third countries; (c) national objectives for the development of the ability to cope with constrained or interrupted supply of an energy source, including gas and electricity; (d) national objectives with regard to increasing the flexibility of the national energy system, in particular by means of deploying domestic energy sources, demand response and energy storage [and...] (f); regional cooperation in support of supply security as well as any relevant financing measures.”<sup>899</sup>

This provision adds further to the tightly woven framework of reporting and coordination of EU Member States in relation to supply security measures and the fuel-specific measures sketched out above.

## 6.5 Availability in the TCA

Section 3 of chapter 2 of the TCA sets out provisions concerning the cooperation of the EU and the UK in relation to supply security.

Article 315 contains a commitment that the UK and the EU “shall cooperate with respect to the security of supply of electricity and natural gas.”<sup>900</sup> To underscore this commitment, through Article 315, both the UK and the EU undertake to “develop appropriate frameworks for cooperation with respect to the security of supply of electricity and natural gas,”<sup>901</sup> to “inform each other without undue delay where there is reliable information that a disruption or other crisis relating to the security of electricity or natural gas may occur and on measures planned or taken,”<sup>902</sup> or (if the disruption or other crisis has already occurred) seek to enable the coordination of possible mitigation and restoration measures.<sup>903</sup>

Article 315 is a clear attempt to both preempt possible supply emergency situations while also creating minimum requirements for how to act if such an emergency is foreseen or actually occurs.

Article 316 builds on it further by requiring each party to be proactive in setting out a commitment to “assess risks affecting the security of supply of electricity or natural gas, including the likelihood and impact of such risks, and including cross-border risks.”<sup>904</sup>

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899 Energy Union Regulation, Article 22.

900 TCA, Article 315(1).

901 *ibid* Article 315(7).

902 *ibid* Article 315(4).

903 *ibid* Article 315(5).

904 *ibid* Article 316(1).

These assessments are to take the form of regularly updated plans, which shall contain “measures needed to remove or mitigate the likelihood and impact of any risk identified ... and the measures needed to prepare for, and mitigate the impact of, an electricity or natural gas crisis.”<sup>905</sup> Moreover, each party has committed to share these plans with one another,<sup>906</sup> exchanging information on any potential risks to the security of supply “in a timely manner.”<sup>907</sup> Importantly, Article 316 contains a commitment from each party not to plan any measures that would “endanger the security of supply of electricity or natural gas of the other Party.”<sup>908</sup>

Whilst these provisions paint a picture of close cooperation between the EU and the UK, this cooperation is largely limited to the exchange of information in various forms. The TCA does not replicate the solidarity mechanisms of the 2017 Gas Regulation or the 2019 Risk Preparedness Regulation, neither does it create other forms of mutual assistance, nor does it address minimum stockpiling obligations in either jurisdiction.

Instead, Article 302 TCA explicitly provides that the UK and the EU preserve the right to adopt, maintain, and enforce measures necessary to pursue legitimate public policy objectives, such as securing the supply of energy goods and raw materials. Article 340(3) TCA explicitly provides that nothing in the TCA shall prevent a party from developing their own rules pertaining to energy security. This implies that even against a backdrop of cooperation efforts, policy divergence is possible and in fact, likely. Given that the TCA contains no minimum stockpiling or other obligations that affect the availability element of supply security directly, it is likely that the UK will develop its own policy in this regard.

## 6.6 Impact of the TCA on Availability of Energy in the EU

Taking into consideration the UK's contribution to the EU's energy supply, it is difficult to argue that the UK's departure from the EU's Internal Energy Market has had a material impact on 26 of the 27 EU Member States<sup>909</sup>—though there may be some minor geopolitical ripple effects in the EU as a result of it losing one of its few large-scale gas-producing Member States.<sup>910</sup>

905 *ibid* Article 316(2).

906 *ibid* Article 315(3).

907 *ibid* Article 315(2).

908 *ibid* Article 316(3)(c).

909 Thierry Bros, ‘Brexit’s impact on gas markets’ (January 2017) The Oxford Institute for Energy Studies <<https://a9w7k6q9.stackpathcdn.com/wp-content/uploads/2017/01/Brexit-impact-on-gas-markets-OIES-Energy-Insight.pdf>>

910 Aziiz Sutrisno and Floor Alkemade, ‘EU gas infrastructure resilience: Competition, internal changes, and renewable energy pressure’ (2020) 6 Energy Reports 24

In relation to electricity, the direction of flow on GB-EU interconnectors is generally, with few exceptions, from the EU into GB due to price differentials. However, this could change in the future depending on the scale of offshore wind deployment in the North Sea.<sup>911</sup> Whilst the electricity trading arrangements post-Brexit do not, in terms of efficiency, match those of the EU's market coupling arrangements (see chapter 6 of this dissertation on market access for further details), the Brexit-related changes to interconnector trading have not affected the availability of electricity.<sup>912</sup>

The sole exception to this assessment, however, is Ireland, a country which (like the UK) is not currently capable of meeting demand through indigenous supply,<sup>913</sup> whose only gas pipelines come via Great Britain,<sup>914</sup> and which, for EU purposes, is an energy island as it is not interconnected with the electricity system of any other Member State. In addition, Ireland faces a particular geographical challenge in relation to its oil stocks. Chapter 11 discusses the gas availability challenges in Ireland post-Brexit in further detail, including in relation to alternative investments; indigenous gas supply from the Corrib field, which has peaked, with production “projected to decline throughout the 2020s;”<sup>915</sup> and import strategies through the Shannon LNG terminal.

There is currently no biogas production facility in Ireland, despite the country having the highest potential for biogas production per capita among the EU Member States.<sup>916</sup> Gas Networks Ireland (GNI) estimates that “up to 30% of demand could be met by renewable gas by 2040,”<sup>917</sup> indicating that renewable gas has the potential to improve the long-term gas security of Ireland. This is even more important as there are no public stocks of natural gas in the country, the last storage site having ceased operations in 2017.<sup>918</sup> The GNI and EirGrid joint report (the “Joint Report”) identified that investment in storage capacity in Ireland would raise the country's N-1

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911 Jonny Bairstow, ‘UK could become net exporter of electricity by 2040s’ (Energy Live News, 14 October 2020) and Rachel Morison ‘UK Could Become Net Power Exporter to Europe in Five Years’ (Bloomberg UK, 3 June 2021) <[www.bloomberg.com/news/articles/2021-06-03/u-k-could-become-net-power-exporter-to-europe-in-five-years](http://www.bloomberg.com/news/articles/2021-06-03/u-k-could-become-net-power-exporter-to-europe-in-five-years)>

912 National Grid, ‘Why electricity interconnection between Europe and the UK matters’ (8 September 2021) <[www.nationalgrid.com/stories/engineering-innovation-stories/why-electricity-interconnection-between-europe-and-uk](http://www.nationalgrid.com/stories/engineering-innovation-stories/why-electricity-interconnection-between-europe-and-uk)>

913 Byrne Ó Cléirigh, ‘Energy Security in Ireland: 2020 Report’ (SEAI, September 2020) 28-29 (‘SEAI Report’).

914 *ibid* 29.

915 *ibid* 3.

916 IEA, ‘Energy Policies of IEA Countries: Ireland – 2019 Review’ (April 2019) 68–9 (‘IEA Ireland 2019 Review’).

917 GNI and EirGrid, ‘Long Term Resilience Study 2018’ (2018) 28 (‘GNI and EirGrid’).

918 IEA Ireland 2019 Review 66.

position in a 2030 median demand scenario to 68%.<sup>919</sup> The N-1 standard “describes the ability of the technical capacity of the gas infrastructure to satisfy total gas demand in the calculated area in the event of disruption of the single largest gas infrastructure during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years.”<sup>920</sup> The Joint Report recommended that “opportunities for permanent gas storage in Ireland and gas storage operations in the rest of Europe”<sup>921</sup> be monitored.

This will be of particular importance as the UK is no longer legally bound to show solidarity to a connected country such as Ireland that requests gas supplies in an emergency. However, Byrne Ó Cléirigh has argued that Ireland “may need special arrangements with the UK and, or, other Member States to ensure that it has access to gas supplies during a gas crisis.”<sup>922</sup>

A bilateral agreement between Ireland and the UK in relation to energy matters will undoubtedly raise difficulties under EU law (as individual Member States cannot enter into international treaties in relation to energy matters, such competency sitting solely with the European Commission on behalf of the EU since the entry into force of the Lisbon Treaty) and is therefore unlikely.

Chapter 11<sup>923</sup> also considers the impact of Brexit on the electricity market on the island of Ireland (I-SEM). From a supply security perspective, it can be added that whilst a 2020 SEAI report identified that Ireland “currently has significant surplus power generation capacity,”<sup>924</sup> it noted that a combination of an increase in electricity demand and planned closures of generation stations will lead to a reversal of this position from 2026.<sup>925</sup> Failing the construction of new infrastructure, Ireland will therefore be reliant on energy imports from the UK to secure an adequate supply of electricity for its population.

Whilst the UK’s annual oil production is barely sufficient to meet even its own demand<sup>926</sup> and as such, is unlikely to raise supply security issues for the EU generally, Brexit raises a particular issue for Irish oil stocks from a logistics and access perspective. The IEA noted in 2019 that “Ireland has been pursuing a policy of rebalancing its emergency oil reserves by maximising stocks stored on the island of Ireland,

919 GNI and EirGrid 32.

920 Gas Regulation Annex II.

921 GNI and EirGrid 5.

922 SEAI Report 40.

923 *ibid* 398

924 SEAI Report 63.

925 *ibid* 64–65.

926 Department for Business, Energy & Industrial Strategy, ‘Energy Trends: UK, April to June 2021’ 6–7.

composed of stocks held in Ireland and Northern Ireland.<sup>927</sup> As of 2019, Ireland held 59% of its required stocks in the country, with the remaining 41% held abroad such that 21% of the country's total stocks were held in the UK (11% in Great Britain, 9% in Northern Ireland), with the remaining 20% of total stocks held in Denmark, Spain, and Sweden.<sup>928</sup>

In the absence of Ireland having sufficient capacity to store reserves locally, practical solutions (including capacity building within Ireland) must be considered to ensure that both EU law is respected (i.e., oil is stored in the EU) and the relevant reserves can be accessed with sufficient speed.

## 7 DELIVERABILITY

*Deliverability* refers to the ability to ensure the delivery of physically available energy through the relevant infrastructure to the desired destination.

### 7.1 Deliverability in the EU Context

This section explores the extent to which Brexit has had an impact on the deliverability of energy within the EU. Deliverability of energy post-Brexit generally is of particular importance to Ireland, as Brexit has had little impact on the availability of fossil energy in the EU generally.

In relation to the decarbonisation of the EU's energy supply (see section 4 above), energy infrastructure development, management, and governance (and therefore, the regulatory regime) play an important role due to the special characteristics of renewable energy.

Therefore, this section focuses on the deliverability of energy in Ireland post-Brexit as well as issues pertaining to the deliverability of energy (specifically electricity) arising out of the shift towards RES in the EU.

Deliverability is not an isolated concept in EU legislation; rather, it is woven through numerous pieces of legislation which frame the Internal Energy Market, including the 2019 Electricity Directive,<sup>929</sup> the 2019 Gas Directive,<sup>930</sup> and the 2019

927 IEA Ireland 2019 Review 47.

928 *ibid.*

929 Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU [2019] OJ L158/125.

930 Directive (EU) 2019/692 of the European Parliament and of the Council of 17 April 2019 amending Directive 2009/73/EC concerning common rules for the internal market in natural gas [2019] OJ L117/1.

Electricity Regulation.<sup>931</sup> All impose supply security-related obligations on different market participants, NRAs as well as Member States. The dispersed obligations of different market participants are a reflection of the liberalised nature of the EU energy market in which no single organisation is solely responsible for ensuring supply security standards. Instead, EU legislation has created a complex web of obligations, with national regulatory authorities (NRAs), Transmission System Operators (TSOs), and the EU Agency for Cooperation of Energy Regulators (ACER), as well as the European Network of Transmission System Operators for Electricity (ENTSO-E) and the European Network of Transmission System Operators for Gas (ENTSO-G) (the ENTSOs), playing prominent roles in relation to planning, developing, and maintaining, as well as the governance of, the energy systems which in turn are crucial for the deliverability of energy.

By way of example, Article 1 of the 2019 Electricity Directive provides that Member States, regulatory authorities, and TSOs cooperate in relation to the integration of electricity from renewable sources, free competition, and security of supply. Article 59 of the same provides that NRAs are to monitor investment in generation and storage capacities in relation to security of supply. The ENTSOs are mandated to work closely with TSOs to plan energy infrastructure on the basis of the Ten-Year Network Development Plans,<sup>932</sup> whereas the network codes and guidelines adopted pursuant to Articles 59, 60, and 61 of the 2019 Electricity Directive govern the trading of electricity, including over interconnection points, in the Internal Energy Market (IEM). Together, all of these measures ensure the appropriate infrastructure and governance for energy deliverability is in place.

However, a detailed overview of the relevant obligations is beyond the scope of this chapter.

## 7.2 Energy Deliverability in the TCA

The TCA touches, largely indirectly, on a number of concepts important to deliverability, in particular on provisions pertaining to the development and maintenance of energy infrastructure and on the “regulatory backdrop” or framework that relates to such infrastructure. By its nature, the TCA touches chiefly on cross-border energy infrastructure, i.e., interconnectors between the UK and the EU. In particular, Article 311 TCA mandates that “the maximum level of capacity of electricity interconnectors is made available,” albeit with some minor caveats.<sup>933</sup>

931 Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity [2019] OJ L158/54.

932 Article 51 of Directive (EU) 2019/944.

933 TCA, Article 311(1)(b).

By seeking to maximise available interconnector capacity between the EU and the UK, the EU has ensured the deliverability of electricity from the UK. To enable a more seamless utilisation of interconnectors, Article 311 envisages the UK and the EU ensuring that “capacity allocation and management across electricity interconnectors are coordinated between concerned [EU] Union transmission system operators and [UK] transmission system operators”<sup>934</sup> and that “this coordination shall involve the development of arrangements to deliver robust and efficient outcomes for all relevant timeframes, being forward, day-ahead, intraday and balancing.”<sup>935</sup>

Whereas Article 311 commits both parties only to ensure that, in relation to electricity interconnectors, “capacity allocation and congestion management on electricity interconnectors is market-based, transparent and non-discriminatory,”<sup>936</sup> Article 313 goes a little further in relation to gas. Beyond the commitment to ensure that “capacity allocation and congestion management procedures for gas interconnectors are market-based, transparent and non-discriminatory (seeking to continue the efficient use of pipelines, a keystone in safeguarding regional energy security),”<sup>937</sup> there is a specific commitment that each party “shall take the necessary steps to ensure that: transmission system operators endeavour to offer jointly standard capacity products which consist of corresponding entry and exit capacity at both sides of an interconnection point.”<sup>938</sup>

This commitment to offering jointly standard capacity products (i.e., within-day, daily, monthly, quarterly, and yearly) further facilitates gas trade between the UK and the EU. The issues arising out of the scant trading arrangements over electricity interconnectors are addressed in more detail in Chapter 2 of this book,<sup>939</sup> but suffice to note that the TCA arrangements will require supplementing with detailed arrangements in relation to electricity trading, as all U-EU electricity interconnectors currently operate on a “no-deal” basis only.

Article 314 provides for a commitment by the UK and the EU “to facilitate the timely development and interoperability of energy infrastructure connecting their territories.”<sup>940</sup> This will be especially relevant to new electricity interconnectors between the UK and the EU, not least as both jurisdictions have a clear policy aim to increase their respective interconnection capacity: the UK aims for 18 GW of

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934 *ibid* Article 311(1)(f).

935 *ibid* Article 311(1)(f).

936 *ibid* Article 311(1)(a).

937 *ibid* Article 313(1)(b).

938 *ibid* Article 313(2)(a).

939 This reference to chapter 2 is a reference to the Constituting Manuscript which is chapter 6 in this dissertation

940 *ibid* Article 314(1).



interconnection capacity by 2030<sup>941</sup> (with a current baseline of 6 GW of operational interconnector capacity),<sup>942</sup> and the EU has a target of 15% interconnection capacity of the EU's installed generation capacity.<sup>943</sup>

Article 317 specifically requires UK and EU TSOs to “develop working arrangements that are efficient and inclusive” and to work with ENTSO-E and ENTSO-G to establish frameworks for cooperation covering *inter alia* access to networks,<sup>944</sup> the security of electricity and gas supply,<sup>945</sup> infrastructure planning,<sup>946</sup> and the efficient use of electricity and gas interconnectors.<sup>947</sup> As explained in further detail in chapter 5 of this dissertation, these working relationships fall short of a status comparable to membership in ENTSO-E or ENTSO-G by UK TSOs<sup>948</sup> and will establish fora for the exchange of information rather than proactive joint planning and decision making, which in turn may have a negative impact on the development of UK-EU gas and electricity interconnectors.

Cooperation between regulatory authorities is key to establishing the regulatory regime for cross-border energy infrastructure. In this regard, Article 318 provides that ACER and Ofgem are to make administrative arrangements “as soon as possible in order to facilitate meeting the objectives of this Agreement,”<sup>949</sup> covering *inter alia* access to networks,<sup>950</sup> the security of electricity and gas supply,<sup>951</sup> infrastructure planning,<sup>952</sup> the efficient use of electricity and gas interconnectors,<sup>953</sup> and cooperation between TSOs.<sup>954</sup> This, together with the relevant market access issues arising from this form of cooperation and its limitations, is discussed in further detail in Chapter 6 of this dissertation.

In light of the growing importance of renewable energy and particularly offshore wind, in the energy mix of both the EU and the UK,<sup>955</sup> Article 321 provides for the

941 Ofgem, ‘Interconnector Policy Review – Decision’ (13 December 2021) <[www.ofgem.gov.uk/publications/interconnector-policy-review-decision](http://www.ofgem.gov.uk/publications/interconnector-policy-review-decision)>

942 Ofgem, ‘Interconnectors: Gas interconnectors’ <[www.ofgem.gov.uk/energy-policy-and-regulation/policy-and-regulatory-programmes/interconnectors](http://www.ofgem.gov.uk/energy-policy-and-regulation/policy-and-regulatory-programmes/interconnectors)>

943 Energy Union Regulation, Article 4(d)(1).

944 TCA, Article 317(1)(b).

945 *ibid* Article 317(1)(c).

946 *ibid* Article 317(1)(e).

947 *ibid* Article 317(1)(f).

948 *ibid* Article 317(1).

949 *ibid* Article 318(1).

950 *ibid* Article 318(1)(b).

951 *ibid* Article 318(1)(d).

952 *ibid* Article 318(1)(e).

953 *ibid* Article 318(1)(g).

954 *ibid* Article 318(1)(h).

955 Nearly 80% of the global offshore wind capacity (23.1 GW) is situated in Europe, where the UK is

cooperation of the parties in the development of offshore renewable energy. Its provisions commit the parties to “sharing best practices and, where appropriate, by facilitating the development of specific projects.” Article 321 explicitly references the North Seas Energy Cooperation<sup>956</sup> and provides for the creation of a forum for technical discussions between the European Commission, ministries and public authorities of the Member States, UK ministries and public authorities, and TSOs, as well as other offshore energy industry bodies and stakeholders. Whilst the language of Article 321 does not directly refer to supply security, its references to offshore grid development and the RES potential of the North Seas region indicate that this cooperation will be important to the deliverability of electricity generated by offshore wind farms. Cooperation pursuant to Article 321 includes, at a minimum, (a) hybrid and joint projects, (b) maritime spatial planning, (c) support framework and finance, (d) best practices on respective onshore and offshore grid planning, (e) the sharing of information on new technologies, and (f) the exchange of best practices in relation to the relevant rules, regulations, and technical standards. As with the cooperation in relation to the ENTSOs, the cooperation pursuant to Article 321 takes the form of information sharing.

### 7.3 Impact of the TCA on Deliverability of Energy in the EU

#### 7.3.1 Ireland

For both gas and electricity, Ireland is only interconnected to the UK and as such is an energy island with both availability and deliverability issues.<sup>957</sup> Ireland’s vulnerability from an energy deliverability perspective can be ascertained by reference to the N-1 standard. Pre-Brexit, Ireland met the minimum standard to cope with an N-1 disruption on the basis of a joint risk approach between the UK and Ireland, which evaluated the two countries together. Post-Brexit, such a regional approach is no longer an option, and consequently, Ireland no longer meets the minimum standard prescribed by the N-1 criteria.<sup>958</sup>

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 the leading market (8 GW capacity), followed by Germany (6.4 GW), followed by Denmark (1.3 GW), Belgium (1.2 GW) and the Netherlands (1.1 GW); See also, Alex Wilson, ‘Briefing, Offshore wind energy in Europe’ (European Parliamentary Research Service, November 2020) <[www.europarl.europa.eu/RegData/etudes/BRIE/2020/659313/EPRS\\_BRI\(2020\)659313\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659313/EPRS_BRI(2020)659313_EN.pdf)>

956 For further details on the North Seas Energy Cooperation see, European Commission, ‘The North Seas Energy Cooperation’ <[https://energy.ec.europa.eu/topics/infrastructure/high-level-groups/north-seas-energy-cooperation\\_en](https://energy.ec.europa.eu/topics/infrastructure/high-level-groups/north-seas-energy-cooperation_en)>

957 European Commission, ‘Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Communication on strengthening Europe’s energy networks’ COM (2017) 718 final, n 18.

958 SEAI Report 40.

Plans are afoot to reduce the energy dependency of Ireland on the UK and to improve the deliverability of electricity from the EU to Ireland through the new sub-sea 700 MW Celtic interconnector intended to link France with Ireland directly.

There have been some reports that a fixed pipeline to northern France may be constructed,<sup>959</sup> but the project does not seem well advanced and would come at a significant cost (an estimated €727 million)<sup>960</sup> while only raising the country's N-1 position in a 2030 median demand scenario to 73%.<sup>961</sup>

Much has been made of the potential of the Shannon LNG project<sup>962</sup> for Irish energy security; however, the project is somewhat controversial, with no government support,<sup>963</sup> and Green Party TD Neasa Hourigan has recently proposed banning the construction of LNG infrastructure in Ireland.<sup>964</sup>

### 7.3.2 Deliverability of RES in the EU

The IEA's Stated Policies Scenario (based on existing government policies) estimates that the EU and UK together will account for nearly 40% of the global offshore wind market by 2040 and will increase their installed capacity to almost 130 GW. Offshore wind would then deliver 16% of the UK and EU combined region's electricity supply by 2040 (12% by 2030).<sup>965</sup>

This increase will continue to render the EU's power systems more complex as multiple tools are required to achieve and maintain electricity supply security, in particular, to maintain power system adequacy and to address peak capacity requirements. Due to the intermittent nature of RES, a range of tools, including the use of battery storage, capacity markets and demand response providers, will be needed to meet this challenge. As Thaler and Hofmann note,<sup>966</sup> the integration of electricity systems and markets with neighbouring jurisdictions will also assist by providing

959 Sarah McInerney, 'Ireland aims to go full gas on French pipeline' (The Times, 17 July 2016) <<https://www.thetimes.co.uk/article/ireland-aims-to-go-full-gas-on-french-pipeline-jb6rw9rph>>

960 GNI and EirGrid 31.

961 GNI and EirGrid 32.

962 European Commission, 'Shannon LNG Terminal and connecting pipeline (IE)' <[https://ec.europa.eu/energy/maps/pci\\_fiches/PciFiche\\_5.3.pdf](https://ec.europa.eu/energy/maps/pci_fiches/PciFiche_5.3.pdf)>

963 The Irish Times, 'Government decision on Shannon LNG plant not straightforward' (24 August 2021) <<https://www.irishtimes.com/business/energy-and-resources/government-decision-on-shannon-lng-plant-not-straightforward-1.4654435>>

964 Cormac McQuinn, 'Law proposed that would see liquefied natural gas terminals banned' (Irish Times, 18 February 2022) <[www.irishtimes.com/news/politics/law-proposed-that-would-see-liquefied-natural-gas-terminals-banned-1.4806106](http://www.irishtimes.com/news/politics/law-proposed-that-would-see-liquefied-natural-gas-terminals-banned-1.4806106)>

965 Alex Wilson, 'Briefing, Offshore wind energy in Europe' (European Parliamentary Research Service, November 2020) <[www.europarl.europa.eu/RegData/etudes/BRIE/2020/659313/EPRS\\_BRI\(2020\)659313\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659313/EPRS_BRI(2020)659313_EN.pdf)>

966 Philipp Thaler and Benjamin Hofmann, 'The impossible energy trinity: Energy security, sustain-

“access to flexible balancing power and the levelling of energy demand and supply across larger areas.”<sup>967</sup>

Offshore projects, such as offshore wind farms or multipurpose interconnectors (MPIs), such as the Kriegers Flak Combined Grid Solution project by 50Hertz and Energinet in the Baltic Sea,<sup>968</sup> are particularly suited to cross-border projects and depend on a seamless regulatory regime. In light of the offshore wind potential in the North Sea region, the provisions of Article 321 TCA are, therefore, key to the successful expansion of offshore wind projects in the region. The UK currently has a large pipeline of offshore wind projects, and a number of these have the potential to connect to MPIs, which in turn would enhance deliverability security for the connected jurisdictions and also lead to efficiencies as fewer offshore transmission assets would be required.<sup>969</sup>

However, even within the EU, the development of the North Sea offshore potential faces some regulatory and market design issues. For instance, Article 16(8) of the 2019 Electricity Regulation requires that TSOs have to make available a minimum level of 70% of capacity for inter-zonal trading from 1 January 2020. This rule and related issues currently represent an obstacle for offshore grid development and MPIs in the North Sea area, with several sponsors having obtained or applied for (temporary) exemptions pursuant to Article 64 of the 2019 Electricity Regulation.<sup>970</sup> Further uncertainty as to the future regulatory regime for such projects is increased by the fact that the TCA does not replicate this rule and reduces the cooperation between NRAs and TSOs largely to the sharing of information.

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ability, and sovereignty in cross-border electricity systems’ (2022) 94 *Political Geography* 102579 <<https://doi.org/10.1016/j.polgeo.2021.102579>>

967 *ibid.*; Heymi Bahar and Jehan Sauvage, ‘Cross-Border Trade in Electricity and the Development of Renewables-Based Electric Power: Lessons from Europe’ (2013) OECD Trade and Environment Working Papers No 2013/02 <<https://doi.org/10.1787/5k4869cdwnzr-en>>

968 For more detail about Krieger’s Flak, see 50hertz, ‘Kriegers Flak – Combined Grid Solution’ <[www.50hertz.com/en/Grid/Griddevelopment/Offshoreprojects/CombinedGridSolution](http://www.50hertz.com/en/Grid/Griddevelopment/Offshoreprojects/CombinedGridSolution)>

969 For more details on potential benefits from coordination of offshore transmission infrastructure, see nationalgridESO, ‘Offshore Coordination Project’ <[www.nationalgrideso.com/future-energy/projects/offshore-coordination-project](http://www.nationalgrideso.com/future-energy/projects/offshore-coordination-project)>

970 The Krieger’s Flak project benefits from such an exemption: covering the Belgian TSO (Elia Herman Moestue, ‘Belgian TSO wins exemption from 70% cross-border rule’ (Montel, 29 October 2021) <<https://www.montelnews.com/news/1268810/belgian-tso-wins-exemption-from-70-cross-border-rule>>), and the Swedish TSO (Wilhelm Zakrisson, ‘Swedish TSO seeks exemption from 70% cross-border rule’ (Montel, 7 September 2020) <<https://www.montelnews.com/news/1145777/swedish-tso-seeks-exemption-from-70-cross-border-rule>>).

## 8 CONCLUSIONS

The implications of the UK's departure from the EU on energy security within the EU are, for 26 of 27 Member States at least, limited in nature as far as the availability and deliverability of fossil fuels are concerned.

The exception to this is Ireland, which has particular challenges in relation to both availability and deliverability security, as it does not currently seem prepared to deal with a major supply shock on its own in the absence of any solidarity measures from the UK. The speed of investments in the relevant energy infrastructure, whilst forthcoming, at least in relation to electricity, seems to suggest that this situation is likely to persist for several years. Should a supply crisis arise, pragmatic solutions will be required.

Whilst the other Member States may not be materially affected by Brexit, the EU27 has plenty of challenges of its own to address in relation to supply security. In relation to the availability, the recent outbreak of war in Ukraine has put the EU's dependence on Russian gas into critical focus. This concern is not new—already in 2014, the European Commission stated that “[i]n the long term, the Union's energy security is inseparable from and significantly fostered by its need to move to a competitive, low-carbon economy which reduces the use of imported fossil fuels.”<sup>971</sup> However, in light of the war in Ukraine, the energy security policies of the EU in relation to gas are likely to undergo a paradigm shift<sup>972</sup> and contribute to the acceleration of investment in renewable energies and the accompanying infrastructure.

From a deliverability perspective, if the ambitious Fit for 55 decarbonisation objectives are to be achieved, the EU needs to invest more into RES and, critically, the infrastructure required to deliver renewable energy to the consumer.

In 2016, the Ten-Year Network Development Plan of ENTSO-E noted that “[there is a] need for up to €150 billion investment in electricity infrastructure only, of which €70-80 billion for mid-term and long-term projects (committed in national plans and to be commissioned by 2030)” and that “[i]n its Progress Monitoring Report, ACER estimates the investment costs for electricity transmission Projects of Common Interest (PCIs) reported by project promoters to reach €49.3 billion.”<sup>973</sup> In 2020, ENTSO-E noted that in addition to the “35 GW of new cross-border reinforce-

971 European Commission, ‘Communication from the Commission to the European Parliament and the Council, European Energy Security Strategy’ COM (2014) 330 final.

972 Nikolaus J Kurmayer, ‘EU ministers brace for future without Russian energy’ (euractiv.com, 1 March 2022) <<https://www.euractiv.com/section/energy/news/eu-ministers-brace-for-future-without-russian-energy/>>

973 ENTSO-E, ‘A push for Projects of Common Interest’ <<https://tyndp.entsoe.eu/2016/insight-reports/common-projects/#:~:text=ENTSO%2DE's%2oTYNDP%2o2o16%2oidentifies,to%2obe%2ocommissioned%2oby%2o2o3o>>

ments expected to be built by 2025 in addition to the 2020 grid, 50 additional GW of cross-border reinforcements would be cost-efficient to support the electric system in its path towards decarbonisation.”<sup>974</sup> Without such investment, it is difficult to see how the EU will be able to deliver its Energy Union and climate objectives.<sup>975</sup>

Finally, from a deliverability perspective, an increase in RES will also mean greater reliance on interconnectors and, therefore, a greater need for cooperation between the EU, the UK, and Switzerland. In addition, pragmatic solutions will be required for cross-border projects in the North Sea with the UK, even if these transcend the letter of the TCA.

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974 ENTSO-E, ‘Completing the map – Power system needs in 2030 and 2040’ (November 2020) <[https://eepublicdownloads.azureedge.net/tyndp-documents/IoSN2020/200810\\_IoSN2020main-report\\_beforeconsultation.pdf](https://eepublicdownloads.azureedge.net/tyndp-documents/IoSN2020/200810_IoSN2020main-report_beforeconsultation.pdf)>

975 Adina Valean, ‘No chance of meeting EU renewable goals if infrastructure neglected’ (euobserver.com, 24 September 2018) <<https://euobserver.com/opinion/142922>>

# CHAPTER 8:

## CONCLUSION

### 1 INTRODUCTION

#### 1.1 Structure of this Chapter

After this brief overview section, section 2 will provide a conclusion to the main research questions as set out in section 2.2 of Chapter 1 and as explored in the Constituting Manuscripts.

As some time has passed since the publication of the relevant Constituting Manuscripts, this conclusion also provides an opportunity to reflect further on the implementation and impact of the TCA.

Specifically, section 2.2 summarises the findings in relation to the general Brexit objectives, and section 2.3 contains the findings in relation to the Brexit objectives pertaining to the energy sector. Section 2.4 addresses the findings in relation to the TCA and legal certainty. Section 2.5 conveys the conclusions in relation to the effectiveness of the implementation of the TCA. Section 2.6 builds on the findings set out in the previous sections and concludes by providing an answer to the overall research question as to whether the TCA is an adequate replacement for the EU regulatory and legislative regime in the energy sector.

Section 3 provides a brief excursus and provides, on the basis of chapters 4 and 5, conclusions in relation to the nuclear energy sector.

Section 4 provides an outlook on the likely developments which will affect the energy market in the EU and UK as a result of Brexit. It also makes some recommendations as to how some of the difficulties arising out of Brexit might be addressed in the bilateral relationship between the EU and the UK, with section 4.1 explaining why Brexit “did not get done” and is in fact, a continuing process and section 4.2 contextualising Brexit in the changing geopolitical landscape and the legal consequences of Brexit the energy sector. Section 4.3 draws on the findings of this dissertation and sets out some recommendations.

## 2 CONCLUSIONS TO RESEARCH QUESTIONS

### 2.1 Recall of Research Questions

The overarching research question driving the Constituting Manuscripts is:

“To what extent is the TCA an adequate post-Brexit regime for the energy sector in the UK and the EU?”

In this context, adequate means that the TCA delivers legal certainty has been effectively implemented and meets the Brexit objectives in relation to the energy sector.

In turn, this implies the following subsidiary research questions:

- Does the TCA meet the Brexit objectives in relation to the energy sector?
- Do the post-Brexit arrangements of the TCA deliver legal certainty for the UK and EU energy sector and specifically to UK-EU relations in the energy sector?
- To what extent has the TCA been effectively implemented; and

These questions have a number of layers, and the answers to the overarching research question and its subsidiary research questions depend, to some extent, on the time at which they are answered, which is reflected in the Constituting Manuscripts.

The research questions were explored from different perspectives in the Constituting Manuscripts: Chapter 2 gave a prospective view on the likely issues arising for the energy sector prior to the beginning of the Brexit negotiations and chapter 5 provided a detailed overall analysis of the TCA after it had been agreed.

More specific issues were explored in chapter 3 on the impact of Brexit on inter-connectors, chapter 4 on the scope of Brexit regarding Euratom, as well as chapter 6 on the impact of Brexit on IEM access for UK companies and chapter 7 on the impact of Brexit on EU supply security.

### 2.2 The TCA in Light of the Brexit Objectives for the Energy Sector

As outlined in section 2.3.1 of chapter 1, there are several general Brexit Objectives, depending on the phase of the Brexit process, as well as energy sector-specific Brexit objectives which emerged from November 2018 onwards.

If the overall Brexit objectives during the Referendum campaign can be summarised as “Take back control”, this was further differentiated during the negotiations first for the Withdrawal Agreement and then the TCA.

During this negotiation phase, the overall objective of “take back control” was translated into the more nuanced objectives of (1) the UK taking control in relation to its legislation, ending the supremacy of EU law and the jurisdiction of the Euro-



pean Court of Justice (ECJ), (2) achieving the freest possible trade in goods and service between the UK and the EU, and (3) certainty as to the application of laws were key Brexit objectives during the negotiation phase. This latter element pertaining to certainty in the application of laws relates to the concept of legal certainty, which will be further discussed in section 2.4 in this chapter. In this chapter, I am setting out the conclusions as to whether the general Brexit objectives have been met in relation to the energy sector. The conclusions in relation to the general Brexit objectives in the energy sector are set out in sections 2.2.1-2.2.3 of this chapter.

The specific Brexit objectives in relation to the energy sector were (1) the continued efficient trading over interconnectors, (2) limited technical cooperation between TSOs and organisations concerned with the planning of energy infrastructure, (3) support for renewable energy projects in the North Sea, and (4) the continued operation of the iSEM, the integrated single electricity market on the island of Ireland. The conclusions in relation to the specific Brexit objectives in relation to the energy sector are set out in Sections 2.3.1-2.3.4 of this chapter.

### **2.2.1 Take back control in relation to legislation and ending supremacy of EU law and jurisdiction of ECJ**

Brexit means that EU law, will no longer apply to the UK. This also means that the jurisdiction of the ECJ in relation to the UK has ended. The UK is, therefore, in a position to formally take control of its legislation. However, the TCA sets certain parameters and limits for this control.

In relation to the energy sector, as per the findings of the Constituting Manuscripts, it commits both the EU and the UK to market design principles such as third-party access to electricity and gas grids and unbundling, that is the separation of transmission businesses from supply and generation businesses.

In relation to climate change, the TCA is, due to the level-playing field provisions, effectively a non-regression pact: Neither the EU nor the UK is able to fall behind their current commitments in relation to climate change. A similar mechanism is at play in relation to the nuclear sector.

De facto, the UK has committed, in the EU-UK Nuclear Agreement, to a regime which tracks key elements of the Euratom regime without the benefits of participating in the decisions to shape the Euratom rules.

As shown in chapter 5, the TCA reflects the state of the energy sector as it was at the time of the entry into force of the TCA. It does not contain any framework for developing a common approach for emerging technologies, e.g., in relation to multi-purpose interconnectors, hydrogen and carbon capture. All of these technologies are complex and require detailed regulation. At present, both the EU and the UK are developing the relevant legislation for these nascent industries. The TCA has, apart

from its overall review dates, no specific mechanism to incorporate new provisions for, e.g., market design or the regulation of new technologies.

This means that the practical effect of the TCA will be limited as nascent technologies become more important in the energy sector and require changes in the market design, which is not addressed in the TCA. This also means that there is potential for future regulatory divergence between the UK and the EU, which may arise due to the absence of relevant provisions in the TCA.

This potential for divergence arguably reflects the very objective of Brexit, taking control, as a result of which the UK decided against further alignment with the EU. This decision has arguably not only led to the potential for future divergence but also led to the TCA being shallow and narrow in scope.

In conclusion, the TCA arrangements mean that the UK's ability to fully set its own legislation in the energy sector is somewhat limited by the parameters set out in the TCA.

### 2.2.2 Freest possible trade in goods and services

Being focused on the energy sector, this dissertation has analysed the trade in energy rather than the general trading terms between the UK and the EU post-Brexit.

In this section, a brief general summary of the findings in the Constituting Manuscripts in relation to energy trading will be presented. A more detailed conclusion in relation to electricity trading, in particular will be presented in section 2.3.1 below.

Post-Brexit, the trade in electricity and gas between the UK and the EU has continued. However, it is doubtful whether this trade can be classified as “the freest possible” for the following reasons.

In relation to electricity trade, the TCA provisions do not facilitate trade but roll back the EU market coupling provisions for the trade in electricity. To date, the parties have failed to establish the TCA-mandated MRLVC trading arrangements intended to replace the EU market coupling arrangements with the UK. As a result, electricity trading between the EU and the GB electricity market now occurs on “no deal” or Hard Brexit terms.

In relation to gas trading, the TCA prevents the application of tariffs to any gas trades between the UK and the EU but (as with the electricity market in relation to ENTSO-E) does not allow for UK companies to participate with decision-making powers in ENTSO-G. In terms of the gas trading arrangements, the EU network codes no longer apply at GB/EU interconnection points which does not facilitate but renders the trade in gas more difficult.

The post-Brexit issues in relation to electricity trading between GB and the IEM and the issues pertaining to EU market access for UK companies are inextricably linked, as explored in chapter 6. This is due to the fact that (1) interconnectors are a condition sine qua non for the trade of electricity between GB and the EU and

(2) access, as discussed in the Constituting Manuscripts and in particular in Chapter 6, refers to both trading in or into a market as well as the having a physical presence in a market.

In terms of access of UK companies to EU electricity or gas markets and establishing a trading presence in the IEM, the post-Brexit situation is complex. As the analysis in Chapter 6 shows, there is no EU-wide licensing regime for energy trading, nor is there a passporting regime comparable to the passporting regime in place for the financial service industry. Any authorisation (to the extent required) for the generation, supply, transmission, or trading of electricity and/or gas is granted by the relevant national regulatory authority or ministry of the EU Member State.

This is in sharp contrast to the access to the IEM for EU companies which is based on non-discrimination and equal treatment. As has been shown in Chapter 6, access to the IEM for UK companies (and, conversely, access to the UK market by EU companies) therefore, has, post-Brexit, become both more complex and less efficient.

In conclusion, the Brexit objective of “the freest possible trade” has not been met in relation to the trade in electricity and gas.

### **2.2.3 Certainty as to the application of laws**

The conclusions of this dissertation in relation to the Brexit objective of certainty as to the applications of laws are set out in section 2.4.4 of this chapter (Post-Brexit Arrangements and Legal Certainty)

### **2.2.4 Failure to meet the general Brexit objectives in the energy sector**

In light of the above findings, and subject to the findings in Section 2.4 below in relation to legal certainty, I conclude that the general Brexit objectives have only been partially met in relation to the energy, as the UK’s ability to fully set its own legislation in the energy sector is somewhat limited by the parameters set out in the TCA and the framework of the TCA falls short of allowing for the “freest possible” trade in electricity and gas.

## **2.3 Brexit Objectives in Relation to the Energy Sector**

As set out in section 2.3.1 of chapter 1, the Brexit negotiation aims of the UK Government in relation to energy were minimal and chiefly concerned with the continued efficient trading over interconnectors, limited cooperation between TSOs and organisations concerned with the planning of energy infrastructure and support for renewable energy projects in the North Sea as well as the continued operation of the iSEM.

### 2.3.1 Continued efficient trading over interconnectors

Whilst the TCA explicitly provides for commitment to the efficient use of interconnectors and the continued validity of existing interconnector exemptions, the investment in new interconnectors is not explicitly covered by the TCA.

Chapter 3 set out a list of likely issues that might arise for interconnectors post-Brexit, especially in a Hard Brexit scenario. As the findings of chapters 5 and 6 have shown, this list has proven to be a good checklist for the TCA and the post-Brexit reality. Two years after Brexit, many of the legal issues outlined in chapter 3 have materialised, either as a result of the provisions in the TCA or precisely due to the absence of clear provisions for future GB-EU interconnectors in the TCA.

Chapter 3 discussed whether UK interconnectors could obtain and maintain the status of an EU Project of Common Interest (PCI) after Brexit. The TCA does not address the topic of PCIs. The TEN-E Regulation,<sup>976</sup> the EU Regulation covering the development of Trans-European networks, and which contains the PCI regime, contains criteria for interconnectors from third countries to be part of the PCI regime. These criteria are more complex than those for intra-EU PCIs, and in the first post-Brexit PCI list of 2022,<sup>977</sup> none of the UK-EU electricity interconnectors made the cut. Since Brexit, the TEN-E regulation has been revised and now includes the category of “Projects of Mutual Interest” (PMI), which is intended to facilitate the development of interconnectors between the EU and third countries. At the time of writing, the first PCI list established on the basis of the revised TEN-E Regulation is being prepared and will likely be published at the end of 2023, with adoption by the EU legislators following in early 2024. It, therefore, remains uncertain whether UK-EU interconnectors will be included. As the access to European funding sources such as the Connecting Europe Facility is predicated on the PCI status, failure to obtain PCI status will also mean loss of access to this funding.

Post-TCA, trading over interconnectors continued. However, the post-Brexit trading arrangements are, as analysed in chapter 6, not efficient and are run on a Hard Brexit basis. This is costly and has, as shown in chapter 6, contributed to electricity price increases in GB.

As shown in chapters 5 and 6, until the drawn-out negotiations regarding the set-up of the post-Brexit market coupling to facilitate electricity trading between GB and the EU pursuant to the multi-region low volume coupling (MRLVC) model are

976 Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022 on guidelines for trans-European energy infrastructure, amending Regulations (EC) No 715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944, and repealing Regulation (EU) No 347/2013 [2022] OJ L152/45.

977 (European Commission,) <[https://energy.ec.europa.eu/system/files/202111/fifth\\_pci\\_list\\_19\\_november\\_2021\\_annex.pdf](https://energy.ec.europa.eu/system/files/202111/fifth_pci_list_19_november_2021_annex.pdf)>

successfully concluded and implemented in practice, electricity will continue to be traded between the GB and EU markets on the basis of the current “no-deal” access rules with all the trading inefficiencies this implies.

Whilst the trading arrangements for electricity are of obvious importance for current GB-EU interconnectors, they will also play a critical role in relation to the economics of future interconnectors and, therefore, ultimately, for the supply security of the UK in light of the desired increase in interconnector capacity by 2030.

Even when MRLVC will be implemented, it will be less efficient compared to the price coupling applicable in the IEM, because, as discussed in chapter 6; volume-based market coupling is less efficient than price-based coupling in general. In addition, MRLVC is an untested method which may require a certain “testing and settling in” time before its full effects will be seen in the electricity market.

However, the efficient cooperation and functioning of the GB and EU electricity markets are of particular importance in the wider geopolitical context. Given the increasing share of renewable energy and, therefore, intermittent load on the grid, this will require not only a consequent build-out of the national grids but also increasing interconnectedness between national markets, which is now hampered by the legal consequences of Brexit, as discussed in chapter 6.

More than two years after the TCA entered into force, the MRLVC arrangements are still under negotiation. This demonstrates not only the complexity of such arrangements post-Brexit but also the dependence of the cross-Channel electricity trading regime on the political agreement between the EU and the UK, as the TCA does not provide sufficiently clear and detailed parameters to establish the MRLVC regime.

In conclusion, the Brexit objective of “continued efficient trading over interconnectors” has not been achieved.

### **2.3.2 Limited technical cooperation between TSOs and organisations concerned with the planning energy infrastructure**

Chapter 3 has queried whether the UK TSOs could continue their membership in the European Network of Transmission Operators for electricity and gas. ENTSO-E and ENTSO-G have important planning and coordination functions in the planning of the European transmission grids and, as such, also for the planning of electricity and gas interconnectors.

As discussed in Chapter 5, the TCA provides for some cooperation between UK TSOs and ENTSO-E and ENTSO-G. However, the TCA makes clear that this cooperation will be on a sub-membership level and the UK TSOs, therefore, no longer participate in the decision-making processes in the ENTSOs.

As a result, GB TSOs and future interconnector developers from the UK have lost direct access to these decision-making bodies and merely enjoy observer status in these EU organisations.

This will make the planning decisions for new interconnectors depend on further political negotiations between the EU and the UK or the UK and the relevant connecting country.

The analysis in chapters 5 and 6 demonstrates that Brexit has made the development and operation of any cross-border project and trade more complex because the regulatory regime for joint cross-border decisions between Ofgem and the relevant NRA in the connecting EU Member State (including the possibility of escalating a particular decision to ACER in case the two NRAs cannot come to an agreement) has fallen away. Furthermore, the TCA simply does not provide a framework for the joint planning and decision-making processes that underpin interconnector projects.

Ofgem has recently opened the so-called “third window” for applications for its cap-and-floor interconnector regime, the GB-regulated regime for electricity interconnectors.<sup>978</sup>

Seven developers of UK-EU interconnectors have been deemed to be eligible, in principle, for consideration for the cap-and-floor regime. As a policy objective, the UK Government has stated that a total of 18 GW of interconnector capacity in GB would be desirable by 2030.

Therefore, these potential new interconnectors are likely to be the litmus test for the application of the TCA provisions on interconnectors, as well as the cooperation of Ofgem and the relevant EU NRAs and the relevant TSOs on both sides of the channel.

In the near future, new electricity interconnectors will be required between GB and the EU in order to achieve the energy transition and decarbonisation objectives of both jurisdictions (see also below section 3 of this chapter).

As a result, the Brexit objective of “limited technical cooperation” may have been formally met; however, the UK TSOs are excluded from the relevant decision-making processes within ENTSO-E and ENTSO-G. The current cooperation provisions may also, for practical purposes, be too limited to assist with the planning for future interconnectors.

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978 For more detail on the third cap-and-floor window and interconnector development and regulation pursuant to the conditions set out in relation the same, see ‘Cap and Floor Third Application Window and MPI Pilot Regulatory Framework – Guidance on our Needs Case Assessment Framework’ (Ofgem, July 2022) <[https://www.ofgem.gov.uk/sites/default/files/202207/ThirdWindow\\_MPIPilot\\_NeedsCaseFramework.pdf](https://www.ofgem.gov.uk/sites/default/files/202207/ThirdWindow_MPIPilot_NeedsCaseFramework.pdf)>

### 2.3.3 Support for renewable energy projects in the North Sea

As shown in chapter 5, the TCA provides for the cooperation of the parties in the development of offshore renewable energy. Its provisions commit the parties to “sharing best practices and, where appropriate, by facilitating the development of specific projects.” Article 321 explicitly references the North Seas Energy Cooperation (NSEC) and provides for the creation of a forum for technical discussions between the European Commission, ministries and public authorities of the Member States, UK ministries and public authorities, and TSOs as well as other offshore energy industry bodies and stakeholders.

As with the cooperation in relation to the ENTSOs, the cooperation pursuant to Article 321 takes the form of information and the exchange of best practices and does not provide for any joint decision-making in relation to projects.

Whilst the TCA specifically references the NSEC as a forum for EU-UK energy cooperation, the UK left the NSEC when it left the EU as the European Commission had made clear that continued participation post the Transition Period would not be possible. In December 2022, the UK re-joined the NSEC pursuant to a memorandum of understanding. This demonstrates that the UK’s participation in the NSEC is, in fact, dependent on political support, which in turn suggests that if that political support is, for whatever reason, withdrawn, the UK could also leave the NSEC again. This would be detrimental to the development of renewable energy projects. Pragmatic solutions will be required for cross-border projects in the North Sea with the UK, as cooperation to facilitate both the energy transition and energy security is in the mutual interest of both the EU and the UK (see also Section 3 of this chapter).

By way of conclusion, whilst the TCA provides support for North Sea energy projects, this support seems to be limited to the exchange of information and best practices in relation to energy projects. There is no mechanism for joint decision-making in relation to energy projects, specifically in the North Sea or more generally, in the TCA.

This means that the institutional framework for energy cooperation in the North Sea region between the EU and the UK in the TCA is not sufficient and requires ongoing political support from the UK and all states participating in the NSEC.

Therefore, it is not certain whether the regulatory and formal requirements potentially capable of achieving the intended objective of “support for renewable projects” in the North Sea are in place.

### 2.3.4 Continued operation of the iSEM

Post-Brexit, the iSEM continues to function, but it is vulnerable to continuous political tensions between the UK and the EU as the Protocol and Windsor Framework<sup>979</sup>

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979 “Political Declaration by the European Commission and the Government of the United Kingdom”;



are implemented, and its continued function will require the political support of both Ireland, the EU, and the UK.<sup>98o</sup>

As shown in chapter 7, the impact of Brexit on the EU's supply security is, with the exception of Ireland, not significant. Ireland has particular challenges in relation to both the availability and deliverability of its energy security, as it does not currently seem prepared to deal with a major supply shock on its own in the absence of any solidarity measures from the UK.

Whilst these provisions paint a picture of close cooperation between the EU and the UK, this cooperation is largely limited to the exchange of information in various forms. The TCA does not replicate the solidarity mechanisms of the 2017 Gas Regulation or the 2019 Risk Preparedness Regulation; neither does it create other forms of mutual assistance, nor does it address minimum stockpiling obligations in either jurisdiction.

As the TCA does not commit the UK or the EU to any solidarity measures and, given that the electricity market of the island of Ireland includes both Northern Ireland and the Republic of Ireland, pragmatic solutions will be required by both parties to ensure the continued supply security of the island of Ireland.

As per the findings of chapter 7, the energy security of Member States other than Ireland may not be materially affected by Brexit, the EU<sup>27</sup> faces a number of challenges in relation to supply security.

As shown in chapter 7, the TCA provisions regarding cooperation in relation to supply security seem at first sight to suggest close cooperation between the EU and the UK. However, this cooperation is largely limited to the exchange of information in various forms. The TCA does not replicate the solidarity mechanisms of the 2017 Gas Regulation or the 2019 Risk Preparedness Regulation; neither does it create other forms of mutual assistance, nor does it address minimum stockpiling obligations in either jurisdiction. As such, the TCA fails to bring about effective cooperation in relation to supply security. In turn, this may affect the operation of the iSEM in a crisis scenario.

Based on the findings in the Constituting Manuscripts, I conclude that the Brexit objective of “continued operation of the iSEM” has been met. However, given the

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referred to as the “Windsor Framework” of 27 February 2023, available here: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1139420/Political\\_Declaration\\_by\\_the\\_European\\_Commission\\_and\\_the\\_Government\\_of\\_the\\_United\\_Kingdom.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1139420/Political_Declaration_by_the_European_Commission_and_the_Government_of_the_United_Kingdom.pdf)>

The UK legal position regarding the Windsor Framework is available here: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1141823/UK\\_Government\\_Legal\\_Position\\_\\_The\\_Windsor\\_Framework.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1141823/UK_Government_Legal_Position__The_Windsor_Framework.pdf)>

98o Murray Colin RG and Niall Robb ‘From the protocol to the Windsor Framework’ (SSRN 2023) <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4382498](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4382498)>



absence of any energy solidarity mechanisms between the UK and the EU, the iSEM may be at risk in a crisis scenario. In addition, it may be vulnerable to political tensions between the UK and the EU in relation to Northern Ireland and the Protocol.

### 2.3.5 Partial achievement of the Brexit objectives in relation to the energy sector

In relation to the Brexit objectives in relation to the energy sector, the TCA delivers a mixed result:

Whilst trade over interconnectors has continued post-Brexit, the Brexit objective of “continued *efficient* trading over interconnectors” has not been achieved, as the trading arrangements continue to be subject to negotiations by the EU and UK.

By contrast, the Brexit objective of “limited technical cooperation between TSOs and organisations concerned with the planning energy infrastructure” may have been formally met. However, the UK TSOs are excluded from the relevant decision-making processes within ENTSO-E and ENTSO-G. The current cooperation provisions may also, for practical purposes, be too limited to assist with the planning for future interconnectors.

Whilst the TCA provides for the support of North Sea energy projects, this support seems to be limited to the exchange of information and best practices in relation to energy projects. The UK’s participation in the NSEC seems to be furthermore dependent on political negotiations and support for its membership outside of the TCA framework.

The Brexit objective of “continued operation of the iSEM” has been met. However, given the absence of any energy solidarity mechanisms between the UK and the EU, the iSEM may be at risk in a crisis scenario and is vulnerable to political tensions.

## 2.4 Post-Brexit Arrangements of the TCA and Legal Certainty

The second research question relates to the concept of legal certainty for which the following working definition was established: legal certainty in relation to law means that the relevant law has to be foreseeable (predictable), knowable, clear, precise, and not dependent on the exercise of discretion.

This section 2.4 considers each of these elements in turn, in light of the findings of this dissertation.

Legal certainty also relates to the third of the general Brexit objectives (“certainty as to application of laws”). Therefore, this section will also provide a conclusion in relation to this general Brexit objective.

### 2.4.1 Foreseeability/ predictability

As shown in chapter 5, pursuant to Article 331, the energy chapter of the TCA is – like the fisheries chapter – subject to review by the Partnership Council in June 2026 and annually thereafter. This gives the energy (and fisheries) provisions of the TCA a temporary character.

The short-term nature of the energy provisions in the TCA, therefore, creates structural uncertainty in the EU-UK energy relationship, which will ultimately not be to the benefit of either party. Investments in the energy sector require long-term visibility of policies and the applicable regulatory framework, and this is not provided by the TCA.

Beyond this structural inability to know whether the arrangements of the TCA will in principle (as a change in law is always possible, also in the EU and other national regimes) and continue to apply, there are other concerns regarding the foreseeability or predictability of the energy provisions in the TCA.

In chapter 6, the issues regarding the implementation of the post-Brexit electricity trading arrangements have been discussed. Beyond the issues pertaining to the implementation of MRLVC, it is also true that it is unclear what precisely the concept of MRLVC entails as it is without precedent, and the TCA does not actually specify what it might be, leaving the TSOs and the parties to agree at a later date the exact format of the regime.

As market participants have no way of being able to predict the form of MRLVC and its impact on electricity trading, they have to rely on the present arrangements, which means that any planning for future electricity trades will need to happen on the terms of a Hard Brexit. This is of particular relevance for mid- and longer-term planning for interconnector investments and their business cases and any cross-Channel power hedging arrangements.

The delays in the implementation of MRLVC further contribute to the unpredictability of the relevant arrangements.

Other examples of foreseeability and unpredictability in relation to TCA provisions arise from insufficient precision in the drafting of the same.

### 2.4.2 Knowable/clear and precise

The provisions of the TCA are not in all cases precise, and often, their scope is unclear. For instance, the scope of the TCA-mandated cooperation amongst TSOs is unclear, and the relevant articles in the TCA provide very little detail as to the scope, extent, and format of the cooperation other than to say that the UK TSOs are not to be members in ENTSO-E and ENTSO-G, respectively.

Other provisions of the TCA pertaining to energy are so vaguely worded that it is difficult to establish what it is that the relevant provisions aim to achieve. This is the case in particular with provisions which contain general cooperation or contact

mandates without precise steps or instructions as to how this cooperation or contact should be established in practice.

As shown in chapter 5, the TCA provisions pertaining to the cooperation between the EU and the UK regarding the timely development and interoperability of energy infrastructure connecting their territories (namely, interconnectors) are not precise. It is unclear whether the parties are required to establish joint planning and regulatory decisions or whether occasional updates and exchanges of information by the NRAs will be deemed to be fulfilling the requirements of the relevant TCA provisions.

As also discussed in chapter 5, a similar conclusion can be drawn in relation to the parties' obligation to "enable the integration of electricity from renewable energy sources and ensure the efficient and secure operation and development of the electricity system." Similarly, the commitments of the EU and UK to cooperate "with respect to the security of supply of electricity and natural gas"<sup>981</sup> are unclear in their scope, and the standard of compliance with the provision is entirely unclear beyond a specific information duty in case of emergencies.

The exact scope of these provisions therefore requires a political agreement between the parties in order to give the desired effect to them.

### 2.4.3 Not dependent on the exercise of discretion

The vague scope and various mandates for the UK and EU to implement or create more detailed arrangements after the entry into force of the TCA means that the implementation of the TCA and, therefore its exact legal provisions will mean that the UK and the EU will have to negotiate various aspects of their energy relations.

As a result, this makes the post-Brexit energy sector dependent on political agreement and, therefore discretion, the outcome of which is not foreseeable.

In addition, the link to the fisheries sector creates a direct conditionality which could be used as a tool in future negotiations, making the continued application of the energy provisions even more dependent on macro-political discretion.

The possibility of the expiry of the energy chapter also maintains the risk of a "no-deal Brexit," as the consequence of political disagreement regarding the arrangements for the energy sector beyond 2026 would, by default, mean that the current arrangements in the TCA would fall away and a Hard Brexit scenario would apply to the energy sector.

### 2.4.4 Lack of certainty

The answer to the research question as to whether or not the TCA delivers legal certainty for the energy sector post-Brexit is a clear no. The energy provisions of the

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<sup>981</sup> TCA, Art 315(1).

TCA are uncertain due to the architecture of the TCA and the structural dependence of the energy chapter on the fisheries chapter.

In addition, individual provisions in the energy chapter are not clearly drafted as far as their scope is concerned. The relevant norm is, therefore, often not foreseeable in its full scope, not precise and knowable or dependent on political discretion.

There is also interdependence between the lack of legal certainty in the energy provisions of the TCA and the implementation of the same. The uncertainty as to the scope of the obligations makes it not only difficult to implement them and determine compliance, but it also makes non-implementation and subsequent non-compliance hard to capture and sanction.

This lack of legal certainty also means that one of the general Brexit objectives (certainty as to the application of the law) has not been fulfilled. This finding further contributes to the conclusion that the general Brexit objectives have only been partially met.

## 2.5 Effective Implementation of the TCA

It is useful to recall the working definition established in Chapter 1 for the concept of Effective Implementation which means:

1. to the extent required, the transposition of an EU or international norm into national law in accordance with the relevant norms applying to the process of transposition;
2. that parties obligated pursuant to the relevant norm give effect to it by acting in accordance with the same;
3. that non-compliance with the relevant norm is being sanctioned by a clear enforcement regime; and
4. that the relevant norm creates a result that meets their intended policy objective.

This section 2.5 considers elements 1–3 in light of the findings of this dissertation. For the purposes of the fourth element, the relevant policy objectives are the Brexit Objectives in relation to which the conclusions have been set out in sections 2.2 and 2.3 above.

### 2.5.1 Ratification and transposition

The TCA has been ratified and, in relation to the UK, transposed into domestic law through the EUFRA, with was granted Royal Assent on 31 December 2020. For the EU, the European Parliament ratified the TCA on 27 April 2021. As the TCA is an “EU-only Agreement,” its provisions become binding on the EU Member States without any further need for ratification by the same.

From a formal legal perspective, the TCA has therefore been ratified and transposed into the domestic UK law, and it is also binding on EU Member States.

### 2.5.2 Effect through acting in accordance with the TCA provisions

The next element of implementation of an international agreement is that the relevant parties, pursuant to its norms, give effect to it by acting in accordance with the same.

As shown in section 2.4 of Chapter 1, the TCA does not have a direct effect meaning that it does not create rights for private parties, which these might be able to invoke in a domestic or other court. Chapters 5 and 6 in particular have shown that the TCA does not come with an “administrative scaffolding” for an implementation framework.

As there is no direct effect, individual legal or natural persons have to rely on the parties to the TCA to give effect to the same. As will be shown below, this is reliant on the political will of the parties and not a dependable outcome for the relevant person or group of persons.

This approach contrasts with the direct effect and judiciability of EU law,<sup>982</sup> which is a remedy for failures to implement directives. Whilst the direct effect is a complex area of law due to issues in interpretation and differences in the enforceability of, e.g., Treaties, regulations, and directives, it provides nonetheless a route for private parties to access their rights and obligations and the certainty that these will be enforced by and in the Member States when necessary.<sup>983</sup>

The energy provisions of the TCA contain general market design principles, which are often vaguely worded, and impose obligations to cooperate without providing concrete details as to the framework for such cooperation or any timeframe for implementation.

This is further complicated by the fact that, as set out in detail in chapter 5, a number of the energy provisions in the TCA are effectively “mandating provisions” in that they contain a mandate for some institutions or the parties to further negotiate or specifically implement aspects. For instance, Article 318 TCA directs that Ofgem and ACER establish administrative arrangements without specifying the exact scope of such arrangements so that quite minimal arrangements could be regarded as giving practical effect to this provision.

982 See section 2.3 on direct effect of EU law in chapter 5 of this dissertation

983 On the normative impact of the direct effect of directives, see also; Squintani Lorenzo and Justin Lindeboom, ‘The Normative Impact of Invoking Directives: Casting Light on Direct Effect and the Elusive Distinction between Obligations and Mere Adverse Repercussions’ (2019) Yearbook of European Law 38 <<https://doi.org/10.1093/yel/yez004>>

Implementation in the sense of “giving effect” to the provisions of the TCA has been slow. As discussed in chapter 5, neither the UK nor the EU has as yet designated the authority granting exemptions pursuant to Annex 29 of the TCA.

As discussed in chapter 6, the ongoing negotiations concerning the future electricity trading and market-coupling arrangements are evidence of these implementation issues.

One of the reasons for this slow implementation is that, in contrast to other EU association agreements, the TCA does not provide the framework for a common project based on further alignment.

Instead, as discussed in section 2.4 of chapter 5, the common objective of the parties is reduced to tracking and monitoring divergence and formal compliance with the TCA. As a consequence, there might be little motivation by the parties to press ahead and take steps in relation to the practical implementation beyond steps that are necessary to manage any divergence between the EU and the UK.

This deliberate move away from the EU legal framework was one of the Brexit objectives (see section 2.3.1 of chapter 1). Arguably it is now the very objective of Brexit that contributes to implementation issues of the TCA.

### **2.5.3 No sanction of non-compliance by a clear enforcement regime**

The TCA contains a detailed enforcement and dispute resolution regime and a Specialised Committee for Energy, which governs the energy aspects of the EU-UK relationship and which is mandated to make recommendations for the implementation of the energy provisions of the TCA.

As discussed in chapter 5, the TCA covers goods, and, as electricity and gas are classified as goods, no tariffs are applicable post-Brexit to the trade of electricity and gas between the UK and the EU.

As shown in chapter 5 and discussed in detail in chapter 6, since 1 January 2021, electricity trading between GB and the IEM has occurred on a “no-deal” basis, given that the TCA does not contain an immediately applicable successor arrangement to price-based market-coupling. This means that capacity of electricity interconnectors between the EU and the UK has to be assigned explicitly in separate auctions. In practice, this means staggered times for both capacity auctions and energy auctions which are less efficient than the price-based market coupling of the IEM, which in turn causes additional costs.

As discussed in detail in chapter 6, Annex 29, Part 1 of the TCA stipulates that the transmission system operators of the UK and the EU must develop detailed market regulations for electricity trading between the EU and the UK based on the principle of “multi-region loose volume coupling” (MRLVC) by March 2022. However, as of April 2023, MRLVC has not been introduced. The minutes of the most recent meeting of the Specialised Committee on energy merely note that the parties

should request that the TSOs provide further information to progress the work on MRLVC. This suggests that neither the EU nor the UK views the slow development of the MRLVC in breach of the deadlines stipulated in the TCA as a breach. Instead, work on the implementation continues without a clear view as to the date of practical introduction of MRLVC.

Chapter 5 noted that neither the UK nor the EU had designated the authority in charge of granting exemptions from certain regulatory provisions (such as unbundling and third-party access) in the TCA pursuant to Annex 29 of the TCA. Such exemptions can be important for the development of large new energy infrastructure projects and have been available in EU law since the introduction of the unbundling regime in 2003 (see section 6 of chapter 1). In relation to the UK, this is likely to be Ofgem as the NRA. In relation to the EU, this may be ACER, but it could also be the European Commission as the latter has a role in approving exemptions pursuant to the electricity and gas directives, or an NRA of a Member State.

As of April 2023, no such authority has been designated, which leads to uncertainty for companies wishing to apply for such exemptions as there is no clear path for an application to that effect. As such exemptions are of particular relevance for interconnectors, the non-designation of the relevant authorities is likely to impede the development of cross-border infrastructure required for the energy transition. Yet, on the basis of the minutes of the Specialised Committee for Energy (see chapter 5), there is no indication of either party to the TCA admonishing this lack of designation or indeed any sign of enforcement steps.

Other provisions of the TCA are so broadly formulated (see the section on legal certainty) that any breach or non-implementation would be difficult to determine and subsequently enforce.

#### **2.5.4 Existing yet insufficient implementation**

By way of answer to the research question as to whether the TCA require implementation and has the TCA been implemented, I conclude on the basis of the findings in chapter 1 and the Constituting Manuscripts:

Formal implementation and ratification of the TCA was required and undertaken, with the TCA entering into force on 1 May 2021.

However, the practical implementation of the TCA as far as the energy sector is concerned is a different matter: key provisions have not been given practical effect on time or at all, and often the practical implementation seems to be limited to divergence monitoring. Whilst the TCA contains an enforcement and dispute resolution regime, this has not been deployed to date in relation to matters affecting the energy sector, with the Specialised Committee on Energy not playing an active role to accelerate or facilitate the practical implementation of the TCA.

As a consequence, the implementation of the TCA energy provisions will be a slow and tentative process, which in turn will depend on the political goodwill of the UK Government and the EU. The extent and speed of the implementation will also depend on the interpretation of the TCA—not all are drafted in a way that allows a legally certain interpretation as to their intention, making both enforcement and assessing their effect difficult in practice. See also section 2.4 for an assessment as to whether the TCA will deliver legal certainty in the energy sector.

## 2.6 The TCA as a non-adequate post-Brexit regime

As defined in section 2.1 above, for the purpose of this dissertation, adequate means that the TCA delivers legal certainty has been effectively implemented and meets the Brexit objectives.

As shown in chapter 1 and this chapter, the normative criteria applied in this dissertation are intrinsically linked and build on one another in assessing the TCA in light of the research question.

In light of the findings of the Constituting Manuscripts and the summary of the relevant analysis in sections 2.2.4 (failure to meet the general Brexit objectives), 2.3.5 (partial achievement of the Brexit objectives in relation to the energy sector), 2.4.4 (lack of certainty), and 2.5.4 (existing but insufficient implementation), I conclude that the TCA is not an adequate replacement for the EU legal and regulatory regime for the energy sector.

Taking the analysis of the Constituting Manuscripts a step further, the Brexit process and the TCA, with its shortcomings and implementation difficulties, have ultimately also demonstrated just how integrated and interdependent the IEM has become since its creation. Over time, the contrast between an ever more integrating IEM governed by a consistent EU regulatory regime and a UK which has to rely on the limited provisions of the TCA may become more marked. Therefore, unless pragmatic steps for cooperation between the UK and the EU are undertaken, the difficulties referenced in the Constituting Manuscripts may deepen.

## 3 THE OUTLIER: NUCLEAR ENERGY

The findings in relation to Brexatom discussed in chapter 4 and chapter 5 demonstrate that the situation is different in relation to the post-Brexit arrangements for the nuclear sector.

Given the very technical nature of arrangements necessary to manage Brexatom and the need to agree on a replacement regime imminently to maintain nuclear safety and, by that, supply security in the UK, the negotiations and implementation



of the post-Brexit arrangements in the nuclear sector were largely carried out in the background away from a more politicised debate.

The scope of nuclear cooperation under the EU-UK Nuclear Agreement includes the facilitation of trade and commercial cooperation, the supply of nuclear and non-nuclear material and equipment, safe management of spent fuel and radioactive waste, nuclear safety and radiation protection, monitoring of levels of radioactivity in the environment, and nuclear safeguards and physical protection.

As outlined in chapter 5, the Euratom replacement regime in the UK is predictable, clear and precise, and as far as its applicability in the UK is concerned, not subject to the exercise of political discretion. Thereby, it delivers legal certainty for the nuclear energy sector.

The EU-UK Nuclear Agreement, as well as a series of nuclear cooperation agreements with other non-EU countries and a British legal regime pertaining to nuclear safeguards, were negotiated under great time pressure and were in place prior to or on 31 December 2020. The International nuclear cooperation treaties concluded by the UK in the run-up to Brexatom are likely to maintain the general framework for future UK nuclear policy and law, as any departure from the same in an attempt to “go it alone” would likely put the UK in a difficult position in as far as its nuclear supply chain is concerned.

In turn, this means that the UK will de facto maintain the Euratom regime, but on the basis of British laws and international treaties.

## **4 BEYOND BREXIT: OUTLOOK AND RECOMMENDATIONS**

### **4.1 A Continuous Brexit?**

The TCA can justifiably be called unprecedented. Past trade or association agreements concluded by the EU with third parties have typically been predicated on the mutual desire to overcome trade barriers and to generally create greater alignment in cooperation and standards, either overall or for particular sectors. By contrast, the TCA is not based on the desire for further integration; it merely manages disintegration and sets parameters for future divergence, including in the energy sector.

Brexit has re-politicised the energy market and brought legal uncertainty and, therefore, complication, inefficiencies, and costs to the sector, as the TCA is not an adequate replacement for the regulatory framework of the IEM, and its implementation is complex and slow, all the while achieving the self-set Brexit objectives of the UK Government in a partial way only.

However, in relation to the energy sector, Brexit is, in fact, a continuous process and the expiry of the energy provisions of the TCA on 30 June 2026 again raises the spectre of a Hard Brexit for the energy sector.

It is, therefore, difficult to provide a “definite” conclusion to the Constituting Manuscripts in this dissertation. This is partly due to the fact that some of the issues considered in the early Constituting Manuscripts have already been overtaken by political and legal reality and partly because Brexit, despite “getting done” formally on 31 December 2020, is, in fact, a fluid and continuous process which changes the legal and political parameters of the relationship between the UK and the EU on an ongoing basis.

This is not only true at the constitutional level with regard to the Protocol, in relation to which at the time of writing further negotiations are ongoing,<sup>984</sup> but also in relation to the energy sector: the UK’s recent re-joining of the North Seas Energy Cooperation group (see chapter 3) and the ongoing negotiations in relation to the multi-region low-volume coupling (MRLVC) electricity trading arrangements (see Chapters 5 and 6) are but two examples.

Politically, Brexit might now fade into the background in the EU, but this is not the case in the UK. Longer-term constitutional issues in Scotland and Northern Ireland aside, which have been outside the scope of this dissertation, it is likely that the UK’s relationship with the EU will continue to feature on the political agenda for the foreseeable future. This has several reasons:

1. A vocal part of the Conservative party is advocating the abolishment of Retained EU Legislation,<sup>985</sup> which they see as a “hangover” of the UK’s membership in the EU and wish to remove in order to access (perceived or otherwise) Brexit benefits. A bill is currently under discussion to abolish Retained EU legislation.<sup>986</sup> For the energy sector, this might, for instance, entail the removal of the REMIT regime or the implementing legislation of the 2019 EU Energy Regulation from the stat-

984 BBC News, ‘NI Protocol deal by no means done, says Rishi Sunak’ (18 February 2023) <[www.bbc.co.uk/news/uk-northern-ireland-64689160](http://www.bbc.co.uk/news/uk-northern-ireland-64689160)> and for an Irish perspective: Vincent Kearney, ‘Big moment’ for Northern Ireland Protocol talks’ (rte.ie, 19 February 2023) <[www.rte.ie/news/analysis-and-comment/2023/0219/1357481-protocol-dup/](http://www.rte.ie/news/analysis-and-comment/2023/0219/1357481-protocol-dup/)>

985 On the Conservative party after Brexit and its factions and drivers generally, see, for instance, Bale Tim, *The Conservative Party after Brexit: Turmoil and Transformation* (John Wiley & Sons 2023). On the ideological conflict within the Conservative Party around Brexit, see e.g. Beech Matt, *Conservative Party Ideology in the Age of Brexit. In Conservative Governments in the Age of Brexit* (Cham: Springer International Publishing, 2023)

986 House of Commons Library, ‘Research Briefing, Retained EU Law (Revocation and Reform) Bill 2022-23’ (17 October 2022) <<https://commonslibrary.parliament.uk/research-briefings/cbp-9638/>>

- ute books in Great Britain (subject to changes to the Protocol and the SEM, these provisions will continue to apply in Northern Ireland).
2. The effective implementation of the TCA is by no means complete. In the energy sector, this concerns, for instance, the development of the MRLVC, which continues to move ahead only slowly, and the designation of an authority for the grant of exemptions pursuant to Article 308 in conjunction with Annex 28 TCA. As these issues are affecting UK companies more than their EU counterparts, they will be followed more closely in the UK.
  3. The post-Brexit arrangements in relation to Northern Ireland remain contentious in the UK, where there is an ongoing debate on the Protocol, which continues to make headlines,<sup>987</sup> even after the negotiations of the Windsor Framework.<sup>988</sup> This also has an indirect influence on the implementation of the energy provisions of the TCA, as it is understood that little material progress in, e.g., the implementation of MRLVC is likely, whilst the political issues pertaining to the Protocol are not settled.
  4. Several polls have recently suggested that public support for the TCA and/or Brexit is waning. UK business leaders, including those from the energy sector, have openly acknowledged that the TCA, or indeed Brexit itself, is not working and damaging to the economy, particularly in relation to the energy sector.<sup>989</sup>

987 See for instance Annabelle Dickson and others, 'Fear of Cabinet resignation stalks Rishi Sunak as Brexit deal looms' (politico.eu, 21 February 2023) <[www.politico.eu/article/uk-cabinet-resignation-fears-as-rishi-sunak-warned-over-getting-northern-ireland-protocol-brexit-deal-through/](http://www.politico.eu/article/uk-cabinet-resignation-fears-as-rishi-sunak-warned-over-getting-northern-ireland-protocol-brexit-deal-through/)> on the debate within the UK Government in relation to a possible deal with the EU on the Protocol. On the role of Northern Ireland within the Brexit debates of the Conservative party generally, see e.g. McGrattan Cillian, *Alienation and Destabilization: Northern Ireland in the Age of Brexit. In Conservative Governments in the Age of Brexit* (Cham: Springer International Publishing 2023)

988 On the Windsor Framework, see e.g., Paul Goodman, "The Windsor Framework Tory backbench revolt. Quite a few officers, not very many privates, for "Conservative Home"" (22 March 2023) <<https://conservativehome.com/2023/03/22/the-windsor-framework-conservative-backbench-revolt-quite-a-few-officers-not-very-many-privates/>>

On the Windsor Framework more generally, see also: Marcin Szczepanski, *The Windsor Framework: A new way forward for the Protocol on Ireland/Northern Ireland*, EPRS: European Parliamentary Research Service. Belgium (2023) <<https://policycommons.net/artifacts/3681372/the-windsor-framework/4487258/>>

In relation to the Windsor Framework as a turning point for EU-UK relations post Brexit, see e.g. Kenny Mel, "The Windsor Framework: finding a new way forward for EU/UK relations?" (2023) Jean-Monnet-Saar-Brief 2023.

989 Valentina Romei, 'Brexit has cost UK £29bn in business investment, says BoE rate setter' (Financial Times, 13 February 2023) <[www.ft.com/content/270cb4f7-31eb-4dac-bd36-225of49de057](http://www.ft.com/content/270cb4f7-31eb-4dac-bd36-225of49de057)> On UK business attitudes and post-Brexit strategies more generally, see e.g. Coen David and Alexan-

5. This has led to discussions between the UK Government and members of the opposition to evaluate “how to make Brexit work,”<sup>990</sup> whilst recent polls suggest that 19% of the voters who voted in favour of Brexit in the Referendum now regret that choice.<sup>991</sup> This group of voters is big enough to influence the outcome of the next election scheduled for December 2024 or January 2025 at the latest, and it is, therefore, likely that British politicians will wish to engage with this segment of the electorate in particular.

## 4.2 Changing Geopolitical Parameters

The geopolitical parameters have shifted considerably since Brexit. The Russian invasion of Ukraine on 24 February 2022 has raised the question as to the cooperation of European states, be that in the context of NATO, the EU or beyond, anew.

In relation to the energy sector, the Russian war has demonstrated (a) the extent to which energy and energy infrastructure can be used as strategic and tactical tools and (b) the importance of solidarity mechanisms and a coordinated approach to supply security. In this context, “proximity suddenly matters,”<sup>992</sup> as Europe as a whole is interconnected and interdependent, not only in terms of energy infrastructure and market architecture, but also in relation to supply routes for fossil fuels that still make up a significant proportion of the European energy market.

Immediately after the Russian invasion of Ukraine, the focus of both the EU and the UK was clearly on the continued availability of gas as Europe’s dependence on Russian gas was critically assessed. However, the war in Ukraine has also had the effect of EU Member States accelerating their investment in renewable energies and the accompanying infrastructure.

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der Katsaitis, ‘Hedging Bets: British Business Lobbying in the European Union post-Brexit’ (2022) 93 (2) *The Political Quarterly*

990 Kiran Stacey, ‘Brexiters claim ‘sellout’ after Tories discuss rapprochement with EU’ (*The Guardian*, 12 February 2023) <[www.theguardian.com/politics/2023/feb/12/brexiters-claim-sellout-after-tories-discuss-rapprochement-with-eu](http://www.theguardian.com/politics/2023/feb/12/brexiters-claim-sellout-after-tories-discuss-rapprochement-with-eu)>

991 Stefan Boscia, ‘Will UK Labour’s Brexit gamble pay off?’ (*politico.eu*, 10 January 2023) <[www.politico.eu/article/will-uk-labour-party-keir-starmer-brexit-gamble-pay-off/](http://www.politico.eu/article/will-uk-labour-party-keir-starmer-brexit-gamble-pay-off/)> On the Labour party and the role of Brexit for its (former) voters, see also: Margherita De Candia, *Il partito laburista che laburista non è più*, on “il Mulino, *Rivista trimestrale di cultura e di politica*” 1/2023, pp. 78-86, doi: 10.1402/106625

992 Paul Mason, ‘The Ukraine war has invalidated Brexit’ (*The New Statesman*, 10 March 2022) <[www.newstatesman.com/comment/2022/03/the-ukraine-war-has-invalidated-brexit](http://www.newstatesman.com/comment/2022/03/the-ukraine-war-has-invalidated-brexit)> On UK foreign policy more generally after Brexit (including the Ukraine war), see e.g. Martill, Benjamin ‘Withdrawal symptoms: party factions, political change and British foreign policy post-Brexit’ (2023) *Journal of European Public Policy*

From the perspective of the deliverability of the EU's supply security, this increase in renewable energies in the energy mix of the EU will also mean greater reliance on the design and reinforcement of transmission infrastructure and interconnectors. This will trigger a greater need for cooperation between the EU, the UK, and Switzerland, not least because the biggest boost to the volume of renewable energy available is likely to stem from large offshore wind projects in the North Sea area (see below).

Therefore, isolation and friction with her EU neighbours born out of Brexit, at a time when the whole of Europe is re-thinking its energy policy and supply security strategy, may potentially be detrimental to the UK's supply security.

The war in Ukraine may also lead to a re-evaluation of the importance of European and international institutional cooperation in the UK, at least by some. In a perhaps surprising statement, former UK prime minister Boris Johnson has recently suggested that Ukraine should join both NATO and the EU after the war.<sup>993</sup>

### 4.3 Future Divergence as a Source for Further Uncertainty

Chapter 2 sets out the different models for post-Brexit arrangements between the EU and the UK. Two key criteria for the description of these models are the questions as to depth, i.e., how deep should the cooperation be between the UK and the EU, to what level (if any) should there be any harmonisation or even integration between the two jurisdictions, and width, i.e., to what areas should the cooperation determined by the answer to the first question between the two jurisdictions extend.

As set out in chapter 5, the TCA is unique in that it is not about further convergence between the parties but to manage future divergence of the parties, which hitherto had a common basis for cooperation, harmonisation and integration in the form of the EU and its *acquis communautaire*.

Compared to trade deals between the EU and the UK that would have, theoretically been possible, the TCA has a narrow scope. Apart from its architectural issues in relation to the energy sector outlined in this dissertation and summarised below, the TCA focuses chiefly on the trade in goods and does not contain provisions pertaining to, e.g., financial services or services more generally, nor does it contain provisions on the free movement of people.

The energy provisions of the TCA are also in sharp contrast to the EU's comprehensive set of energy directives and regulations, which have shaped the energy sector within the EU since the inception of the liberalisation directives and regulations in

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993 Interview with the Atlantic Council on 3 February 2023, the relevant clip of the interview can be seen here: <<https://www.youtube.com/watch?v=gnnqcJz4i2c>>

the late 1990s and early 2000s and which were designed to free the then emerging IEM from politically motivated decisions.<sup>994</sup>

By contrast, the TCA is quite “shallow” in that it merely enshrines a number of core principles which might be referred to as the “essence” of liberalised markets and which underpin energy relations between the UK and EU going forward.

Chapter 3 raised the possibility of the UK diverging from EU electricity regulation and the resulting risk of a growing policy gap over time. Looking ahead, the electricity trading arrangements between the UK and the EU may indeed become more complex as the regulatory regimes underpinning the current market design may change.

Even though the current electricity trading arrangements between the IEM and the GB market are de facto on Hard Brexit terms, the market designs underpinning these arrangements are near-identical for the time being. Since the entry into force of the TCA, both the EU Commission and the UK Government have undertaken public consultations on the future of their respective electricity markets.

As the TCA does not, in contrast to the EU regime in relation to EU Member State NRAs, require UK NRAs (i.e., Ofgem and NIAUR) to consider the wider European context in which they operate in their decisions. Likewise, no requirement for EU NRAs or ACER to take into account any developments in the UK, there is a significant chance of “inbuilt divergence” in the way that cross-border trade, projects and market access might be functioning in the future.

The UK Government’s review of the GB electricity market arrangements (REMA)<sup>995</sup> and the initial consultation regarding the same has set out a wide range of possibilities for the future design of the GB electricity markets, some of which deviate from the current EU market model (e.g., REMA contemplates nodal rather than zonal pricing).

Similarly to REMA, the EU consultation is considering a wide range of options for the future design of the IEM intended to address (a) ways of decoupling electricity prices from volatile oil and gas markets, which are ultimately controlled by third countries, and (b) the integration of large volumes of renewable power.<sup>996</sup>

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994 See section 1.3 of Chapter 1 of this dissertation

995 Department for Business, Energy & Industrial Strategy, ‘Review of Electricity Market Arrangements, Consultation Document’ <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1098100/review-electricity-market-arrangements.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1098100/review-electricity-market-arrangements.pdf)>

996 See European Commission, ‘Electricity market – reform of the EU’s electricity market design’ <[https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13668-Electricity-market-reform-of-the-EUs-electricity-market-design\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13668-Electricity-market-reform-of-the-EUs-electricity-market-design_en)> At the time of writing (21 February 2023), the consultation document itself is no longer available online, the link provides contextual information on the consultation, the consultation process and next steps.

Depending on the outcome of REMA and the EU market consultation, we might see a significant divergence between the two market designs, which could make the interoperability of the two markets harder, which in turn might have a detrimental impact on market access.

#### 4.4 Recommendations

Whilst a truly coordinated European energy policy and legislation may only be possible within the IEM, the benefits of the IEM, including that of its regulatory framework, are only available to EU, EEA or (with some delay) EFTA Members. Even though the issues arising out of Brexit and the TCA would be remedied by the UK re-joining the EU, it needs to be recognised that this is not a likely scenario in the short or mid-term.

In light of this and the post-Brexit challenges outlined in this dissertation, it is possible to formulate the following recommendations.

##### 4.4.1 Improvements and implementation

The first set of recommendations concerns the implementation of the TCA on the assumption that whilst it would be helpful, in particular for the UK, to recognise that the TCA is limited in its scope and improvement may be required, there seems to be limited political appetite by the current UK Government to engage with this topic. Short of any political will to improve the TCA, its proper implementation will be key.

1. If the EU and the UK wish for the TCA to function as per its (albeit limited) potential, it needs to be implemented properly and speedily. For the energy sector, this entails addressing the issues outlined in Chapters 5 and 6:
  - a. Rapid implementation of MRLVC;
  - b. The designation of the relevant authority or authorities which are empowered to grant exemptions pursuant to Article 308 in conjunction with Annex 28 TCA so as to enable large cross-border infrastructure projects to have access to this exemption regime in the EU;
  - c. A formalised forum for ACER and Ofgem that goes beyond the administrative contacts pursuant to Article 318 TCA. This forum should provide the space to discuss policy issues pertaining to, e.g., market design, to ensure the continued interoperability of the IEM and the GB electricity market as stipulated by Article 314 TCA.
2. The Specialised Committee on Energy has, to date, only met four times<sup>997</sup> and discussed a limited range of issues. In order to support the implementation of the

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<sup>997</sup> For a list of the meetings and the minutes of the same, see Specialised Committee on Energy (UK



TCA and meaningful cooperation in energy matters, the Specialised Committee on Energy should meet more often and on a regular, scheduled basis with a substantive agenda covering, for instance, the parties' respective supply security strategies, and plans for a future electricity market reform in the IEM and GB.

#### 4.4.2 Recommendation regarding EU supply security

As discussed in chapter 7, the UK is no longer part of the EU solidarity mechanisms for supply security, and Ireland is the EU jurisdiction most affected by supply security concerns in the wake of Brexit. Therefore, in addition to any infrastructure investment Ireland may wish to make to address this situation, the UK and Ireland may wish to consider a bilateral energy solidarity mechanism.

#### 4.4.3 Beyond the TCA: Addressing energy challenges of the future

As outlined above, the TCA is, in its energy provisions, a snapshot of the energy sector at the time of the entry into force of the TCA. The TCA does not contain provisions which allow for an extension of its regime to new technologies:

1. More wind is likely to be one of the biggest sources of renewable energy in Europe. The North Seas Energy Cooperation (NSEC) states have set a target of at least 260 GW of installed offshore wind capacity by 2050.<sup>998</sup> Together with the ambition of 50 GW of offshore wind capacity by 2030 set out in the British Energy Security Strategy,<sup>999</sup> by mid-century, more than 310 GW of offshore wind capacity could be installed in the North Sea. The successful delivery of this volume of offshore wind will require significant investment, including in offshore cross-border trans-

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Government, 10 March 2023) <<https://www.gov.uk/government/groups/specialised-committee-on-energy>>

998 As the UK was not a member of the North Seas Energy Cooperation at the time this target was adopted, the figure of 260 GW excludes the UK target. Adnan Durakovic, 'Nine North Seas Countries Set 260 GW by 2050 Offshore Wind Target' (offshorewind.biz, 12 September 2022) <[www.offshorewind.biz/2022/09/12/nine-north-seas-countries-set-260-gw-by-2050-offshore-wind-target/](http://www.offshorewind.biz/2022/09/12/nine-north-seas-countries-set-260-gw-by-2050-offshore-wind-target/)> On the potential for offshore wind projects in the North Sea region generally, and the use of energy islands; Jansen Malte, Connor Duffy Tim C., Green and Iain Staffell, 'Island in the Sea: The prospects and impacts of an offshore wind power hub in the North Sea' (2022) 6 *Advances in Applied Energy*

999 HM Government, 'British Energy Security Strategy – Secure, clean and affordable British energy for the long term' (April 2022) <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1069969/british-energy-security-strategy-web-accessible.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1069969/british-energy-security-strategy-web-accessible.pdf)>

On the British Energy Security Strategy, see e.g. Marshall Jonathan, 'Low Energy-The British Energy Security Strategy brings increased ambition on decarbonising electricity but fails to offer immediate respite from' (2022) <<https://policycommons.net/artifacts/2325883/low-energy/3086456/>>



mission links (multi-purpose interconnectors, “MPIs”).<sup>1000</sup> As there is currently no developed regime for MPIs, a holistic design<sup>1001</sup> for a reliable UK-EU multi-purpose interconnector regulatory regime will be required to deliver both the decarbonisation of electricity generation as well as supply security. In this context, the NSEC can play an important role, and the UK’s recent re-joining of this is a positive step in this regard.<sup>1002</sup>

2. A similar cooperation forum should be considered for the development of hydrogen and carbon capture, usage, and storage (CCUS) infrastructure. Both the EU and the UK are currently considering the details of business models and support regimes for hydrogen and CCUS (including the relevant regulatory regimes), with the European Commission adopting a proposal for a voluntary framework to certify carbon removals on 30 November 2022.<sup>1003</sup> The UK has been developing the relevant business models since 2020.<sup>1004</sup> Hydrogen and CCUS projects can play an important role in the energy transition and, by their very nature, require large volumes of capital commitments. It is likely that the relevant CCUS projects in the North Sea will be cross-border projects involving not only

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1000 On multipurpose interconnectors and their potential use in decarbonisation, see e.g. Devoy David, Elizabeth Wells, Rajiv Lodhia, Martin Moran, Morris Bray and Christopher A. Smith, *The use of Multi-Purpose Interconnectors to meet net zero by 2050. The 17th International Conference on AC and DC Power Transmission* (ACDC Vol 2021 IET 2021)

1001 In this context, “holistic design” refers to the integrated design of non-radial offshore transmission lines that supports the large-scale delivery of electricity generated from offshore wind. In GB, Ofgem has issued a policy decision in relation to such design in the UK EEZ. Decisions (ideally coordinated) covering this issue will be required in the EU to ensure the infrastructure necessary to deliver the decarbonisation aims are in place. For the Ofgem decision, see: <[https://www.ofgem.gov.uk/sites/default/files/2023-03/\\_Final\\_Decision\\_on\\_PT2030\\_290323.pdf](https://www.ofgem.gov.uk/sites/default/files/2023-03/_Final_Decision_on_PT2030_290323.pdf)>

1002 This cooperation will require some cross-border institutional cooperation to implement the offshore grid plans. Rentier et al have explored this cooperation in further detail: Rentier Gerrit, Herman Lelieveldt and Gert Jan Kramer, ‘Institutional constellations and policy instruments for offshore wind power around the North sea’ (2023) *Energy Policy* 173

1003 European Commission, ‘Proposal for a Regulation of the European Parliament and of the Council establishing a Union certification framework for carbon removals’ COM(2022) 672 final (30 November 2022) <<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52022PCo672&from=EN>>

On the potential for North Sea offshore wind in relation to decarbonisation and power prices, see, for instance: Durakovic Goran, Pedro Crespo del Granado and Asgeir Tomasgard, ‘Powering Europe with North Sea offshore wind: The impact of hydrogen investments on grid infrastructure and power prices’ (2023) *Energy* 263.

1004 Department for Business, Energy & Industrial Strategy, ‘Research and analysis – Carbon capture, usage and storage (CCUS): business models’ <[www.gov.uk/government/publications/carbon-capture-usage-and-storage-ccus-business-models#full-publication-update-history](http://www.gov.uk/government/publications/carbon-capture-usage-and-storage-ccus-business-models#full-publication-update-history)>

EU Member States, but also the UK.<sup>1005</sup> For such large investments, regulatory certainty is a core requirement in both the EU and the UK.

3. The TCA parties should therefore avoid rule changes or tolerating regulatory uncertainty, which could undermine these investments, as divergence or regulatory friction could jeopardise the achievement of these renewable energy objectives and, therefore, ultimately, the success of the energy transition. This will require a certain amount of pragmatism and (at least since Brexit-times) unprecedented cooperation between the EU and the UK.

Unless steps are taken to implement the TCA and to use all available fora for cooperation, future divergence between the two jurisdictions will become more likely, leading to greater uncertainty for the energy sector, which cannot be a welcome outcome.

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<sup>1005</sup> Jeremy Beckman, 'North Sea consortia setting the stage for carbon capture and storage' (*Offshore magazine*, 29 April 2022) <[www.offshore-mag.com/renewable-energy/article/14248314/north-sea-consortia-setting-the-stage-for-carbon-capture-and-storage](http://www.offshore-mag.com/renewable-energy/article/14248314/north-sea-consortia-setting-the-stage-for-carbon-capture-and-storage)> On the UK CCUS strategy; Gibbins Jon and Mathieu Lucquiaud, 'The development of UK CCUS strategy and current plans for large-scale deployment of this technology.' *Annales des Mines-Responsabilité et environnement* (2022) 1 Cairn/Softwin

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This book focuses on the legal consequences of Brexit for the energy sector both in the United Kingdom and in the European Union. In particular, it considers to what extent the EU-UK Trade and Cooperation Agreement (TCA) is adequate for the energy sector post-Brexit by exploring whether the TCA

- delivers legal certainty,
- has been effectively implemented, and
- meets the Brexit objectives.

The analysis of these questions leads to several recommendations, for instance in relation to the implementation of the TCA and its extension to new energy technologies.

University of Groningen Press

ISBN 978-94-034-3052-2



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