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THE UNITED KINGDOM'S SECURITY OF GAS SUPPLY POST BREXIT

Comparing the Legal Aspects of Potential Options

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I. Abstract

The United Kingdom's (UK) main energy source is gas, which is either imported from continental Europe and Norway, or shipped, in the form of liquefied natural gas from around the world. Given the size of the population in the UK and the declining North Sea gas reserves, it is highly dependent on imports of gas and the crucial political issue is to *safeguard the supply of gas*. The importance of guaranteeing the supply of gas justifies some degree of legal regulation to organize activities among actors involved in the gas market. Thus, the UK as a current Member State in the European Union (EU) adopts energy legislation, in accordance with the energy legislation adopted by the EU. However, with the UK withdrawing its membership in the EU by invoking Article 50 of the Treaty on the European Union (TEU), energy legislation deriving from the EU will no longer be applicable in the UK. No country has ever invoked Article 50 TEU and despite the complexity of a withdrawal from the EU, little is actually known about the process.

The 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 Energy Market (IEM), will be terminated upon withdrawal. Existing options post-Brexit available to the UK for it to safeguard its supply of gas range between two extremes: continued access to the IEM and adoption of regulations thereto ('soft Brexit') on the one hand, and no further preferential relationship with the EU ('hard Brexit'), on the other hand. Between these two extremes there are a range of different options allowing for closer cooperation with the EU than the 'hard Brexit' provides ('grey' Brexit). In this thesis I *will identify existing options available to the UK to secure its supply of gas*, as well as study and compare the legal aspects of these options.

To assess potential outcomes for the UK within gas security post-Brexit the international energy market and legislation thereto will be examined. With this approach bilateral- and multilateral trade and energy agreements possible to negotiate and/or to commit to with third countries will be studied, as to examine the option where the UK does not negotiate a withdrawal agreement addressing gas security matters with the EU. Another discussion will be the UK's possibility to become self-sufficient in its gas supplies, taking into account undiscovered sources and unconventional production of gas, allowing for the UK to be less dependent on imports of gas. For a future relationship with the EU, existing agreements between third countries, on the one hand, and the EU and its Member States, on the other hand will be examined. This study will be executed by identifying the EU's bilateral and multilateral external energy policy.

This thesis is one of the first written comparative studies of potential options for a Member State in the EU post-withdrawal. It addresses a question, which is currently being reviewed by the UK Government with many specialists trying to identify post-Brexit relations. A lot of writing upon this subject has been done in newspapers suggesting many post-Brexit relations based on the political climate and gut feelings, however this research provides the theoretical and the law aspects of what is actually possible for the UK within gas security post-Brexit.

II. Abbreviations

ACER	Agency for the Cooperation of Energy Regulators
APERC	Asia Pacific Energy Research Centre
Brexit	Britain's exit
CET	Common External-Tariff
CETA	Comprehensive Economic and Trade Agreement
CS	Contracting States of the Energy Community
ECT	International Energy Charter Treaty
EEA	European Economic Area
EFTA	European Free Trade Association
ENTSO-G	European Network for Transmission System Operators for Gas
EU	European Union
EUCU	European Union Customs Union
GATT	General Agreement on Tariffs and Trade
GATS	General Agreement on Trade and Services
IEA	International Energy Agency
IEM	Internal Energy Market
LNG	Liquefied Natural Gas
MFN	Most Favoured Nation principle
SAA	Stabilisation and Association Agreement
SPA	Strategic Partnership Agreement
TEU	Treaty on the European Union
TFEU	Treaty on the Functioning of the European Union
UK	United Kingdom
VCLT	Vienna Convention on the Law of Treaties
WTO	World Trade Organisation

III. Table of Contents

I. Abstract	2
II. Abbreviations.....	3
III. Table of Contents.....	4
1. Introduction and Problem Statement.....	7
1.1. Introduction	7
1.1.1. The Internal Energy Market	8
1.1.2. Exiting the Internal Energy Market.....	9
1.1.3. Post-Withdrawal Options	10
1.2. Research Question and Objectives	11
1.3. Methodology	11
1.3.1. Bilateral- and Multilateral Agreements (Non-EU relations).....	12
1.3.2. Self-sufficiency	13
1.3.3. EU Relations.....	13
1.3.4. The Comparative Method.....	14
1.3.5. Options Within the Political Landscape	14
1.4. Thesis Structure	15
2. Energy Security	16
2.1. Introduction	16
2.2. The Definition of Energy Security	17
2.3. The Secure Supply of Natural Gas	18
2.3.1. Crises Highlighting the Importance of Energy Security	19
2.3.2. Transportation Methods and Infrastructure.....	20
2.3.3. Trans-boundary Trade	21
2.3.4. Supply Agreements and the Spot Market.....	21
2.3.5. Interrelated Risks for the Secure Supply of Natural Gas	23
2.4. Goals to Safeguard a Secure Supply of Gas.....	23
3. The UK’s Current Legislative Framework Governing Gas Security.....	25
3.1. Introduction	25
3.2. The Common Market and the European Energy Market	25
3.2.1. Introduction	25
3.2.2. European Internal Market.....	25
3.2.3. European Internal Energy Market	26
3.2.4. The Internal Energy Market and Energy Security.....	27
3.3. The Legislation of the European Energy Market	29
3.3.1. History of the Energy Packages	29
3.3.2. Third Energy Package	30
3.3.2.1. Unbundling	31
3.3.2.2. Independent Regulators	32
3.3.2.3. Agency for the Cooperation of Energy Regulators	32
3.3.2.4. Cross-border Cooperation.....	32
3.3.2.5. Security of Gas Supply	32
3.3.3. Measures to Safeguard the Security of Gas Supply	33
3.3.3.1. National Measures	33
3.3.3.1.1. The Preventive- and Emergency Action Plan	33
3.3.3.1.2. The N-1 Supply Standard.....	34
3.3.3.2. Market-Based Measures	34
3.3.3.3. EU Coordinated Measures.....	34

3.3.3.3.1.	Energy Security Strategy.....	35
3.3.3.4.	The Importance of the European Energy Market.....	35
4.	The Brexit.....	37
4.1.	Introduction.....	37
4.2.	Current Events.....	37
4.3.	Possible Ways to Withdraw from the EU.....	38
4.3.1.	Unilateral Withdrawal.....	38
4.3.2.	Negotiated Withdrawal.....	39
5.	Unilateral Withdrawal.....	40
5.1.	Introduction.....	40
5.2.	International Trade and Energy Agreements and Energy Security.....	40
5.2.1.	Bilateral Agreements.....	40
5.2.1.1.	Liquefied Natural Gas Market.....	41
5.2.1.2.	Pipeline Gas Market.....	42
5.2.2.	Multilateral Agreements.....	43
5.2.2.1.	The General Agreement on Tariffs and Trade.....	44
5.2.2.1.1.	Trade in Gas.....	44
5.2.2.1.2.	The Transit of Gas.....	45
5.2.2.2.	The Energy Charter Treaty.....	46
5.2.2.2.1.	The Liberalised International Energy Market.....	46
5.2.2.2.2.	Energy Security.....	46
5.2.2.2.3.	Trade in Gas.....	46
5.2.2.2.4.	The Transit of Gas.....	47
5.2.2.2.5.	The Investment Regime.....	47
5.2.3.	The Outcome of the Bilateral and the Multilateral Agreements.....	47
5.3.	Self-sufficiency in Gas Supplies.....	51
5.3.1.	Does the UK Use Gas in its Energy Consumption?.....	51
5.3.2.	Does the UK Produce Gas Domestically?.....	51
5.3.3.	What are the Political Consequences?.....	52
5.3.3.1.	Undiscovered Gas and Unconventional Production of Gas.....	52
5.4.	The Outcome of the Hard Brexit.....	53
5.4.1.	The UK Guaranteeing Gas Security Individually.....	54
6.	Negotiated Withdrawal.....	56
6.1.	Introduction.....	56
6.2.	Bilateral And Multilateral Aspects of the European Union’s External Energy Policy.....	56
6.2.1.	Bilateral Agreements.....	56
6.2.2.	Multilateral Agreements.....	58
6.2.3.	Agreements Concluded Between the EU and Third Countries.....	58
6.3.	The Norwegian Model.....	58
6.3.1.	Introduction.....	58
6.3.2.	European Economic Area and the European Free Trade Association.....	58
6.3.2.1.	Incorporation of European Union Legislation.....	60
6.3.2.2.	Access to the Internal Energy Market.....	60
6.3.2.3.	Energy Security.....	61
6.3.2.4.	The Process of Decision-making.....	61
6.3.3.	The Norwegian Model Applied to the UK.....	61
6.4.	The Swiss Model.....	62
6.4.1.	Introduction.....	62
6.4.2.	Bilateral Agreements and the European Free Trade Association.....	62
6.4.2.1.	Incorporation of European Union Legislation.....	63
6.4.2.2.	Access to the Internal Energy Market.....	64

6.4.2.3.	Energy Security	65
6.4.2.4.	The Process of Decision-making	65
6.4.3.	The Swiss Model Applied to the UK	65
6.5.	The Turkish Model	66
6.5.1.	Introduction	66
6.5.2.	Customs Union	66
6.5.2.1.	Incorporation of European Union Legislation.....	67
6.5.2.2.	Access to the Internal Energy Market	68
6.5.2.3.	Energy Security	69
6.5.2.4.	The Process of Decision-making	69
6.5.3.	The Turkish Model applied to the UK	69
6.6.	The Canadian Model.....	70
6.6.1.	Introduction	70
6.6.2.	Comprehensive Economic and Trade Agreement.....	70
6.6.2.1.	Strategic Partnership Agreement	71
6.6.2.2.	Access to the IEM and Energy Security	71
6.6.3.	The Canadian Model Applied to the UK.....	71
6.7.	The Albanian Model	73
6.7.1.	Introduction	73
6.7.2.	Energy Community	73
6.7.2.1.	Access to the IEM and Energy Security.....	74
6.7.3.	The Albanian Model Applied to the UK	74
6.8.	The Outcome of the Soft and the Grey Brexit.....	74
7.	Discussion of Results – Energy Security	76
7.1.	Introduction	76
7.2.	The Regional or the National Gas Market?.....	76
7.3.	UK Specific Comparison of Existing Options	78
7.3.1.	Availability	78
7.3.2.	Accessibility	79
7.3.3.	During Crisis	79
7.3.4.	Affordability.....	80
8.	Discussion of Results – the Political Perspective of the Brexit.....	82
8.1.	Introduction	82
8.2.	Reasons for the UK to Leave the EU.....	82
8.3.	Pro-Brexit Arguments in Contrast to the Existing Models.....	83
8.3.1.	Free Movement of Persons.....	83
8.3.2.	EU Law Overriding National Law	84
9.	Conclusion.....	86
9.1.	Recommendations	87
10.	Bibliography	89

1. Introduction and Problem Statement

1.1. Introduction

The United Kingdom (UK) is currently a member of the European Union (EU) but, as a result of a referendum held in June 2016, it intends to withdraw its membership. This separation process is commonly referred to as Brexit, merging the words Britain and exit. The new Prime Minister of the UK, Theresa May, was against leaving the EU but intends to respect the will of the people.¹ One of the main reasons for the Brexit vote is thought to be the restriction on the free movement of persons into the UK, especially the free movement for labour,² which is a freedom stipulated under Article 3(2) of the Treaty on the European Union (TEU)³, Article 21 of the Treaty on the Functioning of the European Union (TFEU)⁴ and Article 45 of the TFEU. Such freedom of movement is one of the key principles of the European internal market, and a tenant that was rejected by the British people. However, if the UK wishes to have access to the free market, then it needs to weigh its options regarding the concomitant requirement for the free movement of persons. Furthermore, whether EU law can override UK law is also a major reason for Brexit and ‘Euro sceptics’ has been campaigning for an independent sovereign UK for a long time.⁵

The legal consequence for the UK to withdraw from the EU is the end of the application of the EU Treaties, and the Protocols thereto. The application ends when a withdrawal agreement between the UK and the EU has been negotiated, or within two years of the UK’s withdrawal notification to the EU.⁶ EU law can therefore cease to apply in the UK, as national acts adopted in the implementation or transposition of EU law would remain valid until the national authorities decide to amend or repeal them.⁷

The right for a Member State to leave the EU was first introduced in the Treaty of Lisbon under Article 50 of the TEU. This provision does not constitute any substantive conditions for a Member State to exercise its right to withdraw from the EU; rather it includes only

¹ Wheeler, Brian and Hunt, Alex. *Brexit: All You Need to Know About the UK Leaving the EU*. BBC News. 2016-09-01 <<http://www.bbc.co.uk/news/uk-politics-32810887>> (Retrieved 2016-09-09) and

Chu, Ben. *Why did People Really Vote for Brexit? If we don’t face the psychological reasons, we’ll never bring Britain together*. Independent. 2016-06-26 <<http://www.independent.co.uk/voices/brexit-eureferendum-why-did-people-vote-leave-immigration-nhs-a7104071.html>> (Retrieved 2016-09-09).

² *Eight Reasons Leave Won the UK’s referendum*. BBC News. 2016-06-24 <<http://www.bbc.co.uk/news/uk-politics-eu-referendum-36574526>> (Retrieved 2016-09-09).

³ Consolidated version of the Treaty on the European Union of the 26 October 2012, OJ C 326.

⁴ Consolidated version of the Treaty on the Functioning of the European Union of the 26 October 2012, OJ C 326.

⁵ Mason, Rowena. *How Did UK End Up Voting to Leave the European Union?* The Guardian. 2016-06-24 <<https://www.theguardian.com/politics/2016/jun/24/how-did-uk-end-up-voting-leave-european-union>> (Retrieved 2016-10-26)

⁶ Nicolaidis, Phedon. Withdrawal from the European Union: A Typology of Effects. *Maastricht Journal*, Vol. 20 (2013): p. 213 and EUR-Lex. Access to European Union Law. *Withdrawal Clause* <http://eur-lex.europa.eu/summary/glossary/withdrawal_clause.html> (Retrieved 2016-09-26).

⁷ Poptcheva, Eva-Maria. Article 50: Withdrawal of a Member State from the EU. *European Parliamentary Research Service, The European Parliament* (2016): p.1.

procedural provisions.⁸ This Article refers to a negotiated, post-exit relationship between the state of concern and the EU.⁹ In accordance with Article 50 TEU such an agreement needs to be concluded within two years from the withdrawal request, unless the European Council and the Member State decides jointly to extend this period. A failure for the UK to negotiate a withdrawal agreement with the EU would result in the so-called '*hard Brexit*', implying no further preferential relationship with the EU. However this could also be a deliberate choice made by the UK's politicians. Opposed to the '*hard Brexit*', is the '*soft Brexit*', an outcome with a continued relationship at somewhat the current level between the parties, but without the UK being referred to as a Member State of the EU. However, between these two extremes there is also a grey zone, referred to as the '*grey Brexit*', in which the UK would continue having a preferential relation with the EU but not to the same extent as today.¹⁰

The process of withdrawing from the EU is complex, and has large implications for the countries involved, both within the economical as well as the political context of their relations.¹¹ Since the UK will be the first state in history to invoke Article 50 of the TEU, there exists little knowledge about such a process.¹² Additionally, the UK has been a member of the EU since 1973, and European legislation is deeply interwoven in the UK's legal framework and society. The upcoming negotiations are therefore expected to be difficult and complex.¹³

1.1.1. The Internal Energy Market

One of the central functions of the EU is to provide its Member States with an *internal market* in which all factors of production can flow freely without hindrance and where people can reside beyond state borders without obstacles.¹⁴ With the creation of the so-called internal market it was expected that cooperation between countries were to be strengthened, as countries that share economic interests are less likely to engage in political and social conflicts, which had been going on for almost five centuries on the European continent.¹⁵

⁸ Ibid, p. 3-4.

⁹ Nicolaides, Phedon. Withdrawal from the European Union: A Typology of Effects. *Maastricht Journal*, Vol. 20 (2013): p. 209-210.

¹⁰ Menon, Anand and Fowler, Brigid. Hard or Soft? The Politics of Brexit. *National Institute Economic Review*. Vol. 1, no. 238 (2016): p. R4-R12.

¹¹ This argument has mainly been presented by politicians and economists in the following sources: The Global Counsel. *Brexit: the Impact on the UK and the EU*. 2015 <https://www.global-counsel.co.uk/sites/default/files/special-reports/downloads/Global%20Counsel_Impact_of_Brexit.pdf> (Retrieved 2016-09-13) and Capital Economics of Woodford Investment Management. *The Economic Impact of Brexit*. 2016 <<https://woodfordfunds.com/economic-impact-brexit-report/>> (Retrieved 2016-09-13) and Vivid Economics. *The Impact of Brexit on the UK Energy Sector: An Assessment of the Risks and Opportunities for Electricity and Gas in the UK*. 2016 <<http://www.vivideconomics.com/wp-content/uploads/2016/03/VE-note-on-impact-of-Brexit-on-the-UK-energy-system.pdf>> (Retrieved 2016-09-13).

¹² Lazowski, Adam. How to Withdraw from the European Union? Confronting hard reality. *European Law Review* (2013): p. 2.

¹³ Foster, Nigel. *EU Law*. 2 ed. New York: Oxford University Press, 2010. p. 33-36.

¹⁴ Barnard, Catherine. *The Substantive Law of the EU – The Four Freedoms*, 4 ed. Oxford University Press, 2013, p. 8-13.

¹⁵ Hartley, Trevor C. *European Union Law in a Global Context*. Cambridge: University Press. 2004. p. 9-11.

Since a stable and integrated market was formed, business companies could focus in specialised production, which prompted economical advantages. Arguably, this creates a competitive advantage not only for consumers and producers in the internal market, but for the EU as a whole. This resulted in competitive advantages towards strong countries like the US and the former Soviet Union.¹⁶

Not only has an internal market been created under Article 26 (2) of the TFEU for the free movement of goods, services, capital and persons, but also for the *energy sector*. Energy is one of the key questions in the EU's agenda, as the access to energy is absolutely critical for both a state's economical growth, as well as for the society to function in whole. As a result, the *Internal Energy Market (IEM)* was established to create an integrated and stable market of energy.¹⁷ The IEM's main objective is to enhance competition and exploit economies of scale by creating an *integrated regional market* linked to the EU, which transcends the EU's external border. Furthermore, it enhances the security of energy supply for its participating states, where the constant flow of the domestic demanded energy in the participating states is secured by the regional cooperation in the IEM.¹⁸

1.1.2. Exiting the Internal Energy Market

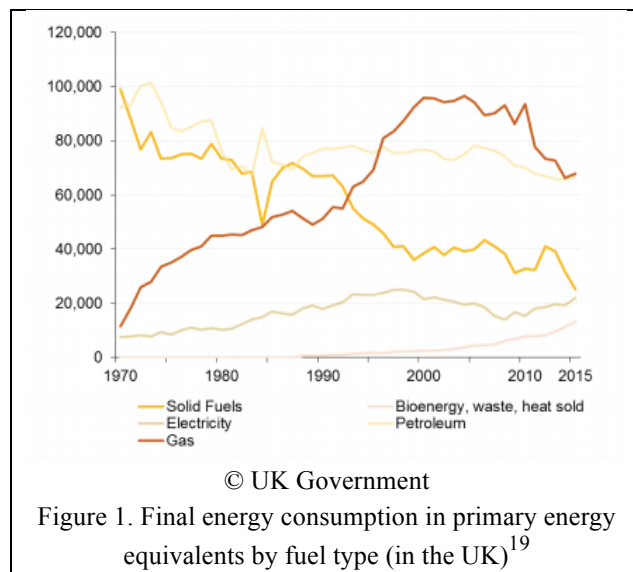
As a current Member State in the EU, the UK *participates in the IEM*. Applying the 'hard' or the 'soft' Brexit scenario to the UK's current participation in the IEM, gives a '*hard Brexit*' option where the UK has no preferential access to the IEM and the regulations thereto post-withdrawal, while the '*soft Brexit*' gives continued access to the IEM and the application of the regulations thereto post-withdrawal. Between these extremes, referred to as the '*grey Brexit*', there are a variety of different options allowing for a continued relation with the EU in various different areas currently governed by EU law. Although many different options are available there will be pressure on the UK Government to find optimal solutions that will fulfil the wishes of the people, whilst preserving business and economic integrity as far as possible for the secure supply of energy. For example, the opinion of the UK's residents, and the reason for them voting out of the EU, will be of great significance when the UK negotiates future economic terms and relationships with the EU. However, whether a 'hard', 'soft' or 'grey' Brexit is preferred post-withdrawal is not only dependent on the wishes of the pro-Brexit camp, but also on whether the UK is dependent on cooperation with the EU upon energy security.

¹⁶ Foster, Nigel. *EU Law*. 2 ed. New York: Oxford University Press, 2010. p. 246.

¹⁷ Communication from the Commission to the European Parliament and the Council the 28 of May 2014. European Energy Security Strategy, COM (2014) 330 Final.

¹⁸ Wilson, Alex. Energy Community – Prospects and Challenges. *European Parliamentary Research Service, The European Parliament* (2015): p. 2.

Currently the UK is *highly dependent on its participation in the IEM* for its supply of energy, and in particular the supply of gas,²⁰ as gas is the main energy source in the UK. The UK imports approximately 60% of its gas from continental Europe and Norway through pipelines, or from the Liquefied Natural Gas (LNG) market.²¹ This thesis therefore examines the *legal framework regarding the options post-Brexit in order to secure the supply of gas,*²² such that the UK can continue having gas as its prime energy source for electricity and heating.



1.1.3. Post-Withdrawal Options

Invoking Article 50 of the TEU allows for two different outcomes post-Brexit, namely: (i) the UK negotiates an agreement with the EU allowing for a continued cooperation upon the secure supply of gas ('soft' and 'grey' Brexit), or (ii) the UK does not negotiate such an agreement ('hard' Brexit). These two outcomes can be studied from different perspectives, such as policy security, economics or law, and this thesis will take the latter perspective. *Therefore, existing legal frameworks and constellations will be studied and the legal aspects of energy security will be compared.* As for *outcome (i)*, there is a range of existing state cooperation and international agreements which the UK could possibly follow, such as models adopted by the wider family of European countries with extensive cooperation with the EU (e.g. Norway, Switzerland and Albania) or looser agreements with the EU (e.g. Turkey and Canada). Different options are also available for *outcome (ii)*, as the UK could make bilateral agreements with other parties than the EU, apply to multilateral trade and energy frameworks, such as those provided by the World Trade Organisation (WTO), or to make no agreement at all in the case of being self-sufficient in its gas supply.

The nature of this topic leaves future events uncertain and it is important to note that due to the fast-changing and uncertain nature of this topic, this *study is current up to the 23rd of December 2016.* The impact of Brexit is difficult to predict and there is no precedent for such

¹⁹ UK Government, Department for Business, Energy & Industrial Strategy. *Energy Consumption in the UK*. 2016. Chart: 1.04 [online]

<https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/541163/ECUK_2016.pdf> (Retrieve 2016-11-29).

²⁰ Referred to as *gas, natural gas* or *liquefied natural gas (LNG)*.

²¹ UK Energy. *Gas Supplies*. 2015 <<http://www.energy-uk.org.uk/energy-industry/gas-generation/gas-supplies.html>> (Retrieved 2016-11-25).

²² Energy security regards the secure supply of energy sources defined in chapter two. The following terms focusing on gas are used interchangeably throughout the thesis: *safeguard the secure supply of gas, safeguard the supply of gas, secure the supply of gas, security of gas supply, gas supply security* and *gas security*.

withdrawal from the EU. Therefore, the consequences of the withdrawal cannot be presented, although presupposed outcomes can be examined and applied. It is therefore possible to examine existing international associations – options with or without a preferential EU relationship – that can be applied as potential relationships for the UK post-withdrawal. However, it must be stressed that energy security is one of several areas that a potential post-withdrawal arrangement encompasses, therefore negotiations within other areas, such as free trade and environment, will affect a future collaboration on energy security.

1.2. Research Question and Objectives

In the previous sections I have stressed the current importance of the IEM for the UK securing its supply of gas and explained how the Brexit may threaten this security. Post-Brexit there are different options available for the UK to secure its supply of gas, which have been presented in the introduction as the 'hard', the 'soft' and the 'grey' Brexit, and the aim of this research is therefore to *compare the legal aspects of the available options for the UK post-Brexit and evaluate to what extent these options meet the requirements of securing the supply of gas*. This aim leads to the following research question:

What options available to the UK post-Brexit provide for the need of a secure supply of gas?

To answer this research question this research has a second aim, which is *to study the legal aspects of the different options available to the UK post-Brexit to safeguard its supply of gas*.

This thesis will be written from a state perspective, and it is intended to be of guiding principle to inform the decision process of the UK. The analysis will seek to provide the UK Government with options to safeguard the supply of gas, through the access of affordable gas supplies for the end consumers. In order for the conclusion of this thesis to be of guidance, the possible options providing energy security need to be placed within the *political perspective* of the Brexit and be evaluated on whether they meet the requirements of the pro-Brexit camp.

1.3. Methodology

In order to *study the legal aspects of the different options available*, I will categorize the existing options available into two broad categories, as the nature of a withdrawal from the EU limits the number of different post-Brexit scenarios to these two: 1) the UK terminates the relationship with the EU governing energy security ('hard' Brexit), or 2) the UK continues having a preferential relationship with the EU governing energy security ('soft' and 'grey' Brexit).

I will study these categories by investigating the following *scenarios that are available within these categories*: 1a. The UK has relations with third-countries other than the Member States of the EU to secure its supply of gas, 1b. The UK covers the domestic need of gas with domestically produced gas (the UK becomes self-sufficient), 2a. The UK negotiates to retain preferential access to the IEM and adopts regulations thereto, and 2b. The UK negotiates other relations with the EU, excluding preferential access to the IEM and the adoption of the

regulations thereto.

These existing options will be evaluated by studying the legal aspects of potential bilateral- and multilateral agreements for the secure supply of gas for option 1a, and study the domestic production of gas in the UK for option 1b. As for options 2a and 2b, I will study a selection of existing relationships, which the EU has with third countries. For 2a I will study existing third-country relations with the EU where the country participates in the IEM and adopts regulations thereto, and for 2b I will study existing third-country relations with the EU where the country is not participating in the IEM, and therefore does not apply to the regulations thereto.

To be able to define whether these options can potentially secure the UK's supply of gas, I will first study the definition of *energy security*, by defining the term and identifying factors affecting the constant flow of gas to the UK. These factors will affect the option that the UK chooses post-Brexit, since it plays a vital role in the legislative framework and the policy making of the UK. One specific factor affecting the constant flow of gas to the UK is interrelated risks. Studying former gas crises that have occurred on the international stage, with a particular focus on the EU, I will identify these risks. To study these crises I will analyse legal academic texts addressing the security of gas supply and public sources such as governmental publications and newspapers. Also, I will examine *how the UK currently secures its supply of gas* through the IEM, as a continued membership of the UK in the IEM is one of the options available for the UK post-Brexit. To identify the current legal framework governing gas supply security in the UK, I will examine primary and secondary EU regulations, as the current energy legislation in the UK is based upon this. I will also examine associated sources to understand the function of the regulations and the directives governing the IEM (e.g. the European Energy Strategy and Communications from the European Commission).

1.3.1. Bilateral- and Multilateral Agreements (Non-EU relations)

The first discussed option post-Brexit to safeguard the UK's supply of gas is to terminate any preferential relations with the EU, and secure its supply of gas by having relations with other suppliers than the EU. In this section I will therefore study the legal aspects regarding gas security in *bilateral agreements* to evaluate whether bilateral agreements may achieve to secure the supply of gas. This evaluation will identify whether the legal aspects of the potential bilateral relations within gas trade fulfils the requirements of energy security.

This study allows me to determine what requirements a potential supplier needs to fulfil, and by studying the international trade in gas I will be able to identify potential partners for the UK to negotiate supply agreements with. To be able to identify such exporters of gas I will study communications from the European Commission addressing external gas suppliers, as well as international platforms providing an overview of the trade flow in gas.

Furthermore, the UK can also commit to *multilateral trade and energy agreements*, implying that the UK participates in multilateral frameworks. Multilateral agreements governing trade

in energy sources are often region dependent, for example the NAFTA (The North American Free Trade Agreement) and the APEC (Asia-Pacific Economic Cooperation) applied in North America and Asia respectively. As the UK is geographically located in Europe, these frameworks will not be accessible for the UK. The European counterpart of such frameworks is the Energy Charter Treaty (ECT)²³ and this framework will therefore be under review in this thesis. Although most trade agreements are regionally bound, the WTO provides its participating states with a global legislative framework: the General Assembly on Tariffs and Trade (GATT).²⁴ With the GATT being a multilateral framework, and accessible for the UK, this framework will also be a possibility to the UK and will therefore be evaluated in this thesis

To evaluate this option I will engage in an analysis of the international sources of law, focusing upon the legal aspects regarding energy security in the WTO, to assess what international and regional frameworks there are governing the international energy sector.

1.3.2. Self-sufficiency

The second option is for the UK to neither have relations with the EU nor relations with third-countries upon its security of gas supply, as this option implies that the UK needs to secure its supply of gas by domestic production. Using data derived from energy evaluations both from private (e.g. the BP energy outlook) as well as public sources (e.g. the UK Government and the International Energy Agency), I will study to what extent the UK is *self-sufficient* in its domestic gas supply, and whether these supplies can be considered to be secure or not.

1.3.3. EU Relations

To study the third and the fourth option, both referring to continued relations with the EU; I will study the legal aspects of *existing bilateral and multilateral aspects of the EU's external energy policy*. By identifying the already existing agreements between the EU and third countries, it can be determined to what extent the legal aspects of these models can secure the UK's supply of gas post-Brexit. The EU has different types of bilateral agreements with third countries, and countries will be selected to cover the variety of agreements using sources from the European Institutions (e.g. the European Commission and the European Parliament).

The legal aspects of the agreements between the EU and third countries governing energy security will be evaluated and the following countries will be reviewed: Norway, Switzerland, Turkey, Canada and Albania. Even though the EU has a wide variety of agreements, since these countries all have different agreements with the EU, ranging from full integration in the IEM ('soft'-Brexit), to no preferential integration in the IEM ('grey'-Brexit), this evaluation will provide a complete overview of potential relationships available for the UK to secure the supply of gas post-Brexit. Note that the UK could negotiate a *non-existing deal with the EU, however this is beyond the scope of this thesis*.

²³ General Agreement on Tariffs and Trade of 15 April 1994 (1947) LT/UR/A-1A/1/GATT/1.

²⁴ International Energy Charter Treaty of May 2015. The Hague, the Netherlands.

The country based models will be evaluated according to the following steps: First I will evaluate to what extent EU law is incorporated within the legal framework of the model being evaluated, and whether the model allows for access to the IEM (the ‘soft’ Brexit) or not (the ‘grey’ Brexit). Next, I will discuss how the question of energy security is addressed within the legal framework of these models. Thirdly, I will evaluate to what extent these countries are autonomous within the law making around energy security by studying how the countries are involved within the process of decision-making. Finally, I will discuss how the model would look like when the legal framework is applied to the UK, and discuss whether it could safeguard the UK’s supply of gas.

1.3.4. The Comparative Method

In order to answer the research question “*What options available to the UK post-Brexit provide for the need of a secure supply of gas?*” I will engage in a comparative analysis, which is a methodology where “*similar legal systems are compared and placed in correlation to each other*”,²⁵ therefore only ‘existing options providing a legal framework governing energy security can be compared.’²⁶ A well-established approach for the comparative analysis is the functional analysis, as “[...] *in law the only things that are comparable are those which fulfil the same function.*”²⁷ The available options post-Brexit will be compared upon their function to *secure the supply of gas for the UK post-Brexit*, and I will conclude whether these available options will, or will not, secure the UK’s gas supply post-Brexit. The comparative method is therefore considered to have an evaluative criterion, concluding that the better of several laws – law systems – is that which fulfils its function better than the others.²⁸

Although the use of a functional analysis is well established it is also subject to criticism. One of the main points of critique is, according to Ralf Michaels, that “[...] *there is not one (‘the’) functional method, but many.*”²⁹ However, since the Brexit referendum has only taken place in June 2016, there is little research on the subject. This research therefore requires a flexible approach, which turns this point of critique into one of its strengths.

1.3.5. Options Within the Political Landscape

Even though the legal aspects of the different options may, or may not, safeguard the UK’s supply of gas post-Brexit, whether such an option can be recommended for the UK is also dependent upon the political landscape. The pro-Brexit camp amongst the UK’s politicians has expressed several aims, which need to be taken into consideration when recommending

²⁵ Razak, Adilah Adb. Understanding Legal Research. *Integration & Dissemination*. Vol. 4 (2009): p. 19.

²⁶ To start with I want to make clear that I understand the complexity and limitation of using the term *legal systems*. In this thesis legal systems mean the collection of legislative framework, which results directly from the government or regional/international institutions.

²⁷ Zweigert, Konrad and Kotz, Hein. *An Introduction to Comparative Law*. Oxford: Clarendon Press. 1998. p. 34, in: Hunter, Tina. Comparative Law as an Instrument in Transnational Law: the example of Petroleum Regulation. *Bond Law Review*. Vol. 21 (2009): p. 46.

²⁸ Ralf, Michaels. The Functional Method of Comparative Law. In: *The Oxford Handbook of Comparative Law*. Reimann, Mathias and Zimmermann, Reinhard (ed.) p. 339-382. 2006. p. 340-342.

²⁹ *Ibid*, p. 342.

post-Brexit legislation. Although these aims are political, they can be expressed within law. I will therefore evaluate whether or not the legal aspects of the different options 1) ban the free movement of persons, and 2) allow the UK to act as a sovereign state. Furthermore, I will engage in a *second functional* comparison, to study to what extent the different options fulfil their function *to fulfil the wishes of the pro-Brexit camp*.

1.4. Thesis Structure

After this introduction, in *chapter two* I will study what energy security means and explain how energy can be secured with a focus upon how this can be done from a law perspective.

In the following chapter, *chapter three*, I will study the UK's current legislative framework, focusing upon the IEM, as the UK currently participates within that framework as an EU member and continued participation is one of the options post-Brexit.

Next, in *chapter four* the legal aspects of Article 50 TEU will be studied and the practical implications of these will be discussed. The discussion of the practical implications serves as an introduction to the next two chapters as the post-Brexit options can be divided within a unilateral withdrawal and a negotiated withdrawal, discussed in *chapter five* and *chapter six* respectively.

In *chapter seven* I will engage in a comparative analysis of the different options available post-Brexit based upon the *function of gas security*. Furthermore, in *chapter eight*, I will engage in a second comparative analysis in which the different options post-Brexit will be compared upon their *function of meeting the arguments of the pro-Brexit camp*.

Finally, in *chapter nine* I will first conclude my results based upon the ability of the different options to safeguard the UK's gas supply. Secondly, I will provide a recommendation both based upon the function of gas security as well as the function of meeting the arguments of the pro-Brexit camp.

2. Energy Security

2.1. Introduction

Energy law governs the management of energy sources, which have a fundamental value for the society to function as a whole. Because of intensified global consumption the production of energy is larger than ever before. The importance of a nation's future economic development raises the realisation of the fundamental role that the energy sector plays in the economy.³⁰ Energy industries are massive and require an immense amount of money, involving large finance packages stretching over many years. If the energy industry works smoothly it forms a large part of the political and economic landscape of a country. However, if supply problems occur the society realises its complete dependence on a regular supply of energy.³¹

Society today relies on vast amount of energy, where the end use of natural gas contributes to cooking at home, heating and cooling of homes and heating of water. Natural gas also generates electric power and is a vital feedstock in the manufacturing sector.³² The Court of Justice of the European Union stressed the importance of petroleum³³ in the *Campus Oil Case*:

*“Petroleum products, because of their exceptional importance as energy sources in the modern economy are of fundamental importance for a country's existence since not only its economy but above all its institutions, its essential public services and even the survival of its inhabitants depend upon them.”*³⁴

Fuelling both industries and private consumption the energy industry has become one of the most dominant industries of the twentieth century.³⁵ Natural gas projections demonstrate that the world's growing economies calls for continued exploration and distribution, which inquire reliability and affordability.³⁶

The use of conventional energy, fossil fuels,³⁷ expanded during the industrial revolution and has, ever since, increased exponential.³⁸ Global natural gas consumption grew by 1.7 per cent

³⁰ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 1.

³¹ *Ibid*, p. 2.

³² United Kingdom Onshore Oil and Gas. *Natural Gas Uses*. 2016 <<http://www.ukoog.org.uk/onshore-extraction/uses>> (Retrieved 2016-10-24).

³³ Petroleum is a complex mixture of hydrocarbons that occur in the Earth in liquid, gaseous, or solid form. The term is often restricted to the liquid form, but as a technical term it also includes natural gas. In: Atwater, Gordon and Riva, Joseph. Petroleum. *Encyclopædia Britannica* (2012).

³⁴ *Case 72/83 Campus Oil* [1984] ECR 2727, para. 7.

³⁵ Talus, Kim. Internationalization of Energy Law. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 3-17. Edward Elgar Publishing Limited, 2014. p. 3.

³⁶ Haghghi, Sanam Salem. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Oxford: Hart Publishing, 2007. p. 1-3.

³⁷ Oil, natural gas and coal are natural sources that count as fossil fuels.

³⁸ Dincer, Imbrahim. Renewable Energy and Sustainable Development: a crucial review. *Renewable and Sustainable Reviews*. Vol. 4, no. 2 (2002): p. 159.

in 2015 and global trade in natural gas increased by 3.3 per cent during the same year.³⁹ The modern industrial market demands a constant supply of energy and fossil fuels dominates the market providing the total world consumption with 80 per cent of the overall demanded energy.⁴⁰

2.2. The Definition of Energy Security

It is of importance for this thesis to provide the definition of 'energy security'. However, there are many definitions presented, although similar, they tend to be slightly different. This section aims to introduce the *foremost-accepted definitions*, with similar approaches, to give the reader an idea of what constitutes *energy security*.

Sandu-Daniel Kopp presents that Daniel Yergin provided an approach in 1988, which has been regarded as the traditional definition of energy security,⁴¹ stating that: "*The objective of energy security is to assure adequate, reliable supplies of energy at reasonable prices and in ways that do not jeopardize national values and objectives.*"⁴² However, according to Sanam Salem Haghighi, it is difficult to provide a definition of energy security that is accepted by all. Thus, he mentions, a commonly accepted practical definition as "*adequacy of energy supply at a reasonable price*".⁴³

Along the same line as Daniel Yergin comes the most commonly cited approach to energy security, according to Sandu-Daniel Kopp. The definition is known as the '*Four A's of Energy Security*' and introduced in '*A Quest for Energy Security in the 21st Century*' by the Asia Pacific Energy Research Centre (APERC).⁴⁴

*"This Study defines energy security as the ability of an economy to guarantee the availability of energy resources supply in a sustainable and timely manner with the energy price being at a level that still not adversely affect the economic performance of the economy."*⁴⁵

Key elements presented in the research done by the APERC for the secure supply of energy are the following: the *availability* of energy reserves (geopolitical factors), the *accessibility* to the necessary infrastructure and transportation needs (geopolitical factors), the *affordability* of

³⁹ BP Global. *Natural Gas – 2015 in review*, 2015 <<http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/natural-gas.html>> (Retrieved 2016-11-01).

⁴⁰ World Energy Council, *World Energy Resources – 2013 Survey*, London, 2013.

⁴¹ Kopp, Sandu-Daniel. *Politics, Markets and EU Gas Supply Security: Case Studies of the UK and Germany*. Wiesbaden: Springer, 2015, p. 47.

⁴² Yergin, Daniel. Energy Security in the 1990s. *Foreign Affairs*, Vol. 67, no. 1 (1998): p. 111.

⁴³ Haghighi, Sanam Salem. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Oxford: Hart Publishing, 2007, p. 14.

⁴⁴ Kopp, Sandu-Daniel. *Politics, Markets and EU Gas Supply Security: Case Studies of the UK and Germany*. Wiesbaden: Springer, 2015, p. 47-48.

⁴⁵ Asia Pacific Energy Research Centre. *A Quest for Energy Security in the 21st Century*. 2007, p. 6. Available at <http://aperc.ieej.or.jp/file/2010/9/26/APERC_2007_A_Quest_for_Energy_Security.pdf>

energy security (economic factors), the *acceptability* of the people (environment and social factors), and the ability to acquire supply to meet the demand.⁴⁶

Onward, this approach has been referred to by the International Energy Agency (IEA),⁴⁷ which states that recent literature also uses the ‘Four A’s of Energy Security’ in their attempts to define energy security.⁴⁸ The IEA divides energy security into a long- and short-term dimension, stating that the first mainly deals with the investment regime and economic developments, while the latter focuses on the ability of the energy system to react promptly to sudden unexpected events. It defines energy security as “*the uninterrupted availability of energy sources at an affordable price.*”⁴⁹

Furthermore, the European Commission has its own definition stated in its Green Paper published in 2000. It defines energy security in line with the above-presented definitions:

“ [...] *energy supply security must be geared to ensuring, for the well-being of citizens and the proper functioning of the economy, the uninterrupted physical availability of energy products on the market, at a price which is affordable for all consumers (private and industrial), while respecting environmental concerns and looking towards sustainable development, [...]*”⁵⁰

The result of this evaluation shows that all factors indicated – *availability, accessibility, affordability* and *acceptability* – needs to be assessed when a state drafts its policy framework to achieve energy security.

2.3. The Secure Supply of Natural Gas

Although natural gas has been seen as a secure energy source for many decades, some considerable changes have taken place, which challenge its secure status. These changes, according to the IEA, stress the *importance of the inclusion of natural gas in energy security policies*. For example, natural gas usage among Member States of the IEA has increased from

⁴⁶ Asia Pacific Energy Research Centre. *A Quest for Energy Security in the 21st Century*. 2007 in: Kopp, Sandu-Daniel. *Politics, Markets and EU Gas Supply Security: Case Studies of the UK and Germany*. Wiesbaden: Springer, 2015, p. 48.

⁴⁷ The UK is a member country in the International Energy Agency. Further information available at: International Energy Agency. *Member Countries*. 2016 <<http://www.iea.org/countries/membercountries/>> (Retrieved 2016-10-25).

⁴⁸ Jewell, Jessica. *The IEA Model of Short-term Energy Security (MOSES): Primary Energy Sources and Secondary Fuels*. International Energy Agency. 2011. Available at <https://www.iea.org/publications/freepublications/publication/moses_paper.pdf>

⁴⁹ International Energy Agency. *Energy Supply Security 2014*. 2014. p. 13 <http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_PART1.pdf> (Retrieved 2016-10-21)

⁵⁰ European Commission. Green Paper on the Security of Energy Supply of the 29 November 2000. Towards a European Strategy for the Security of Energy Supply. COM (2000) 769 Final.

19 per cent in 1973 to 26 per cent in 2012 in the total primary energy supply.⁵¹ This growth resulted in that gas became the main source of energy in 2000 for the production of heat in Europe, taking over solid fossil fuels. It is therefore important to secure gas reserves during the cold winter months in Northern-Europe.⁵²

2.3.1. Crises Highlighting the Importance of Energy Security

In the previous section it has been concluded that it *becomes more difficult to secure the supply of gas*. To increase energy security, resources (e.g. time, money) need to be invested. However, since these resources are limited the question arises to what extent energy needs to be secured. This has become particularly clear in times of crises, of which we have experienced several during the 21st century leading to major energy disruption. When shortage in energy supply occurs, especially in natural gas, we understand our over-reliance on a constant flow to cover our demand. Energy industries tend to work smoothly in market economies, however Kim Talus mentions the following regarding the importance of energy supply:

*“This changes dramatically if supply problems occur [...] In these situations, society realizes its complete dependence on a regular supply of energy, which is of more critical importance than, say, telecommunications and internet services.”*⁵³

Most of the disruptions in energy are caused by *weather-related catastrophes, accidents and contractual disputes*. For example, the Ukrainian crisis, the Arab revolution and the Syrian conflict show that *underlying political tensions* can unexpectedly and rapidly descend into chaos. The presented conflicts have different reasons for the unstable climate; however, they all resulted in outbreaks causing major energy disruptions. All countries involved are either large natural gas exporters or serve as a transit route for gas consuming countries.⁵⁴

Other recent significant gas crises occurred in the UK, Italy and Ukraine (2006) and Turkey, Greece and Australia (2008).⁵⁵ At the beginning of 2009 Europe suffered its worst gas supply disruption to date. The disruption was a result of contractual disputes between Russian company Gazprom and its Ukrainian trading partner, leading to a three week long supply

⁵¹ International Energy Agency. *Energy Supply Security 2014*. 2014, p. 46

<http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_PART1.pdf> (Retrieved 2016-10-21)

⁵² Eurostat. *Electricity and Heat Statistics*. 2016 <<http://ec.europa.eu/eurostat/statistics-explained/images/0/0a/Derived-heat-production-by-fuel-GWh-EU28-2014-TABLE.png>> Available at: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Electricity_and_heat_statistics> (Retrieved 2016-11-29).

⁵³ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 2.

⁵⁴ De Jong, Sijbren and Widdershoven, Cyril and Kertysova, Katarina and Miladinova, Vesela and Auping, Willem. Running out of Gas – Natural Gas Diversification Efforts in the EU Neighborhood. *OGEL*, Vol. 12, no. 6 (2015): p. 1-2.

⁵⁵ International Energy Agency. *Energy Supply Security 2014*. 2014, p. 54

<http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_PART1.pdf> (Retrieved 2016-10-21)

stop. This resulted in major difficulties due to gas shortages in especially Southern-Europe.⁵⁶ Following this disruption, the EU sought to establish common standards for the security of gas supply for the EU, and therefore adopted Regulation 994/2010 concerning Measures to Safeguard the Security of Gas Supply (the Security of Gas Supply Regulation), now about to be repealed by Regulation 0030/2016.⁵⁷

Crises, like the above mentioned, advocates the need for legislative framework to regulate potential threats to the secure supply of natural gas. To prevent a potential crisis or to solve an on-going crisis requires comprehensive measures. The regional cooperation in the EU is one example where energy security, nowadays, is highly regulated; other multilateral, regional and bilateral cooperation with an aim to safeguard the supply of gas will be presented in the upcoming chapters.

With former crises in mind we understand the *fundamental importance of energy in general, and gas in particular*, for our economy. A country's possibility to secure the supply of natural gas is dependent on many interrelated factors. Upcoming sections will therefore describe transportation methods, trans-boundary trade, long-term agreements in contrary to the spot market, and potential risk factors. These factors are of vital importance when assessing a *country's capability* to secure its supply of natural gas.

2.3.2. Transportation Methods and Infrastructure

The transportation of natural gas is an important factor when evaluating energy security, since a country *needs to possess adequate physical infrastructure* in order to transport gas over significant distances and store gas for peak demands.⁵⁸

The most common method of *transportation* of gas to the end consumer is the transmission of dry natural gas through pipelines. However, natural gas can also be transported in liquefied form (Liquefied Natural Gas) by cargoes such as ships and trucks.⁵⁹ Infrastructure such as pipelines, LNG terminals and transmission networks are therefore an integral part of the gas supply chain.⁶⁰

⁵⁶ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 2.

⁵⁷ Regulation, No 0030/2016 of 16 February 2016 of the European Parliament and of the Council concerning Measures to Safeguard the Security of Gas Supply and repealing Regulation (EU) No 994/2010. COM (2016) 52 Final.

⁵⁸ Natgas. *The Transportation of Natural Gas*. 2013. <<http://naturalgas.org/naturalgas/transport/>> (Retrieved 2016-11-01).

⁵⁹ Last mentioned method requires the natural gas to be cooled down to minus 162 degrees, which shrinks the volume of the gas 600 times, making it easier to store and transport. In: Shell Global, *Liquefied Natural Gas (LNG)* <<http://www.shell.com/energy-and-innovation/natural-gas/liquefied-natural-gas-lng.html>> (Retrieved 2016-11-01).

⁶⁰ Oyewunmi, Tade. Energy Security and Gas Supply Regulation in the European Union's Internal Market. *Eur. Networks L. & Reg. Q.* Vol. 3 (2015): p 195.

A country's physical stockpile of natural gas is not available to the market during normal conditions and is therefore used as an emergency ventilator.⁶¹ The available *storage capacity* needs to be sufficient, in case of high gas demands to protect consumers and avoid exposing them to high and volatile prices.⁶² Gas stocks are a central part of the gas industry's structure, responding to normal but often large, seasonal and even daily demand fluctuations.⁶³ Different options exist for the storage of gas, depending on factors such as geological structure, economy and commercial demands. Storage of gas either takes place *underground* (e.g. depleted natural gas or oil fields) or *aboveground* (e.g. LNG terminals) and capacity is dependent on what storage type is used.⁶⁴

2.3.3. Trans-boundary Trade

Since countries are often not self-sufficient in its gas security (e.g. the UK imports over 60 per cent of all its gas, see section 1.1.2), *trans-boundary trade is of importance* to secure the supply of gas. Although gas trade is rigid and mostly regional, due to the global trade in LNG the former pipeline-bound gas market has developed from a regional to a global market. Kim Talus argues that:

*“Because of its network-bound character and because of the costs related to pipeline construction, gas cannot easily be redirected to new locations in the short term. LNG has changed this to some extent. Much like oil, LNG tankers can easily be re-routed to where LNG is most valued and can be sold for the best price.”*⁶⁵

LNG represents a significant change in the market. The technique used for transportation increases the opportunity for other suppliers to enter the market, next to the already dominant players controlling the gas pipelines.⁶⁶ The origin of natural gas is therefore not anymore regionally bound, as it has become possible to import from producing countries all over the world.

2.3.4. Supply Agreements and the Spot Market

As mentioned previously, many countries are dependent on imports of natural gas. Many *countries dependent on gas imports therefore commit to supply agreements*, which lower the risk of a supply shortage. It is therefore important that the country of concern is able to secure the imports through economic agreements. Long-term agreements do not guarantee an uninterrupted flow of gas, but have traditionally been considered the foundation for a secure

⁶¹ International Energy Agency. *Energy Supply Security 2014*. 2014. p. 53-54
<http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_PART1.pdf> (Retrieved 2016-10-21)

⁶² Kopp, Sandu-Daniel. *Politics, Markets and EU Gas Supply Security: Case Studies of the UK and Germany*. Wiesbaden: Springer, 2015, p. 165.

⁶³ International Energy Agency. *Energy Supply Security 2014*. 2014. p. 54-55
<http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_PART1.pdf> (Retrieved 2016-10-21)

⁶⁴ *Ibid*, p. 55-56.

⁶⁵ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 101-102.

⁶⁶ *Ibid*, p. 67.

energy supply.⁶⁷ Long-term agreements drafted between buyers and distributors (usually different national energy monopolies) provide a medium to long-term security. For the buyer, on the one hand, these agreements can provide the basis of investment needed to provide the necessary means of infrastructure. For the distributor, on the other hand, these agreements secure solid revenue, which is needed for exploration, production and other infrastructural needs.⁶⁸ However, states importing gas do not have the knowledge to estimate the demand for natural gas (the demand over time can exceed or drop under the amount of needed gas) over time and states can therefore make use of the so called ‘spot market’ which is another commercial arrangement where natural gas is bought and sold for an immediate or a very near-term delivery.⁶⁹ It is usually located where numerous of pipelines interconnect, thus allowing for the operation of a large number of buyers and sellers.⁷⁰ Since purchases on the spot market do not require a continuous arrangement between the buyer and the seller, this immediate purchase can be of use when long-term agreements are not sufficient for a country’s gas demand.⁷¹

Whenever a state needs an increased supply of gas, the solution is bound by the possibilities within both the *contractual agreements* as well as *the available infrastructure*. For example, gas markets with access to spare import capacity, from either unused pipelines or unused LNG terminals, might be more capable to respond to a supply interruption. However, a response in the pipeline market is not just dependent on the unused pipeline capacity; it also requires that the pipeline is connected to a distributor of gas and whether the current contractual relationships allows for an increased purchase of gas. Furthermore, if spare capacity exists in the LNG terminals of a certain market, a supply response would be dependent on the ability to purchase gas from additional cargoes. LNG is either sold by contracts signed before the departure of the cargo or by near-term contracts on the spot market. The flexibility that the spot market creates is of importance as the LNG cargoes can be released from their current obligations under an agreement, and diverted to a new location where the demand is acute.⁷² In case of a gas supply shortage the spot market therefore imposes a substantial response for countries with spare capacity in their LNG terminals.

⁶⁷ Talus, Kim. One Cold Winter Day? EC Competition Law and Security of Supply. *OGEL*, Vol. 5, no. 4 (2007): p. 5.

⁶⁸ *Ibid*, p. 2.

⁶⁹ Levine, Steven, Carpenter, Paul and Thapa, Anul. Understanding Natural Gas Markets. *The Brattle Group Inc.* American Petroleum Institute (2014): p. 22.

Available at <<http://www.api.org/~media/files/oil-and-natural-gas/natural-gas-primer/understanding-natural-gas-markets-primer-high.pdf>>

⁷⁰ *Ibid*, p.16.

⁷¹ For further information see European Commission. Quarterly Report on European Gas Markets. *DG Energy*. Vol. 7, no. 3 (2014).

⁷² International Energy Agency. *Energy Supply Security 2014*. 2014, p. 64

<http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_PART1.pdf> (Retrieved 2016-10-21).

2.3.5. Interrelated Risks for the Secure Supply of Natural Gas

Jonathan Stern and Sanam Salem Haghighi have defined *interrelated risks such as reserve depletion, lack of investment in gas fields, insecurity of transit routes and insecurity in energy facilities*. Additionally, they highlighted the risk related to shortage in necessary infrastructure, which is mentioned in section 2.3.3. These risks need to be taken into consideration when designing a policy framework for the secure supply of natural gas.⁷³

As discussed in the previous sections, a country needs to maintain the *availability* and *accessibility* towards distributors of gas. As many new pipelines are built and new transportation techniques becomes more affordable (e.g. LNG), gas markets shift from being traditionally national and regionally bound, towards a global gas market, increasing the number of actors and therefore potential trade partners. This increased global interconnectedness of gas markets, in combination with a high global demand for gas, has lead to a highly competitive gas market. *Diversification of gas suppliers* is therefore an important part of avoiding domestic gas disruptions. Furthermore, *affordability* is a requirement, as volatile prices are a risk for market actors creating ambiguity. This has proved to be an issue over the past decade as energy prices for natural gas have fluctuated, resulting in economic uncertainty and mainly financial pressure.⁷⁴ Next to price fluctuations, other factors threaten the ability to safeguard the supply of gas such as the *ability to prevent gas disruptions and/or act if one occurs*. This ability relates to the capacity and function of a country's supply infrastructure, needed investments for the exploration and production of gas, contractual arrangements with reliable suppliers and the pricing and cost of the production and transportation.⁷⁵

Furthermore, the European Commission highlights that the vulnerability of a country's security of supply depends on aspects such as the *size of domestic production, existing suppliers and routes* and the *possibility to diversify energy sources*. For countries in Europe, integration into the European pipeline network is of significant importance.⁷⁶ The EU has also, through the Parliament and the Council, identified main areas of concern taking into account all relevant risks such as natural disaster, technological, commercial, financial, social, political and market-related risks.⁷⁷

2.4. Goals to Safeguard a Secure Supply of Gas

To conclude, this chapter has presented the importance of energy security and why this subject needs to be regulated. Security of energy supply regularly means security of energy

⁷³ Haghighi, Sanam Salem. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Oxford: Hart Publishing, 2007; Stern, Jonathan. *Security of European Natural Gas Supplies: The impact of Import Dependence and Liberalization*. London: RIIA, 2002, in: Talus, Kim. *EU energy law and policy: A Critical Account*. United Kingdom: Oxford University Press, 2013, p. 102.

⁷⁴ Heffron, Raphael J. *Energy Law: An Introduction*. Springer, 2014, p. 38.

⁷⁵ Oyewunmi, Tade. Energy Security and Gas Supply Regulation in the European Union's Internal Market. *Eur. Networks L. & Reg. Q.* Vol. 3 (2015): p 195.

⁷⁶ European Commission. *Security of Gas Supply Regulation*. 2016 <http://europa.eu/rapid/press-release_MEMO-16-308_sv.htm> (Retrieved 2016-11-03).

⁷⁷ Regulation concerning Measures to Safeguard the Security of Gas Supply COM (2016) 52 Final.

consumption, and the *goal for the UK is to adopt legislative measures safeguarding the supply of gas post-Brexit*. Next chapter therefore turns to analyse how the current legislative framework in the UK safeguards the supply of gas.

3. The UK's Current Legislative Framework Governing Gas Security

3.1. Introduction

In his chapter I will discuss the current legislative framework safeguarding the supply of gas in the UK. With the UK being a member of the EU (prior to the Brexit), the UK participates in the Energy Community and therefore implements provisions concerning the European energy market. The UK is, because of its participation in the IEM, a part of the broad structure of gas trade in Europe and under the obligation to adopt energy law deriving from the EU. Therefore, in this chapter the EU's legislative framework governing energy security will be examined.

3.2. The Common Market and the European Energy Market

3.2.1. Introduction

The aim of the upcoming section is to *examine the function of the internal market and the IEM*. These markets are *strongly related*, and a part of the economic benefits of the EU securing the free movement of goods, persons, services and capitals, whilst enhancing developments in the field of energy (e.g. technical, judicial and economical), as the IEM has increased European demand and supply of energy. To be able to answer the research question of this thesis, on what options there are within energy security for the UK post-Brexit, it is vital to explain the IEM. As one of the main goals in the IEM is energy security, expressed in Article 194(1) TFEU, this section will further evaluate the IEM in depth.

3.2.2. European Internal Market

The European Commission recognises that the Single Market, hereinafter referred to as the internal market, is one of the *major achievements* in the EU.⁷⁸ The establishment of an internal market had economic aims as it were to erase disparities among Member States and make them stronger competitors relative to actors on the global market. Not only does the internal market increase accessibility towards global resources, free trade also allows for specialisation leading to competitive advantage, maximising consumer welfare (see section 1.1.1).⁷⁹

The *aim for the internal market* set out in Article 3 of the TEU, read in conjunction with Article 26(2) of the TFEU, has a broad conception. Article 3(3) of the TEU states that the Union shall work for “*a highly competitive social market economy*” and the general provision in Article 26(2) of the TFEU defines the internal market as an area without internal borders in which the free movement of goods, persons, services and capitals is guaranteed making the internal market free from discrimination and restrictions that inhibit the free movement.

Regarding the external dimension, the EU has introduced a *customs union* in accordance with Article 28 of the TFEU. This article states that no customs are levied on goods travelling

⁷⁸ European Commission. *The Internal Market: A Deeper and Fairer Internal Market*.

<https://ec.europa.eu/priorities/internal-market_en> (Retrieved 2016-11-04).

⁷⁹ Barnard, Catherine. *The Substantive Law of the EU – The Four Freedoms*, fourth edition. Oxford University Press, 2013, p. 3-5.

within the customs union and that members of the customs union impose a common external tariff (CET) on all goods entering the area. Furthermore, this provision also confirms that the EU negotiates as a single entity in international trade deals.

The formation and development of the *customs union*, and thereto the *internal market*, has had a significant impact on the legislative framework governing the energy sector which will be discussed next.

3.2.3. European Internal Energy Market

After introducing the general Single Market Programme (i.e. the internal market) the European Commission moved towards the development of the IEM.⁸⁰ When the European Commission set to create the IEM, the first comprehensive discussion was introduced in the ‘Working Document on the Internal Energy Market’ in 1988.⁸¹ The goal was the realisation of a single energy market, enhancing the *removal of potential obstacles to achieve free energy flow* in Europe and endorse a competition-oriented approach, which would benefit the energy sector by improving security of supply and reduce costs.⁸² The link between the internal market and the IEM is most apparent in the usage of the internal market’s provisions as the legal basis for the broad legislative initiatives applied in the energy market.⁸³

A second aim of the IEM was to move from state owned or controlled monopolies, towards energy markets and contracts, *enhancing privatisation, liberalisation and competition*.⁸⁴ This was achieved as the IEM removed the limitations of national borders, which previously divided European energy markets.⁸⁵ The gas industry before the IEM was mainly domestic, with few if any transnational activities, and the secure supply was a matter for the government. However, the increased global trade led to a broader net of actors in the market,⁸⁶ and as a result Member States of the EU took part in a regional cooperation adopting a range of provisions governing energy related matters. The development in trans-boundary gas trade pressured countries to strike deals with exporting countries to secure the domestic demand in natural gas (see section 2.3.3); most European countries are importers, while the main exporters are located outside the European borders. The EU receives supplies

⁸⁰ Penttinen, Sirja-Leena. The Role of the Court of Justice of the European Union in the Energy Market Liberalization In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 241-271. Edward Elgar Publishing Limited, 2014. p. 242.

⁸¹ The Internal Energy Market. Commission Working Document of the 2 May 1988, COM (88) 238 Final.

⁸² Johnstone, Angus and Block, Guy. *EU Energy Law*. Oxford University Press, 2012. p. 13.

⁸³ Cross, Eugene and Delvaux, Bram and Hancher, Leigh and Slot, Piet Jan and Van Calster, Geert and Vandenberghe, Wim. EU Energy Law. In *Energy Law in Europe - National, EU, and International Regulation*, Roggenkamp, Martha and Redgwell, Catherine and Del Guayo, Inigo and Rønne, Anita (ed.), p. 225-382. 2 ed., Oxford University Press, 2008. p. 228.

⁸⁴ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 20.

⁸⁵ Penttinen, Sirja-Leena. The Role of the Court of Justice of the European Union in the Energy Market Liberalization In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 241-271. Edward Elgar Publishing Limited, 2014. p. 241 in: Talus, Kim and Hünt, Michaël. Ownership Unbundling: What End to the Saga? In *European Energy Law, Droit Européen de l'Énergie*. Buschle, Dirk, Hirsbrunner, Simon and Kaddous, Christine (ed.). Helbing Lichtenhahn, 2011.

⁸⁶ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 3.

of natural gas from a variety of countries around the world, and imports 66 per cent of its total gas demand. Largest exporter to the EU is Russia and second largest is Norway, who together supplies over 40 per cent of the total gas demand in the EU.⁸⁷

Further development of the energy market has been rapid and multiple provisions have been enacted to safeguard the realisation of the market.⁸⁸ The general energy provision adopted in Article 194 TFEU enforced the establishment and functioning of the internal market. In order to harmonise and liberalise the EU's IEM, three consecutive legislative packages of measures were adopted between 1996 and 2009. These packages address market access, transparency and regulation, supporting interconnection and, adequate levels of supply. Other policies related to the IEM, such as the secure supply of gas and the trans-European network for transporting gas,⁸⁹ will be examined closer when introducing provisions governing the internal gas market.

A remark for the IEM is the creation of the *Energy Community*, which is an international organisation containing the EU, represented by the European Commission, and the countries of Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Kosovo, Moldova, Montenegro, Serbia and Ukraine; these countries are known as the Contracting States (CS). The aim of the Energy Community is to extend the EU's IEM to South-eastern Europe and the Black Sea region.⁹⁰ The Energy Community Treaty⁹¹ signed in 2006 governs the collaboration and the Treaty recognises an *area without internal frontiers and expands the IEM to non-members of the EU*. The cooperation in the IEM therefore has a broader scope than the internal market.

3.2.4. The Internal Energy Market and Energy Security

Natural gas is recognised as an essential component in the EU's energy mix and calculates to constitute one quarter of the primary energy supply.⁹² To secure the supply of natural gas the EU has engaged in agreements with exporting countries and has decided to work continuously active to conclude the best deals possible.⁹³ Many countries in the EU import nearly all their supplies and some are also heavily reliant on one single source or single transport route for

⁸⁷ Energy Security Strategy COM (2014) 0330 Final.

⁸⁸ Penttinen, Sirja-Leena. The Role of the Court of Justice of the European Union in the Energy Market Liberalization In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 241-271. Edward Elgar Publishing Limited, 2014. p. 242.

⁸⁹ European Commission. *Internal Energy Market*. 2016 <http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_5.7.2.html> (Retrieved 2016-11-07).

⁹⁰ European Commission. *Energy Community*. 2016 <<https://ec.europa.eu/energy/en/topics/international-cooperation/energy-community>> (Retrieved 2016-11-07).

⁹¹ Energy Community Treaty of 29 May 2006, 2006/500 EC.

⁹² Regulation (EU) No 994/2010 of 20 October 2010 of the European Parliament and the Council concerning Measures to Safeguard Security of Gas Supply repealing Council Directive 2004/67/EC.

⁹³ European Commission. *Supplier Countries*. 2016 <<https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies/supplier-countries>> (Retrieved 2016-11-09).

the majority of its natural gas.⁹⁴ Natural gas is geologically complicated as it can only be extracted in areas suitable for reserves and development. Because of this, countries suitable for extraction are limited, which results in the EU being dependent on a very small number of suppliers.⁹⁵

One international agreement enhancing gas trade was concluded with the *Russian Federation*, on the one hand, and the EU and its Member States, on the other.⁹⁶ With Russia being the largest exporter of gas to the EU, supply commitments were included in the EU-Russia Energy Dialogue.⁹⁷ However, recent *geopolitical tensions* between the EU and Russia (e.g. the assumed involvement of Russia in the Ukrainian crisis on the one hand and the sanctions set by the EU as a response on the other hand) have led to a decreased interest of Russia in the European market. This, together with an increased gas demand from China, led Russia to engage in an energy supply deal with China in 2014 marking its geopolitical change to the east.⁹⁸ Furthermore, Russia's increased domestic demand of gas has contributed to weakened mutual dependence between the EU and Russia.⁹⁹ With a weakened relation with Russia and a declining production of gas in the North Sea, the EU has a compelling need to diversify energy routes (being less dependent on one single supplier of gas). Countries with gas wealth of interest for the external supplies are, *Algeria, Iran and the Caspian region* (Azerbaijan, Turkmenistan, Kazakhstan, and Uzbekistan) for dry gas, and *Nigeria, Angola and Qatar* for liquefied gas.¹⁰⁰ The EU now aims to build new transit routes such as the Southern Gas Corridor¹⁰¹ to diversify its gas supply by bringing gas in from the Caspian countries.¹⁰² Potential market entrants need to be able to access both transit and import infrastructure to bring gas from the delivery point to the consumption area.¹⁰³ This is one major consideration being addressed below.

⁹⁴ European Commission. *Secure Gas Supplies*, 2016 <<https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies/secure-gas-supplies>> (Retrieved 2016-11-09).

⁹⁵ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 66.

⁹⁶ Council and Commission Decision, 97/800/EC. ECSC, Euratom: 1997. O.J. (L327). p. 1.

⁹⁷ The EU-Russia Energy Dialogue provides the overall structure for energy cooperation for the EU and Russia going forward. However this deal was concluded for the first then years of 2000-2010. Available at: European Commission. *Russia*. 2016 <<https://ec.europa.eu/energy/en/topics/international-cooperation/russia>> (Retrieved 2016-11-10).

⁹⁸ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 214.

⁹⁹ Leal-Arcas, Rafael, Costantino Grasso, and Juan, Alemany Rios. Multilateral, Regional and Bilateral Energy Trade Governance. *Renewable Energy L. & Pol'y Rev.* (2015).

¹⁰⁰ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 214.

¹⁰¹ The Southern Gas Corridor is a term used to describe planned infrastructure projects aimed at improving the security and diversity of the EU's energy supply by bringing natural gas from the Caspian region to Europe. Available at: Trans Adriatic Pipeline. *Southern Gas Corridor*. 2016 <<https://www.tap-ag.com/the-pipeline/the-big-picture/southern-gas-corridor>> (Retrieved 2016-11-21).

¹⁰² European Commission. *Imports and Secure Supplies: Diverse, Affordable, and Reliable Energy from Abroad*. 2016 <<https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies>> (Retrieved 2016-11-09).

¹⁰³ De Hauteclocque, Adrien and Talus, Kim. Third Party Access: A Comparative Study on Access Regimes in EU Electricity Grids and Natural Gas Pipelines. *OGEL*, Vol. 9, no. 3 (2011): p. 17.

3.3. The Legislation of the European Energy Market

The principal of conferral means that the EU only has the competence conferred on it by the Treaties (TEU and TFEU). The EU may therefore only act when it is needed to attain objectives specifically regulated in the Treaties. As the division of competence differs, energy is specified as a *shared competence* in Article 4 of the TFEU, also specified under title XXI of the TFEU and Article 194 of the TFEU. In accordance with Article 2(2) of the TFEU shared competence means that the Union and its Member States may adopt legislation and legally binding acts in the area of concern. A Member State is however only allowed to exercise its competence to the extent that the Union has not exercised its competence in the same matter.

Article 194 TFEU addresses energy matters and was essential when the EU formalised and enabled the European energy regulations and policies. Article 194 (1)(a) of the TFEU provides that EU energy policy shall aim to ensure the functioning of the energy market. This provision also specifies the following objectives; (b) ensure security of energy supply in the Union; (c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and (d) promote the interconnection of energy networks. Furthermore, Article 194(2) of the TFEU provides that the European Parliament and the Council, after consulting with the Economic and Social Committee and the Committee of the Regions, shall adopt legislative measures – *secondary law* – to assure that the objectives in paragraph 1 of Article 194 TFEU are achieved; thus, the EU develops its own energy law and the energy policies applicable in its Member States. With this legislative power, the EU has become a major actor in the international energy market.¹⁰⁴

The objective of the European energy legislation is to *ensure fair market access and a high level of consumer protection*, but *also satisfactory interconnection*. To achieve these aims in the energy sector, trade barriers have been removed and tax and price policies are approximated. The essence of the market regulations was the introduction of the freedom of choice. This was encourage to allow Member States of the EU and CS of the Energy Community to engage in the business of and trade in energy, the development of the infrastructure, the choice to export and import, together with the choice to select suppliers to negotiate with. To introduce these freedoms, legal obstacles such as exclusive rights needed to be eliminated.¹⁰⁵ Provisions regarding the energy market have taken place in three different rounds, where a whole set of regulations has been presented in *energy packages*. The term, energy package, is not a legal term but was used to declare that each package consists of a variety of multiple regulations (regulations concerning electricity and natural gas).

3.3.1. History of the Energy Packages

The First Energy Package was introduced in 1998 for gas; the Second Energy Package in 2003 but implemented in 2004; and the Third Energy Package was adopted in 2009. These energy packages aims to increase resilience and reduce dependency. The first step taken towards a liberalised market was the limited third-party access regime to the transmission and

¹⁰⁴ Heffron, Raphael J. *Energy Law: An Introduction*. Springer, 2014, p.16.

¹⁰⁵ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 66.

distribution network, and the introduction of legal unbundling. These legislative tools, presented in the *First Energy Package*, were important in the opening up of national monopolies.¹⁰⁶

The *Second Energy Package*, also called the acceleration package, focused on competition by enhancing the third-party access regime and the legal unbundling. Recital two of the Gas Directive from 2003,¹⁰⁷ established in the second package, recognised the need to reduce market dominance and predatory behaviour by incumbents, while ensuring non-discriminatory transmission and distribution tariffs and the rights of vulnerable customers to be protected. It also recognised the importance of effective monitoring of supply and demand balance in Member States and CS, the construction and maintenance in infrastructure and interconnection capacities and compatibility of EU competition rules with long-term gas supply contracts.¹⁰⁸ The important liberalisation measure introduced, was the obligation in Member States to fully open up their gas markets by improving the existing third-party access regime. This eventually resulted in a regulated third-party access and rules laying down legal, operational and information related unbundling.¹⁰⁹

After the European Commission's Energy Sector Inquiry¹¹⁰ in 2007, it was confirmed that the Second Gas Directive failed to achieve a competitive and transparent internal market for gas. Because of natural gas production being restricted by geological factors – with most locations of production situated beyond EU borders – there was a need to increase the access to transit and to import capacity, to enhance energy security. Consequently the third energy package was adopted, which aimed at strengthening security of gas supply by ensuring a more effective ownership unbundling, efficient competition and third-party access to the market.¹¹¹

3.3.2. Third Energy Package

To date the *Third Energy Package* is in force in the EU and consists of the following directives and regulations: the Electricity Directive,¹¹² the Gas Directive,¹¹³ the Regulation on

¹⁰⁶ Penttinen, Sirja-Leena. The Role of the Court of Justice of the European Union in the Energy Market Liberalization In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 241-271. Edward Elgar Publishing Limited, 2014. p. 242.

¹⁰⁷ Directive 2003/55/EC of the European Parliament and the Council of 26 June 2003 concerning Common Rules for the Internal Market in Natural Gas and repealing 98/30/EC. COM (2014) 0330 Final

¹⁰⁸ Oyewunmi, Tade. Energy Security and Gas Supply Regulation in the European Union's Internal Market. *Eur. Networks L. & Reg. Q.* Vol. 3 (2015): p. 192.

¹⁰⁹ Penttinen, Sirja-Leena. The Role of the Court of Justice of the European Union in the Energy Market Liberalization In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 241-271. Edward Elgar Publishing Limited, 2014. p. 243.

¹¹⁰ Communication from the Commission the 10 of October 2007. European Gas and Electricity Sectors, COM (2006) 851 Final.

¹¹¹ Oyewunmi, Tade. Energy Security and Gas Supply Regulation in the European Union's Internal Market. *Eur. Networks L. & Reg. Q.* Vol. 3 (2015): p. 191-192.

¹¹² Directive 2009/72/EC of the European Parliament and the Council of 13 July 2009 concerning Common Rules for the Internal Market in Electricity and repealing Directive 2003/54/EC.

¹¹³ Directive 2009/73/EC of the European Parliament and the Council of 13 July 2009 concerning Common Rules for the Internal Market in Natural gas and repealing Directive 2003/55/EC.

the Agency for the Cooperation of Energy Regulators,¹¹⁴ the Regulation on Cross-Border Electricity,¹¹⁵ and the Regulation on Access to the Natural Gas Transmission Network.¹¹⁶ However, since natural gas is the focus in this thesis, only directives and regulations concerning the gas market will be of relevance for further examination.

To improve the functioning of the energy market and enhance the liberalisation, a Third Energy Package was introduced. The Third Energy Package is designed to protect and benefit customers. The internal market in natural gas aims to deliver real choice for all consumers of the EU, no matter whether the end consumers are private homes or business. This is of significant importance so as to achieve competitive prices and contribute to security of supply in accordance with the Regulation on Access to the Natural Gas Transmission Network. Third-party access is based on published tariffs, applied in a transparent and non-discriminatory way, which benefits consumers (Article 41 of the Gas Directive).

Aiming to secure the supply of natural gas and to improve the distribution of natural gas in a liberalised energy market enhancing competition and energy security, the Third Energy Package has *five main provisions*, which will be explained next.

3.3.2.1. Unbundling

Unbundling is the separation of energy supply and generation from the operation of transmission networks. Without effective separation of networks from activities of production and supply, there is a risk of discrimination (Article 6 of the Gas Directive). The owner of the pipeline infrastructure cannot deny other suppliers of natural gas to send gas through its networks; instead consumers can buy gas from other suppliers than the owner of the transportation network. Through the third-party access regime transport of energy is separated from production and sale, by allowing distributors of gas access to national networks, interconnections and transit pipelines.¹¹⁷ The purpose of this system is to make sure that the IEM does not suffer from vertical integration. Vertically integrated companies¹¹⁸, therefore have to run the transport of gas as a ‘separate business’. The European Commission stresses that:

“If a single company operates a transmission network and generates or sells energy at the same time, it may have an incentive to obstruct competitors’ access to

¹¹⁴ Regulation (EC) No 713/2009 of 13 July 2009 of the European Parliament and of the Council establishing an Agency for the Cooperation of Energy Regulators.

¹¹⁵ Regulation (EC) No 714/2009 of 12 July 2009 of the European Parliament and the Council on Conditions for Access to the Network for Cross-border Exchanges in Electricity and repealing Regulation (EC) No 1228/2003.

¹¹⁶ Regulation (EC) No 715/2009 of 13 July 2009 of the European Parliament and the Council on Conditions for Access to the Natural Gas Transmission Networks and repealing Regulation (EC) No 1775/2005.

¹¹⁷ De Hauteclocque, Adrien and Talus, Kim. Third Party Access: A Comparative Study on Access Regimes in EU Electricity Grids and Natural Gas Pipelines. *OGEL*, Vol. 9, no. 3 (2011): p. 2.

¹¹⁸ According to the Gas Directive, a group is vertically integrated if it performs at least one of the functions of transmission of gas, distribution of gas, operation of LNG facilities or gas storage, and at least one of the functions of production or supply of natural gas, and it is controlled by the same company.

infrastructure. This prevents fair competition in the market and can lead to higher prices for consumers.”¹¹⁹

3.3.2.2. Independent Regulators

In order to ensure the objective of a competitive market the EU enforced the provision requiring independent regulators for the application of the rules. To accomplish a highly competitive market national regulators need to be independent from both industry interests and governments in accordance with Article 30 of the Gas Directive.

“Energy regulators need to be able to take decisions in relation to all relevant regulatory issues if the internal market in natural gas is to function properly, and to be fully independent from any other public or private interests.”

3.3.2.3. Agency for the Cooperation of Energy Regulators

In order to help the different national regulators cooperate and ensure the smooth functioning of the IEM, the EU established the Agency for the Cooperation of Energy Regulators (ACER) regulated in Article 31 of the Gas Directive. Of importance is that the ACER is independent from the European Commission, national governments and energy companies.¹²⁰ By cooperating with national regulatory authorities and transmission system operators, it enhances a true competitive energy market in Europe (Article 7 of the Gas Directive).

3.3.2.4. Cross-border Cooperation

The development of a true internal market in natural gas requires regulatory control over cross-border interconnections in the regional market (Article 57 of the Gas Directive). National transmission systems are responsible for ensuring that natural gas is effectively transported through pipelines. The European energy market is dependent on cross-border trade, and to ensure the function of this network, the European Network for Transmission System Operators for Gas (ENTSOG) was established.¹²¹

3.3.2.5. Security of Gas Supply

The general Internal Gas Market Directive is linked to security issues as presented above. Security of gas supply has always been one of the prioritised objectives in the IEM, with most legislative instruments in the field of energy per se containing provisions regulating energy security matters.¹²² The key object for the market is to ensure access for every supplier and consumer, and to provide links between otherwise isolated areas; this includes the access to transport and import capacity. Unavailable cross-border capacity and discriminatory access

¹¹⁹ European Commission. *Market Legislation*. 2016 <<https://ec.europa.eu/energy/en/topics/markets-and-consumers/market-legislation>> (Retrieved 2016-11-10).

¹²⁰ Ibid.

¹²¹ European Commission. *Market Legislation*. 2016 <<https://ec.europa.eu/energy/en/topics/markets-and-consumers/market-legislation>> (Retrieved 2016-11-10) and European Network for Transmission System Operators for Gas. <<http://www.entsog.eu>> (Retrieved 2016-11-10).

¹²² Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 106.

procedures hamper the integration of the market.¹²³ Measures such as *unbundling, third-party access and efficient competition* reduce prices and contributes to the secure supply of natural gas.

3.3.3. Measures to Safeguard the Security of Gas Supply

The Regulation concerning Measures to Safeguard Security of Gas Supply (the Security of Gas Supply Regulation)¹²⁴ entered into force in 2010 and repealed the former Gas Supply Directive from 2004. The importance of energy security was marked by the shift from a directive to a regulation, shifting more responsibility and power to EU level. The adoption of the Security of Gas Supply Regulation was a reaction of the Russia-Ukraine crisis in 2009 resulting in gas supplies being cut in the cold months of the winter creating severe difficulties in Europe (see section 2.3.1).¹²⁵

The Security of Gas Supply Regulation requires the Member States of the EU and the CS of the Energy Community, to engage in a *regional cooperation* increasing interconnection. This will, according to the EU, result in an interdependent market, enhancing regional cooperation. The Security of Gas Supply Regulation spells out that:

*"The regional cooperation under this Regulation builds on existing regional cooperation involving natural gas undertakings, Member States and national regulatory authorities to enhance, among other objectives, the security of supply and the integration of the internal energy market [...]"*¹²⁶

3.3.3.1. National Measures

3.3.3.1.1. The Preventive- and Emergency Action Plan

The Security of Gas Supply Regulation obliges Member States and CS to perform a *risk assessment* in accordance with Article 9. The risk assessment requires Member States and CS to evaluate interrelated risks, such as the risks mentioned in section 2.3.5, in order to draft a *Preventive Action Plan* and an *Emergency Action Plan* (Articles 4, 5 and 10 of the Security of Gas Supply Regulation). Whereas the Preventive Action Plan is aimed at taking preventive measures, the Emergency Plan deals with situations where the Preventive Action Plan fell short and a crisis has occurred. It includes specific procedures that could come into effect during a disruption and how these actions will be coordinated with other national authorities. The Preventive Action Plan and the Emergency Plan create a system involving different *security of supply responses*, with different players, depending on the impact of the disruption. Measures to prevent or act in case of an emergency could either be directed to industry, Member State, regional or EU level.¹²⁷

¹²³ De Hauteclocque, Adrien and Talus, Kim. Third Party Access: A Comparative Study on Access Regimes in EU Electricity Grids and Natural Gas Pipelines. *OGEL*, Vol. 9, no. 3 (2011): p. 1.

¹²⁴ Regulation (EU) No 994/2010 of 20 October 2010 concerning Measures to Safeguard Security of Gas Supply repealing Council Directive 2004/67/EC.

¹²⁵ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 102-103.

¹²⁶ Annex IV of the Gas Supply Regulation (EU) No 994/2010.

¹²⁷ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 102-103.

3.3.3.1.2. *The N-1 Supply Standard*

The Security of Gas Supply Regulation also defines a certain *supply standard*. Member States and CS must be prepared to meet this standard even in case of a disruption. The standard is called the ‘N-1’ and the formula describes the ability, or the technical capacity, of the gas infrastructure during a day of exceptional high demand occurring with a statistical probability of once in 20 years.¹²⁸ This standard requires that countries *must be able to supply at least 30 days’ worth of gas* to private households, but also vulnerable consumers like hospitals.¹²⁹

3.3.3.2. *Market-Based Measures*

The EU’s energy policy constitutes a broad scope of provisions enhancing energy security. The Security of Gas Supply Regulation lists *market-based measures* in Annex II covering areas identified to secure the supply of natural gas. All Member States and CS shall take into account the indicative and exhaustive list of measures such as increased production and import flexibility, commercial gas storage, diversification of gas supplies and gas routes, use of long-term and short-term contracts, investment in infrastructure, contractual arrangements to ensure security of gas supplies etc. The current European energy legislation therefore, through the Security of Gas Supply Regulation, covers all the *interrelated risks* regarding the secure supply of natural gas as described in chapter two, with a special focus in section 2.3.5.

3.3.3.3. *EU Coordinated Measures*

In 2016, the Commission proposed an update to its Security of Gas Supply Regulation.¹³⁰ The purpose of the draft was to ensure that all Member States and CS engage in appropriate actions to prepare for and manage the effect of a gas shortage or a major gas disruption. To meet this objective the drafted regulation proposes a stronger regional coordination. Under Article 194 of the TFEU a certain level of coordination, transparency and cooperation is necessary to adapt measures taken by the Member States and the CS, which is of importance to make sure that the energy market functions properly. With increased interconnection and the obligation of the corridor approach,¹³¹ the EU calls for an increased coordination among Member States and CS. It was stated that *national security of supply measures is likely to adversely affect* other Member States and CS, or the security of supply at EU level. Because of the interconnected gas market coordinated action can avoid major gas supply disruptions. Namely, a measure taken in one country can cause a shortage of gas in neighbouring countries. Situations like the cold spell in 2012 and the stress test committed in 2014¹³² demonstrate the vital importance of such a coordination and solidarity in the gas market.¹³³

¹²⁸ Annex IV of the Gas Supply Regulation (EU) No 994/2010.

¹²⁹ European Commission. *Secure Gas Supplies*. 2016. <<https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies/secure-gas-supplies>> (Retrieved 2016-11-11).

¹³⁰ Regulation No 0030/2016, on Measures to Safeguard the Security of Gas Supply, COM (2016) 52 Final.

¹³¹ The corridor approach means that all Member States along a gas transmission pipeline should assess all the potential benefits beyond their borders for permanent gas reverse flow on a pipeline.

¹³² The ‘*stress test*’ is explained in section 3.3.3.3.1.

¹³³ Regulation No 0030/2016, on Measures to Safeguard the Security of Gas Supply, COM (2016) 52 Final.

3.3.3.3.1. *Energy Security Strategy*

In response to concerns surrounding the delivery of Russian gas via Ukraine, the EU introduced the *EU Energy Security Strategy in 2014*.¹³⁴ As a part of this Strategy, the EU conducted the so-called stress test during the winter of 2014/2015. The Strategy presents measures needed to increase energy production, as well as completing insufficient infrastructure. These measures were addressed to increase the possibility to redirect natural gas to where it is needed during a potential crisis. The stress test performed in the European energy market (2014), performed under supervision of the European Commission, analysed the impact of potential gas disruptions in various European countries. The test was carried out in 38 European countries, including CS in the Energy Community, and showed that a prolonged supply disruption would have substantial impact in the EU. However, if all *countries cooperate* with each other, protected consumers would remain supplied even in the event of a six-month gas disruption.¹³⁵

The Strategy identifies areas where concrete actions implemented in shorter-, medium- and longer-term needs to be taken to be able to respond quickly to energy security concerns. It is based on eight key pillars that together promote closer cooperation beneficial for all Member States and CS while respecting national energy choices,¹³⁶ covering the important aspects of energy security mentioned in chapter two.

3.3.3.4. *The Importance of the European Energy Market*

The need for EU action is clear, given the evidence that national approaches both result in sub-optimal measures and aggravate the impact of a crisis. A measure taken in one country can cause a shortage of gas in neighbouring countries.¹³⁷ The stress test performed strengthens *the theory that the EU safeguards the supply of natural gas better as a unit*.

Third party access, unbundling and transparency are central elements in the legal energy regime and were introduced to break natural monopolies by the establishment of a highly competitive energy market. This in turn, together with measures adopted in the Security of Gas Supply Regulation, contributes to the secure supply of natural gas for the Member States of the EU and the CS of the Energy Community.

The study of the EU's energy legislation indicates that the framework presented in this chapter performs perfect safety measures, without any flaws. There are however very few, if any, legislative frameworks that works fully according to the objectives provided; the EU's energy legislation is no exception. Even though current energy market provisions provide measures safeguarding energy security, former crises prove the inability to prevent shortages

¹³⁴ Energy Security Strategy COM (2014) 330 Final.

¹³⁵ Energy Community. *Stress tests*. 2016 <https://www.energy-community.org/portal/page/portal/ENC_HOME/AREAS_OF_WORK/Instruments/Security_of_Supply/Stress_tests> (Retrieved 2016-11-11).

¹³⁶ Energy Security Strategy COM (2014) 330 Final.

¹³⁷ Regulation No 0030/2016, on Measures to Safeguard the Security of Gas Supply, COM (2016) 52 Final.

and disruptions in the EU's gas supply. The constant need for assessments, developments and improvements, prove that the current legal framework does not provide fully sufficient tools to secure the supply of natural gas. It is however a developed framework with the *objective to provide a constant flow of gas*.

4. The Brexit

4.1. Introduction

Chapter three presented that the UK currently participates in the EU's energy security regime to safeguard its supply of gas. However, with the upcoming Brexit scenario the UK might break with the legal framework providing for energy security. This chapter will address possible ways for the UK to withdraw from the EU, as these political considerations might limit the UK's options post-withdrawal. The lack of publicised strategy for the UK leaves us with the question on how the Government *intend to proceed in the negotiation process* with the EU. In order to discuss possible legal outcomes within the energy sector it is vital to attempt to discover current events.

4.2. Current Events

The UK has throughout decades, dating back to its decision to join the EU in 1973, been agitated for EU withdrawal. Former Prime Minister of the UK, David Cameron, rejected calls for a referendum on the UK's membership in the EU 2012 but announced that his Conservative Government would hold a referendum on this matter if he were to be re-elected. Soon after he was voted in for a second term, 'The European Union Act 2015' was introduced in the UK Parliament to start the process of a referendum.¹³⁸

Up to date, reporting and commentary on the impact of Brexit, have provided little of use for policy-makers and business. However, Theresa May stated that the UK will strike a deal as an '*independent, sovereign state*' and told delegates that "*We are going to be a fully independent, sovereign country – a country that is no longer part of a political union with supranational institutions that can override national parliaments and courts.*"¹³⁹ Despite what Theresa May said during her public appearance in October, no clear answer is possible to present on what aims the UK has for its future relations with the EU. The climate in Europe is tense after the referendum in June, and neither the UK nor the EU shows any interest in sharing its ambition for future relations before the start of the negotiation period. However, in September 2016 EU heads of state and government met in Bratislava, where they concluded that it is a *critical time for the European project*. It was the first time they met as 27 Member States, where the UK was excluded. *The Bratislava Summit of 27 Member States* was devoted to diagnose the present state of the EU and to discuss the common future.¹⁴⁰ They all agreed upon the following general principles:

“Although a country has decided to leave, the EU remains indispensable for the rest of us. In the aftermath of the wars and deep divisions on our continent, the EU secured peace, democracy and enabled our countries to prosper. Many countries and regions

¹³⁸ Lyengar, Rishi. *These 3 facts explain why the UK held the Brexit Referendum*. Time. 2016-06-24 <<http://time.com/4381184/uk-brexiteuropeanunionreferendumcameron/>> (Retrieved 2016-10-06)

¹³⁹ *Brexit: Theresa May to trigger Article 50 by end of March*. BBC News. 2016-10-02 <<http://www.bbc.com/news/uk-politics-37532364>> (Retrieved 2016-10-16).

¹⁴⁰ The Bratislava Declaration and Roadmap of 16 September 2016 [The Bratislava Declaration].

*outside still only strive for such achievements. We are determined to make a success of the EU with 27 Member States, building on this joint history”.*¹⁴¹

At the end of the meeting European Council President, Donald Tusk, stressed that the EU will “*protect the interests of the 27, not the leaving country*”.¹⁴² Furthermore, the head of the executive European Commission, Jean-Claude Juncker, stated, “*We want to have a very good, very close relation with the UK. At the same time, it is not possible for these negotiations to damage our interests*”.¹⁴³

The declaration concluded in Bratislava implies that the main goal for the EU is to seek favourable terms for the remaining Member States. Political statements, e.g. statements from Donald Tusk and Jean-Claude Juncker, shows that the UK will struggle to negotiate preferable terms for itself since the EU clearly has decided to preserve its own common interests. This means that there is a *high probability that the UK will only be able to strike preferable deals for itself within matters that will benefit the EU jointly.*

4.3. Possible Ways to Withdraw from the EU

Brexit invites for different ways to withdraw from the EU, one of them being a unilateral withdrawal, referred to as *the ‘hard’ Brexit* and one of them being a negotiate withdrawal, referred to as *the ‘soft’ and the ‘grey’ Brexit.*

4.3.1. Unilateral Withdrawal

The UK could, by repealing the 1972 European Communities Act,¹⁴⁴ unilaterally withdraw its membership in the EU by relying on the Vienna Convention on the Law of Treaties (VCLT).¹⁴⁵ The 1972 European Communities Act was the piece of legislation that brought the UK into the EU. It gives EU law supremacy over the UK’s national law. A large amount of EU law effective in the UK currently relies on this Act and this *legislation will remain until terminated.* Article 56 of the VCLT provides that where a treaty contains no provision regarding its termination, there is a rebuttable presumption that it cannot be unilaterally denounced unless it can be shown that the parties intended to admit the possibility, or a right of withdrawal can be inferred from the terms of the treaty.

The right for a Member State to withdraw its membership in the EU is acknowledge under Article 50 of the TEU, which constitutes procedural actions rather than substantive conditions. Article 50 of the TEU admits the right of a Member State to withdraw from the Union in accordance with its own constitutional requirements. Accordingly, the TEU consists

¹⁴¹ Ibid.

¹⁴² Foster, Peter and Rothwell, James. *Bratislava Summit: Europe’s ‘United front’ proves a fragile façade as leaders refuse to share a stage.* The Telegraph. 2016-09-16 <<http://www.telegraph.co.uk/news/2016/09/16/eu-bratislava-summit-donald-tusk-calls-for-sober-and-brutally-ho1/>> (Retrieved 2016-10-21).

¹⁴³ Ibid.

¹⁴⁴ European Communities Act 1972 (c. 68), an act to make provision in connection with the enlargement of the European Communities to include the United Kingdom, together with (for certain purposes) the Channel Islands, the Isle of Man and Gibraltar, enacted the 17th of October 1972.

¹⁴⁵ Vienna Convention on the Law of Treaties of 23 May 1969. 1155 UNTS 331 [Vienna Convention].

a provision concerning a Member State's right to withdraw. Therefore, there is a possibility for the UK to withdraw its membership in the EU unilaterally under Article 56 of the VCLT. A unilateral withdrawal would give the same result as if the UK and the EU initiated their negotiations but were to be unsuccessful in concluding a withdrawal agreement within the period of two years set out in Article 50(3) of the TEU.¹⁴⁶

If the UK would proceed with a unilateral withdrawal or if no withdrawal agreement were successfully concluded between the UK and the EU within the timeframe of two years, the UK would be independent relative to the EU's Member States. The unilateral withdrawal will be addressed as *the 'go-it-alone' model*, and this post-withdrawal option will *be examined further in chapter five following the theory of energy security*.

4.3.2. Negotiated Withdrawal

In contrast to a unilateral withdrawal, the UK could according to Article 50(2) of the TEU negotiate and conclude a withdrawal agreement with the EU, settling the arrangements for itself when withdrawing and taking account for the framework of its future relationship with the Union.¹⁴⁷ Article 50(3) TEU consist the following provision concerning the withdrawal agreement:

“The Treaties shall cease to apply to the State in question from the date of entry into force of the withdrawal agreement or, failing that, two years after the notification referred to in paragraph 2, unless the European Council, in agreement with the Member State concerned, unanimously decides to extend this period.”

Accordingly, Article 50 of the TEU is enforced to protect the foundation of earlier cooperation between the state of concern and the EU, by guaranteeing a smooth transition for everyone involved. A negotiated withdrawal therefore implies that the UK and the EU would engage in a continued preferential relationship. This post-withdrawal option will *be examined further in chapter six following the theory of energy security*.

¹⁴⁶ Given that the EU's Member States decide to not prolong the negotiation period.

¹⁴⁷ The withdrawal agreement shall be negotiated in accordance with Article 218(3) of the TFEU.

5. Unilateral Withdrawal

5.1. Introduction

As a result of the 40 yearlong relationship between the UK and the EU, the UK participates in many agreements through its EU membership. Notable, is that the EU up to date has over 50 agreements with third-countries, which the UK would be excluded from upon withdrawal. To regain the benefits these agreements provide the UK with, it would either have to renegotiate all of the agreements or become a signatory party in its own right.¹⁴⁸ In this chapter I will discuss the latter option where the UK would act internationally on the basis of its own statutory provisions, not bound by regulations adopted by the EU, also referred to as *the 'hard' Brexit*. The UK would therefore be referred to as an independent and sovereign state and I refer to this as the 'go-it-alone' model (see section 4.3.1). Accordingly this model represents the greatest degree of independence from the EU and this future option would result in drastic changes for the UK given the current deep-rooted cooperation with the EU.

Some might consider the 'go-it-alone' model as the least attractive option, while others are thrilled about the many possibilities it provides. The withdrawal from the EU introduces the possibility to negotiate bilateral agreements with third countries – non-EU Member States – in its own power, and the possibility to commit to multilateral agreements as an independent signatory. However, next to committing to these agreements, breaking with the EU also give the UK the possibility to not negotiate or commit to any relations and become self-sufficient in its energy demands.

The first section of this chapter is therefore devoted to examine the opportunities within *bilateral and multilateral agreements* in the light of gas security, whilst the second section will evaluate the possibility of *self-sufficiency*.

5.2. International Trade and Energy Agreements and Energy Security

5.2.1. Bilateral Agreements

The legal definition of a bilateral agreement is an agreement formed by and exchange of a promise in which the promise of one party is consideration supporting the promise of the other party. Meaning that the bilateral agreement is committed between two parties, each promising to do something. These parties can be individuals, groups, businesses or governments engaging in mutually binding obligations.¹⁴⁹

A bilateral agreement is usually considered more flexible than its regional and multilateral counterpart, due to fewer parties participating. The reasons to engage in bilateral agreements are many: enhanced trade, commercial policy, political stability, economical advancements and a range of other reasons, which contributes to a deeper integration between the parties

¹⁴⁸ European Commission. *Trade Agreements*. 2016 <http://ec.europa.eu/trade/policy/countries-and-regions/agreements/index_en.htm> (Retrieved 2016-10-16).

¹⁴⁹ The Law Dictionary. *What Are Bilateral Agreements?* <<http://thelawdictionary.org/article/what-are-bilateral-agreements/>> (Retrieved 2016-11-22).

concerned.¹⁵⁰ Today, *non-tariff barriers* play a more important role in bilateral agreements, since it removes obstacles to trade. However, due to the fact that bilateral agreements increase integration between the parties of concern, adoption of new laws and the creation of administrative bodies have become more usual.¹⁵¹

Energy security is one of the reasons to engage in bilateral agreements, such as Japan seeking security of supply commitments with Indonesia.¹⁵² Bilateral trade agreements enable countries to regulate its energy security standards in-between, and provide a good option for tailored agreements between gas importing countries and gas exporting countries. To date the UK imports a large share of gas, and this demanded amount could potentially be safeguarded through *bilateral dialogues with reliable exporters*. The bilateral approach therefore becomes an important consideration under the ‘go-it-alone’ model. The UK could, as Japan, engage in gas trade agreements with supplier countries of natural gas.

However, the UK’s participation in the deregulation of natural monopolies in the IEM resulted in privatised trade and the freedom of choice regarding energy sources. Being a market economy leaves economic decisions and the price setting solely guided by interactions of the UK’s individual citizens and business, resulting in only little intervention by the UK Government. Societal and economic decisions regarding investment, production and distribution are based on the interplay of supply and demand. Following this line bilateral gas supply agreements in the UK would have to be committed between companies. Of interest is either the *liquefied gas market* or the *dry gas market*.

5.2.1.1. Liquefied Natural Gas Market

The UK is not yet importing a large share of gas from the LNG market, only 17 per cent,¹⁵³ but might consider evolving this option due to the EU withdrawal. The UK has three LNG import facilities and together these are capable of meeting nearly 50 per cent of UK’s annual demand.¹⁵⁴ However the UK needs to secure that gas is available for trade, by concluding supply agreements with exporters of LNG. Accordingly, distribution companies of gas in the UK can purchase gas from LNG exporting countries, engaging in bilateral supply agreements with companies of interest. LNG exporting countries, as potential gas trading partners, was mention in section 3.2.4. The current majority of LNG delivered to the UK is from *Qatar*, under long-standing agreements, rather than traded on a spot basis (see section 2.3.4 for supply agreements and the spot market).¹⁵⁵

¹⁵⁰ Cattaneo, Olivier. The Political Economy of PTAs. In *Bilateral and Regional Trade Agreements*. Lester, Simon and Mercurio, Bryan (ed.), p. 28-51. Cambridge University Press, 2009. p. 42.

¹⁵¹ Ibid, p. 51-52.

¹⁵² Agreement between Japan and the Republic of Indonesia for an Economic Partnership of August 2017 (JIEPA).

¹⁵³ British Gas. *Where Does UK Gas Come From?* 2015 <<https://www.britishgas.co.uk/the-source/our-world-of-energy/energys-grand-journey/where-does-uk-gas-come-from>> (Retrieved 2016-12-01).

¹⁵⁴ UK Energy. *Liquefied Natural Gas*. 2015 <<http://www.energy-uk.org.uk/energy-industry/gas-generation/gas-supplies.html>> (Retrieved 2016-11-25).

¹⁵⁵ LNG Industry. *Britain Position for Additional LNG as Reloads Begin* <<https://www.lngindustry.com/special-reports/23072015/britain-positions-for-additional-lng-as-reloads-begin/>> (Retrieved 2016-11-25).

5.2.1.2. Pipeline Gas Market

This section is devoted to study countries of interest for the UK to make bilateral supply agreements with in the pipeline market and only countries connected by pipelines to the UK are of interest. Accordingly, because of UK's pipeline connection to continental Europe, the UK could make supply agreements with all countries directly connected to the EU. The EU would then transit the gas through the continent to the UK (transit is explained in section 5.1.2).

The largest exporter of gas to the EU is *Russia* and the UK could therefore trade gas with Russia. However, due to weakened relations between the EU and Russia, presented in section 3.2.4, this option seems rather unattractive.

Another gas producing country of interest is *Norway*. Norway is currently the second largest supplier of natural gas in the EU and according to the Norwegian Petroleum Directorate hydrocarbon production on the Norwegian shelf is expected to remain relatively stable for at least the upcoming ten years. However, a report published by Wood Mackenzie,¹⁵⁶ Norway expects a decline in oil and gas investment by over \$50 billion between 2016 and 2020. In the long-term, new discoveries will be crucial to the sustained production of Norwegian gas.

The operator of natural gas transportation in Norway, Gassco AS, completed three pipelines last year from Norway to the UK, where the first pipelines completed in Norway in five years, all were destined to the UK; making the UK one of Norway's largest purchaser of gas. The falling production of gas in the UK has necessitated the UK to continue a steady import of natural gas. Yet, the falling investments in Norwegian exploration of gas impose a risk of less gas being exported from Norway to the UK.¹⁵⁷

Notable, is that the Norwegian resource base has not yet been explored because of the huge maritime territory involved: the Barents Sea, the Norwegian Sea and the North Sea.¹⁵⁸ Although Norway has been a reliable supplier for many years, it now requires incentives to continue its exploration and extraction. Together with decreasing prices in natural gas, Norway finds itself in a position where it needs to consider whether further exploration will be profitable. Another considerable factor in this matter is the increased participation among countries worldwide to decrease the use of energy resources contributing to carbon dioxide emissions. In the 'World Energy Resources Survey', it was presented that coal, oil, gas and nuclear will provide for less than 15 per cent of the total energy consumption in the world by

¹⁵⁶ Energy Information Administration (EIA). *Norway's Oil Production Increases, but new Investment is declining* <<https://www.eia.gov/todayinenergy/detail.php?id=23372>> (Retrieved 2016-11-11).

¹⁵⁷ Slowikowski, Matt. *Can Norway Supply Europe with Gas Long-Term?* 2016-09-02 <<http://oilprice.com/Energy/Natural-Gas/Can-Norway-Supply-Europe-With-Gas-Long-Term.html>> (Retrieved 2016-09-04).

¹⁵⁸ Norwegian Petroleum Directorate. *Undiscovered Sources*. 2016. <<http://www.npd.no/en/Publications/Resource-Reports/2016/Chapter-3/>> (Retrieved 2016-09-04).

2100, while renewable energy will provide around 70 per cent.¹⁵⁹ The aim for a sustainable future, has led the EU to impose legislative framework enhancing the development of renewable resources.¹⁶⁰ This increased promotion of renewable resources has resulted in less secure markets for fossil fuels, undermining investor confidence and discouraging Norway. Against this backdrop, the UK's decision to withdraw its membership in the EU would leave them outside the European climate agenda, allowing for it to choose natural gas as a key source in its energy mix.¹⁶¹

Consequently natural gas from Norway could be an alternative to supply the UK with gas in the long-term. For Norway to engage in exploitation of new fields, providing natural gas requires assured markets and predictable terms. However, it is not for the UK Government to conclude such long-term gas supply agreements, but rather for the companies distributing gas in the UK. Because of the liberalised market, introducing freedom of choice, companies buy from the cheapest supplier due to competitive advantage. In this sense, it is not for the UK Government to directly intervene, although it could intervene indirectly by *incentivising* UK companies to conclude bilateral supply agreements with Norwegian gas suppliers through favourable tax regimes and investment subsidies. With the domestic production of gas in the UK, competition would be assured and together with already existing physical interconnection the UK would be an appealing market for Norwegian gas. With UK as a potential market, Norway could uphold its exploration and extraction of gas. This action would though *depart from the general policy of a market economy*, and might not be considered a real life option. However, it is an option that needs consideration, since it can contribute to the secure supply of natural gas for the UK post-Brexit.

5.2.2. Multilateral Agreements

International energy law has an important role in enabling, facilitating and stabilising the functioning of the international energy market. The main reason for introducing regulations governing the energy market is to ensure that energy and energy resources can be traded across borders, which is enhanced somewhat through *multilateral agreements*. In addition, *bilateral agreements*, stabilises the relations between domestic and foreign energy companies or governments (see section 5.2.1).¹⁶²

The WTO is a member-driven international organisation, composed of governments and customs territories, negotiated and signed by the bulk of the world's trading nations. Documents deriving from the WTO *provide the legal ground rules for international*

¹⁵⁹ World Energy Council. *World Energy Resources – 2013 Survey*. London, 2013. p. 10.

¹⁶⁰ Directive 2009/28/EC of the European Parliament and 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.

¹⁶¹ Notable is that the UK however needs to observe its climate obligations under other international agreements.

¹⁶² Shill, Stephan W. The interface between national and international energy law. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 44-76. Edward Elgar Publishing Limited, 2014. p. 61.

commerce.¹⁶³ The core objective of the WTO, rendered in the GATT, is to open up the global market for trade and introduce a trade flow as freely as possible. The GATT is a fundamental multilateral agreement, which governs trade in goods and therefore also *trade in gas*.¹⁶⁴ Additionally, another important agreement deriving from the WTO is the General Agreement on Trade in Services (GATS), which includes service provisions within energy related matters such as transmission and distribution of energy. The GATS will however, not be covered further in this thesis since the main focus is related to trade in gas following the theory of safeguarding energy supply. The UK currently participates in the WTO through its membership in the EU, and it is likely that the UK post-withdrawal will commit to the WTO as a signatory in its own right, due to the coverage that the WTO has worldwide. As the UK is a consumer of gas, and imports a large share of gas yearly, it is important that the UK protects itself from trade barriers in the gas market.

Furthermore, another multilateral treaty of importance for energy matters is the ECT. There is a close link between the ECT and the energy-related provisions in the GATT. The GATT has been considered as the relevant body for trade in energy goods even though many trade provisions are copied into the ECT.¹⁶⁵ However, provisions in the GATT cannot be applied to energy trade outright as the unique characteristics of energy trade necessitate special attention in interpreting the relevant laws and regulations. Applying the GATT will enhance the removal of obstacles to trade in the energy market, however the ECT as a sector specific legislative framework needs to be enforced for a full covered compliance in the field of energy. Therefore the ECT, together with the GATT, imposes positive measures such as the constructions of interconnected pipelines and harmonisation of transmission standards.¹⁶⁶

5.2.2.1. The General Agreement on Tariffs and Trade

5.2.2.1.1. Trade in Gas

Article I:1 of the GATT sets forth one of the main concepts of a multilateral trade system, namely the *Most Favoured Nation principle* (MFN). This principle states that Member States of the WTO are obliged to extend any advantage, favour, privilege or immunity granted to any product (energy products included) originating in or destined from any country, to the like products¹⁶⁷ originating in or destined from the territories of all other Member States of the WTO. The same provision initiates that the MFN clause applies to custom duties and charges imposed on or in connection with importation or exportation, as well as charges imposed on the international transfer of payments for imports or exports, and with respect to

¹⁶³ World Trade Organisation. *Who We Are*. 2016.

<https://www.wto.org/english/thewto_e/whatis_e/who_we_are_e.htm> (Retrieved 2016-11-17).

¹⁶⁴ European Commission. *EU and WTO*. 2016 <<http://ec.europa.eu/trade/policy/eu-and-wto/>> (Retrieved 2016-11-17).

¹⁶⁵ Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Portland: Hart Publishing, 2007, p. 188.

¹⁶⁶ *Ibid*, p. 319-320.

¹⁶⁷ For a deeper understanding of 'like products' see the World Trade Organisation. *Key GATT Principles*. 2016 <https://www.wto.org/english/tratop_e/envir_e/envt_rules_gatt_e.htm> (Retrieved 2016-11-17).

the method of levying such duties and charges, and with respect to all rules and formalities in connection with importation and exportation.¹⁶⁸

Another fundamental principle for the cooperation within the WTO is the *national treatment principle*, which prescribes that import of products (energy products included) should be treated similar to like domestic products according to Article III:1 of the GATT. The principle therefore strengthens the non-discriminatory behaviour in the market. The MFN principle and the national treatment principle are enforced to avoid that like products (energy products included) and materials are discriminated against, on the basis of their origin (imports) or destination (exports).¹⁶⁹ These provisions will guarantee that the UK will be treated in a non-discriminatory way and therefore fairly to its competitors when trading gas in the market.

Furthermore, another provision of importance, conferred in Article XI of the GATT, *prohibits Member States to impose quantitative restrictions*, such as, bans, quotas or licenses or other measure with equivalent effect. This provision is relevant for the trade in energy products, and applies to importation and exportation of energy products to avoid discriminatory treatment.¹⁷⁰ Discriminatory treatment is a factor that can impede the secure supply of energy, because the result of such conduct poses an obstacle for countries to trade in energy. These principles, banning discriminatory behaviour, are therefore of fundamental value for the UK when seeking to *secure the supply of gas*.

5.2.2.1.2. *The Transit of Gas*

Transit rules are also of significant importance for energy trade, because energy is difficult to transport and store (see section 2.3.2 and 2.3.4). Transportation of gas, presented in section 2.3.2 is mainly achieved through pipelines or by cargoes, and Article V of the GATT provides for the freedom of transit. Yulia Selivanova defines gas transit as gas originating in one country (exporter), transits at least one, second country (transit country), and then enters into the destination country (importer).¹⁷¹ The transit provision in GATT *guarantees the freedom of transit through the territory of each Member State* and therefore reduces the risk of a shortage in gas supplies. Former gas disruptions, e.g. the Russia-Ukraine crisis, demonstrate the importance of a provision that guarantees gas to be transited to the final destination. Russia currently provides the EU with most of its gas, and gas entering the UK from continental Europe would therefore be subjected to the *transit clause*.

¹⁶⁸ Selivanova, Yulia. The WTO Agreements and Energy. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 275-307. Edward Elgar Publishing Limited, 2014. p. 280-282.

¹⁶⁹ Ibid.

¹⁷⁰ Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries* Portland: Hart Publishing, 2007, p. 246.

¹⁷¹ Yulia Selivanova comments in footnote 42 of her research that it is possible that the country of origin and destination is the same in: Selivanova, Yulia. The WTO Agreements and Energy. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 275-307. Edward Elgar Publishing Limited, 2014. p. 289.

5.2.2.2. *The Energy Charter Treaty*

5.2.2.2.1. *The Liberalised International Energy Market*

Due to the high dependence of Europe on external sources of energy, it was imperative to create a legal framework through which the EU's relations with important energy producing and transit countries were designed. *The ECT was first introduced* to guarantee Europe's external security of energy supply and it has been stated that the implementation of the ECT in the EU plays an important role in the future to *secure the supply of energy* (and in particular secure the supply of gas).¹⁷² The Charter establishes a framework for *international cooperation* between European Countries and other industrialised countries with the aim of developing the energy required and of ensuring security of energy supply.¹⁷³ The ultimate objective of the ECT is to *create a liberalised energy market* across borders and assure the legal framework required to enhance energy trade. This in turn contributes to the liberalisation of the global energy market through the adoption of WTO rules.¹⁷⁴

5.2.2.2.2. *Energy Security*

Article 2 of the ECT specifies the objective of the ECT as to establish a legal framework in order to promote long-term cooperation in the energy field, based on complementarities and mutual benefits, in accordance with the objectives and principles of the Charter. These principles include inter alia energy security.¹⁷⁵ The ECT creates, in accordance with the objective of energy security, a unique structure for energy cooperation and if applied efficiently it has the opportunity to create increased security of supply for importing countries and economic development for exporting countries.¹⁷⁶ To ensure this, the Charter includes provisions to govern *trade* in energy products, enhance the *freedom of transit*, *protect and promote investment in infrastructure* and *establish a dispute settlement mechanism*.¹⁷⁷

5.2.2.2.3. *Trade in Gas*

The ECT is the *energy-specific multilateral instrument* that was introduced to avoid hindrance and discrimination in the trade of energy products based on WTO rules. To secure a fair trade in energy products the ECT incorporates the MFN principle and the national treatment

¹⁷² Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries* Portland: Hart Publishing, 2007, p. 187-189.

¹⁷³ Decision No 98/181/EC, ECSC, Euratom, of the Commission and of the Council of 23 September 1997 on the conclusion, by the European Communities, of the Energy Charter Treaty and the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects [1998] OJ L 69.

¹⁷⁴ Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries* Portland: Hart Publishing, 2007, p. 319-320.

¹⁷⁵ Konoplyanik, Andrey A. Multilateral and Bilateral Energy Investment Treaties: Do We Need a Global Solution? The Energy Charter Treaty as an Objective Result of the Evolution of International Energy Markets and Instruments of Investment Protection and Stimulation. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 79-123. Edward Elgar Publishing Limited, 2014. p. 98-99.

¹⁷⁶ Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Portland: Hart Publishing, 2007, p. 193.

¹⁷⁷ Siddiky, Ishrak Ahmed. The International Legal Instruments for Cross-border Pipelines. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 308-328. Edward Elgar Publishing Limited, 2014.

principle in Article 29(2)(a) of the ECT, which derive from equivalent provisions in the GATT.¹⁷⁸

5.2.2.2.4. *The Transit of Gas*

The goal to achieve free energy trade was suppose to secure energy supplies to countries that were landlocked or highly dependent on one single supplier. To accomplish this, the ECT adopted the transit provision introduced in the GATT, since fair and strong transit facilities would help to mitigate some of the problems that countries might face.¹⁷⁹ The transit provision expressly *prohibits interference and requires a secure flow of gas* (Article 7.5 of the ECT).¹⁸⁰

5.2.2.2.5. *The Investment Regime*

One of the major concepts of energy security is the access to energy reserves (see section 2.2). Investment in infrastructure is therefore considered important to build the necessary structures and to maintain already existing structures. This in turn can contribute to the unrestricted flow of gas.¹⁸¹ The contribution to adequate infrastructure requires investment, and the ECT therefore governs the conditions under which investments in the energy sector can be done with minimum risk in accordance with fair and equitable treatment, protection from unreasonable or discriminatory treatment, protection under the national treatment principle and the MFN principle (Article 10 of the ECT).

5.2.3. The Outcome of the Bilateral and the Multilateral Agreements

Important bilateral agreements to negotiate with third countries (excluded the EU and its Member States), as well as multilateral agreements to commit to for the UK's secure supply of gas post-withdrawal, have been presented throughout section 5.2.1 and 5.2.2.

With no post-withdrawal agreement addressing energy security matters between the EU and the UK, the UK might need to negotiate bilateral agreements and/or commit to multilateral trade and energy frameworks to secure its supply of natural gas. As mentioned in section 5.2.2 *bilateral agreements can assist multilateral commitments* by stabilising relations between domestic and foreign gas companies/governments.

Through *bilateral energy dialogues* the UK can regulate energy security matters with countries of interest, while the accessibility of gas could be ensured through *bilateral supply agreements*. The latter would be concluded between UK gas companies and foreign gas companies/governments. Bilateral supply agreements can either be concluded with exporters of liquefied gas (in the LNG market) or with exporters of dry gas (in the pipeline market).

¹⁷⁸ Ibid, p. 241.

¹⁷⁹ Siddiky, Ishrak Ahmed. The International Legal Instruments for Cross-border Pipelines. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 308-328. Edward Elgar Publishing Limited, 2014.

¹⁸⁰ Yafimava, Katja. Transit: The EU Energy Acquis and the Energy Charter Treaty. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 593-623. Edward Elgar Publishing Limited, 2014. p. 593-595.

¹⁸¹ Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Portland: Hart Publishing, 2007, p. 235.

Accordingly, the UK would access a variety of exporters, diversifying its gas routes (see section 3.2.4 presenting the importance of diversified gas routes for the secure supply of gas).

However, in case of political instability (e.g. the Russia-Ukraine crisis) or disputes between gas trading partners, bilateral agreements seems to fall short in ensuring a secure supply of gas. Mentioned risks can lead to unfair restrictions imposed on gas trade with the UK, and without enforcement mechanisms to counteract such action, bilateral agreements seems to fall short. In contrast, multilateral agreements can assist the UK by banning unfair trade restrictions and bring the parties to a settlement. Negotiating bilateral agreements can accordingly benefit the UK post-withdrawal as such agreements would diversify gas routes and allow access to gas reserves, but in case of discriminatory actions taken towards the UK, it would have little to set against such actions without a multilateral framework to fall back on.

Because of UK's geographical location and international cooperation through the EU, it would be natural for the UK to continue its participation in the WTO and adopt the GATT, as well as become a signatory party in its own right to the ECT. These *multilateral agreements* will together with bilateral supply agreements, safeguard a diversified trade in gas by providing an obstacle-free market with protection against discriminatory behaviour conducted by market actors. Accordingly, the GATT and the ECT consist significant measures to safeguard the supply of gas for its signatory parties, as these multilateral frameworks provide for the MFN clause, the national treatment principle and the prohibition on imposing quantitative restrictions. Furthermore, this would guarantee that participating states do not impose higher tariffs on trade with the UK than on trade with other participating states, ensuring that the UK's imports of gas are not subjected to unreasonable tariffs. Thus allowing the UK to supply affordable gas for its end consumers (see section 2.2 presenting affordability as a requirement for energy security). Additionally, the transit provision in the GATT and the sector specific ECT ensures that gas can be traded across borders without being subject to obstacles during its transit, which benefits the UK as it is importing a large share of gas yearly.

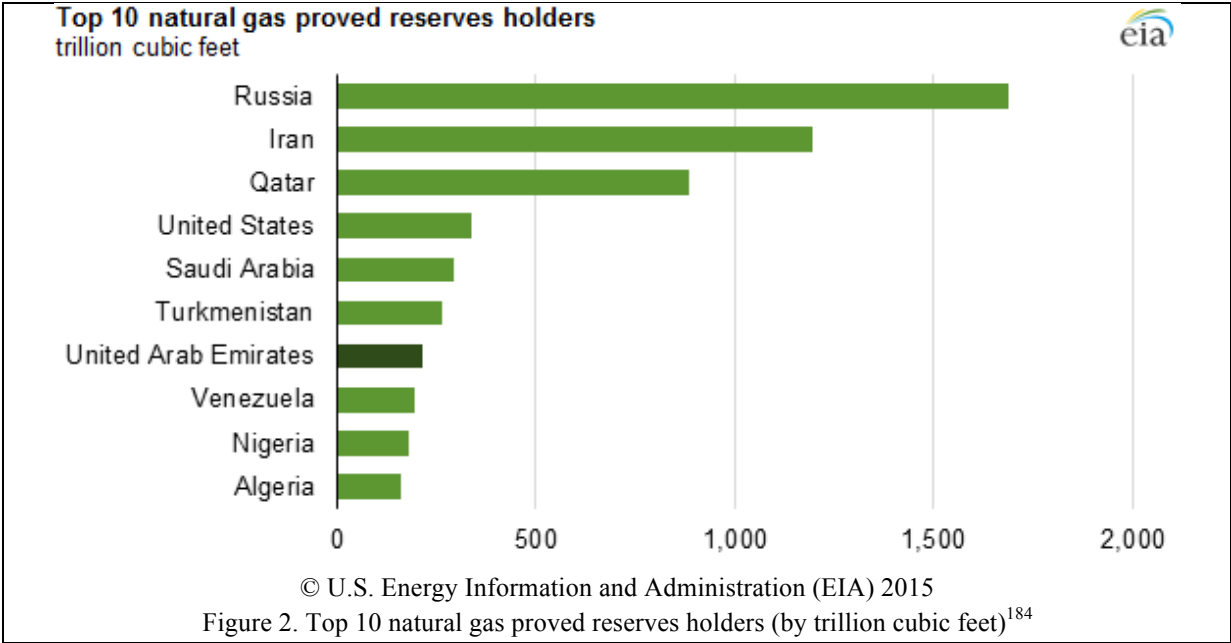
If the UK undertake a unilateral withdrawal it would be required to re-establish customs controls at its borders. Gas trade between the UK and the EU would be governed by the WTO's rules, and the UK would face European external tariffs, and vice versa.¹⁸² Although the UK would be ensured non-discriminatory access to gas markets of participating states, the UK would not benefit from preferential access to specific gas markets if not negotiating such access. Considering the fact that the UK is highly dependent on gas imports from continental Europe, an option with preferential market access in gas trade might be preferable.

¹⁸² European Commission. *What is the Common Customs Tariff?* 2016.

<https://ec.europa.eu/taxation_customs/business/calculation-customs-duties/what-is-common-customs-tariff_en> (Retrieved 2016-11-18).

Additionally it must be noted that the WTO has a *poor record of lifting barriers to trade*, mainly because of its lack of enforcement mechanisms.¹⁸³

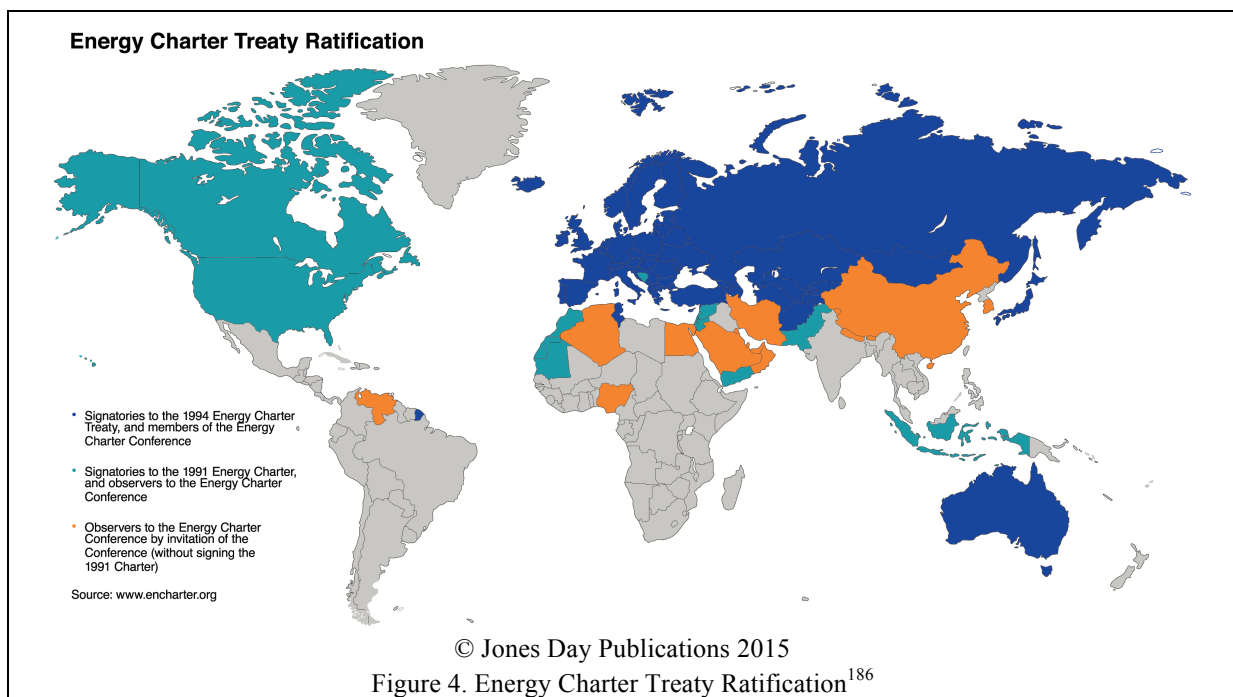
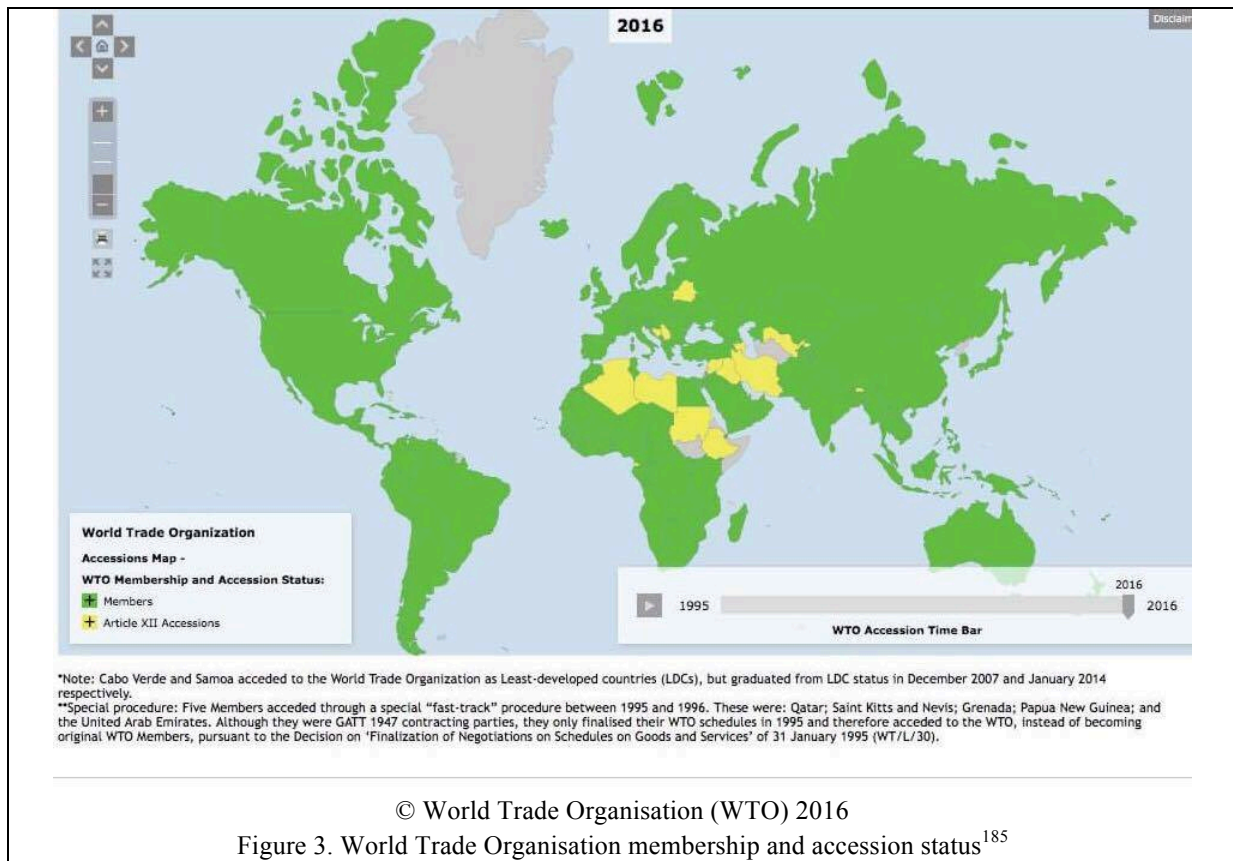
Furthermore, the bilateral- and multilateral approach might impose a risk for the UK’s secure supply of gas post-withdrawal since trade in gas between the UK and a non-participating state of the GATT and/or the ECT would result in no protection under these treaties. Accordingly the UK would *gain no protection* against discriminatory behaviour or imposed trade restrictions in the gas market under these treaties. The largest reserve holders of natural gas in 2015 were the following countries presented in figure 2.



These countries hold the *largest reserves of gas in the world* and are therefore countries of interest to trade gas with. However, *most of these countries are not participating in the WTO and/or the ECT* (see figure 3 for the WTO and figure 4 for the ECT).

¹⁸³ World Trade Organisation. *World Trade Report 2014*. 2014
<https://www.wto.org/english/res_e/booksp_e/world_trade_report14_e.pdf> (Retrieved 2016-12-08).

¹⁸⁴ U.S. Energy Information Administration (EIA), International Energy Statistics. *United Arab Emirates Plans to Increase Crude Oil and Natural Gas Production*. 2015. Chart: Top 10 Natural Gas Proved Reserves Holders [online] <<http://www.eia.gov/todayinenergy/detail.php?id=23472>> (Retrieved 2016-10-01).



¹⁸⁵ World Trade Organisation. *WTO Accession Map*. 2016. Chart: WTO Accession Map [online] <https://www.wto.org/english/thewto_e/acc_e/acc_map_e.htm> (Retrieved 2016-10-01)

¹⁸⁶ Jones Day Publications. *International Remedies for Foreign Investors in Bulgaria's Renewable Energy Sector*. 2015. Chart: Energy Charter Treaty Ratification <<http://www.jonesday.com/international-remedies-for-foreign-investors-in-bulgarias-renewable-energy-sector-09-11-2015/>> (Retrieved 2016-10-01).

Another important factor mentionable is that a unilateral withdrawal could result in insecurities among actors in the energy market during the transposition time. In the long-term it would be wise of the UK to *negotiate bilateral agreements and commit to multilateral agreements*, as this would provide the UK with legislative measures to safeguard the supply of gas.

5.3. Self-sufficiency in Gas Supplies

In terms of trade, there are around 160 countries in the world, which trade with neighbouring countries quit happily without being a part of an economic bloc. The UK could, following this example, *commit to no preferential agreement* at all regarding energy related matters and energy security. Optimal for such arrangement would be *if the UK were self-sufficient* in its gas supplies, which will now be examined.

There is no exaggeration in saying that UK's society is based on a high-energy consumption and that the everyday function would be brought to halt if energy were too costly or unavailable. Thus, crucial political issues are the *secure access to energy and the possibility to provide the demanded domestic share*. This section will therefore examine whether the UK is self-sufficient, or could become self-sufficient in its gas supplies. This would namely exclude the need for the UK to rely on actors exporting gas to UK. To evaluate UK's self-sufficiency three questions needs to be asked. (i) Does the UK use gas in its energy consumption? (ii) Does the UK produce gas domestically? (iii) What are the *political consequences* of the first two questions?

When these questions have been answered and evaluated I can state whether the UK is currently considered or could become self-sufficient in its gas supplies, as well as what the implications of this might be.

5.3.1. Does the UK Use Gas in its Energy Consumption?

The UK is one of the largest natural gas consumers in the EU,¹⁸⁷ mentioned throughout this thesis. Because of the consumption levels of natural gas in the UK, gas is an important source in the total energy mix.¹⁸⁸

5.3.2. Does the UK Produce Gas Domestically?

The UK produces around 40 per cent of its current domestic gas use through productions in the North Sea and the Irish Sea. The rest is, however imported from continental Europe and Norway, or LNG is shipped in from around the world.¹⁸⁹

¹⁸⁷ Eurostat. *Natural Gas Consumption Statistics*. 2016 <http://ec.europa.eu/eurostat/statistics-explained/index.php/Natural_gas_consumption_statistics> (Retrieved 2016-11-12).

¹⁸⁸ United Kingdom Government. *UK Energy Statistics*. 2015 <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/513244/Press_Notice_March_2016.pdf> (Retrieved 2016-11-12).

¹⁸⁹ Gas generation, Energy Industry. *Energy UK*. 2015 <<http://www.energy-uk.org.uk/energy-industry/gas-generation/gas-supplies.html>> (Retrieved 2016-09-13).

5.3.3. What are the Political Consequences?

As the UK is considered a large gas consumer, and *do not produce enough gas domestically* there is a significant need for the UK to safeguard the supply of natural gas through imports. However, not only the UK, but also other countries worldwide are highly dependent on gas imports.¹⁹⁰ This creates an on-going competition over gas reserves. One of the main concerns are that there are more countries importing gas in relation to countries exporting gas, which contributes to an *evolving competition on access to gas*. There is a stated risk that gas exports might gradually shift direction from the west (e.g. Europe) to the East, because of the increasing dependence on natural gas that there is. China, India and other Asian markets are growing economically and economic growth demands sufficient energy sources, and in particular gas.¹⁹¹

The answer to the questions asked above presents that the UK is *not currently self-sufficient in its gas supply*. However, to be able to safeguard the supply of gas in the future there might be a need for the UK to increase the availability of gas, by developing the exploration in its own gas production. Next section will address the UK's possibility to *become self-sufficient in its gas supply*.

5.3.3.1. Undiscovered Gas and Unconventional Production of Gas

Due to declining production of gas in the North Sea, the UK is exploring other areas of interest for domestic production. The UK therefore explores locations around the Shetland Islands where reserves have been found to cover a large share of domestic demand.¹⁹²

Additionally the UK is about to explore its shale gas production. The UK adopted the 'Energy Act of 2013', which mainly regulates the development of a nuclear programme, but also includes legislation for developing unconventional oil and gas (shale gas).¹⁹³ New technologies have made it possible to extract gas from shale rock formations and the development is called 'fracking'. The result from the extraction has been astonishing, and is seen as a major opportunity in many countries, while in other countries a contentious issue.¹⁹⁴

The on-going shale gas revolution has affected the market today, and is estimated to play an important part of the future production in gas.¹⁹⁵ It is anticipated that unconventional gas will account for nearly half of the expected increase in global gas production to 2035. This is due to technological advances, which allows cheaper extraction. The development of cheaper techniques to extract methane from hydrates could give a manifold increase in exploitable gas

¹⁹⁰ BP Global. *Natural Gas: 2015 in Review*. 2015 <<http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/natural-gas.html>> (Retrieved 2016-11-12).

¹⁹¹ Haghghi, Sanam Salem. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Oxford: Hart Publishing, 2007. p. 10-11.

¹⁹² BBC News. *Total Turns on Gas from West of Shetland Laggan and Tormore Fields*. 2016-02-08 <<http://www.bbc.com/news/uk-scotland-north-east-orkney-shetland-35516144>> (Retrieved 2016-11-30).

¹⁹³ Heffron, Raphael J. *Energy Law: An Introduction*. Springer, 2014, p. 21.

¹⁹⁴ Ibid, p. 44-45.

¹⁹⁵ Hobér, Kaj. Recent Trends in Energy Disputes. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 225-240. Edward Elgar Publishing Limited, 2014.p. 234.

reserves worldwide.¹⁹⁶ The UK however, is struggling to get an operational shale gas sector owing to local stakeholders being against shale gas drilling. It is appealing to the UK to open up for shale gas exploration due to the declining production of natural gas in the North Sea and the expectations on shale gas to yield more gas. In fact, the UK government recently approved shale gas extraction in Lancashire and it is the first time a UK shale rock will be fracked horizontally.¹⁹⁷ Yet, the project is highly opposite by many. Shale gas projects are relatively new and the research into their environmental effects is not yet sufficient. Current legal framework is rather reactive than proactive towards shale gas and needs an update to meet safety and environmental concerns.¹⁹⁸

The shale gas revolution in the US might have been an additional factor that influenced the UK Government to shift towards a more prominent role of gas in the UK's energy strategy. Shale gas exploration in the US led to *lower gas prices* and fewer carbon dioxide emissions through the displacement of sources like coal in the power sector.¹⁹⁹ While now being extracted in the US, and soon to be in the UK, it can be noted that it has been banned in for example France. Some countries in the EU is expected to hold large reserves of shale gas, like Poland, France and the UK, which could eventually contribute to the enhancement of energy security; in particular in the UK.

5.4. The Outcome of the Hard Brexit

The goal for the UK, presented in section 2.4, is to adopt legislative measures safeguarding the supply of gas post-Brexit. This section is devoted to deliver the outcome of the 'hard' Brexit with the options of bilateral- and multilateral agreements, as well as the possibility to be self-sufficient.

If undiscovered resources are to be located by the UK around the Shetland Islands and the development in the shale gas extraction succeeds, the UK could become less reliant on gas imports to cover its demand. Once the UK's membership in the EU is terminated the need to secure the supply of gas will be a question for the UK to regulate individually, if it were not to proceed with a preferential relationship with the EU examined further in chapter six. If the UK were to become self-sufficient in its supply of gas it would exclude the need for the UK to negotiate bilateral supply agreements and to commit to multilateral legislative frameworks for the sake of gas trade. However, since it is nearly *impossible to estimate a country's future gas reserves*, with a specification on how much gas that can be produced, this option provides a very insecure future for the UK. The insecurities around whether the shale gas exploration will succeed or whether there are undiscovered locations for natural gas, together with the

¹⁹⁶ Roberts, Peter and Maalouf, Ruchdi. Contractual Issues in the International Gas Trade: LNG – the Key to the Golden Age of Gas. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 329-358. Edward Elgar Publishing Limited, 2014. p. 330.

¹⁹⁷ BBC News. *Fracking in Lancashire Given Go-ahead by Government*. 2016-10-06 <<http://www.bbc.com/news/uk-england-lancashire-37567866>> (Retrieved 2016-11-14).

¹⁹⁸ Heffron, Raphael J. *Energy Law: An Introduction*. Springer, 2014, p. 44-45.

¹⁹⁹ Kopp, Sandu-Daniel. *Politics, Markets and EU Gas Supply Security: Case Studies of the UK and Germany*. Wiesbaden: Springer, 2015, p. 149-150

declining gas production in the North Sea, therefore puts pressure on the UK Government to find a long-term solution safeguarding access to gas. One of the key elements presented in section 2.2 is the *availability of gas, and this requirement cannot yet be achieved by the domestic production of gas in the UK, since it is still highly dependent on imports of gas.*

The analysis in this chapter provides that the UK is not self-sufficient in its gas supply to date, which stresses the need for the UK to safeguard imports of gas. To achieve a constant supply of gas to the UK, it needs to import gas. These *trade relations should be subjected to some level of protection against discriminatory behaviour among actors in the gas market.* This can be achieved, to some extent, through bilateral- and multilateral trade and energy agreements as discussed in section 5.2.3, which presents the outcome of the bilateral- and multilateral agreements.

5.4.1. The UK Guaranteeing Gas Security Individually

The UK could trade in the gas market without participating in regional and/or multilateral collaborations, as the UK could *choose to regulate energy matters individually*, relying on the market without overriding rules governing conducts taken by the UK in the gas market. Some countries address the secure supply of natural gas regionally as the EU's Member States (currently including the UK), while some countries address the secure supply of natural gas individually.

With the UK currently being a large consumer of gas, energy security is a key energy policy goal.²⁰⁰ The *importance of guaranteeing gas supplies justifies some degree of legal regulation*, as well as economic and political speculations to organise activities among the actors involved in the market. Consumers, both industry and private, might be unaware or negligent about the effects of their choices on the overall gas security of the community they live in. Some measures must therefore be designed to regulate their choices.²⁰¹ *Arguably, the UK has to regulate the secure supply of gas individually since its current legislative framework governing the secure supply of gas will be terminated due to its withdrawal.* This is the case even though the UK would negotiate bilateral agreements and/or commit to multilateral trade and energy agreements, as well as becoming self-sufficient in domestic gas supplies.

Whether the UK is suitable to regulate its energy security matters individually is a difficult question to answer. Some energy experts argue that the task of formulating *policy governing the secure supply of gas is better achieved by national governments.* Other energy experts, in line with the EU's energy security approach, argue that *the secure supply of gas policy is better achieved at a regional level.* Energy experts pro national-regulation, consider national governments suitable to address gas security questions, due to its familiarity with its own specific gas market. On the contrary energy experts pro regional-regulation argues that with

²⁰⁰ Heffron, Raphael J. *Energy Law: An Introduction*. Springer, 2014, p. 44-45.

²⁰¹ Haghghi, Sanam Salem *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Oxford: Hart Publishing, 2007. p. 2.

the developed liberalised energy market, gas security questions require a broader operation at a higher level. This argument is based on the fact that a failure to adopt adequate national measures in one country can have serious consequences for neighbouring countries, but also for the energy market as a whole. Accordingly, it is undesirable if broader necessary measures were undertaken by one state alone (see section 3.3.3.4).²⁰²

It is easy to look inwards when it comes to fundamental interests for the domestic gas needs. However, there is a well-integrated market outside UK borders and there is a well-integrated market outside EU borders. *This is important to consider when examining energy security. The gas market has moved from a national market, to a regional market, with few, if any borders.*²⁰³ It has therefore been recognised by many energy experts that while Member States of the EU were once considered as the best authorities to guarantee internal gas security, this competence has shifted towards a regional level.²⁰⁴

Although some experts believe that national public bodies are best placed to ensure the supply of gas, other experts believe that gas supply is best left to a higher level (e.g. EU level). As the UK is not yet self-sufficient in its gas supplies, and *trade in gas has become regional and fairly international, it is important to examine whether the UK could continue its participation in the current legal framework safeguarding gas security* (the UK's current energy legislation safeguarding the supply of gas is presented in chapter three). Next chapter will therefore examine what existing available options there are, for the UK post-withdrawal, to negotiate further cooperation with the EU on gas security matters.

²⁰² Ibid, p. 67-68.

²⁰³ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013.

²⁰⁴ Haghghi, Sanam Salem. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Oxford: Hart Publishing, 2007. p. 84.

6. Negotiated Withdrawal

6.1. Introduction

It is presumed that the IEM and the regulations thereto, are of significant importance for the UK's ability to safeguard the supply of gas (see chapter three). This is a factor that the UK Government needs to take into consideration when entering negotiations with the EU regarding the potential future relationship between the parties. In contrast to chapter five examining the 'hard' Brexit, this chapter will examine *the 'soft' and the 'grey' Brexit* by studying existing options negotiable between the UK and the EU.

To achieve preferential access to the IEM, and the regulations thereto, the withdrawal agreement negotiated between the UK on the one hand, and the EU and its Member States on the other hand, needs to address this matter. There are different options for the UK in negotiating such access, and these negotiable existing options will be evaluated below.

6.2. Bilateral And Multilateral Aspects of the European Union's External Energy Policy

To be able to examine different existing available options that the UK can negotiate with the EU post-withdrawal, the *EU's external energy policy* needs to be examined first.

The EU primarily uses treaties to pursue its energy goals. Treaties establish a network of legal obligations and procedures with its partner countries. The EU's *legal personality* is expressed in Article 47 of the TEU, which entails that the EU acts as a state-like actor in international commitments. This means that the EU can conclude international agreements, but under the surveillance of the Council of Ministers in accordance with Article 218 of the TFEU (Article 207 of the TFEU regulates the common commercial policy). The EU's external competence is based either upon the explicit authority of the Treaty or upon the external manifestation of internal powers.²⁰⁵ The competence to conclude international agreements is given to the EU under Article 216(1) of the TFEU, which allows for action if it is *required to pursue one of the objectives* set forward by the Union.²⁰⁶

Energy is subject to the shared competence of the EU, which was presented in section 3.3. Natural gas however is a good, which is subject to trade, and can therefore fall within the scope of the Common Commercial Policy in Article 207 of the TFEU. The Common Commercial Policy is an *exclusive competence* expressed in Article 3(3) of the TFEU, which means that Member States cannot enter into international agreements themselves.

6.2.1. Bilateral Agreements

The EU aims to remove obstacles to trade, and tackle challenges that get in the way of trade with other countries, by negotiating *bilateral agreements*. Depending on the agreement, partner governments in other parts of the world omit to a series of measures. *There are three main types of agreements*, divided into the following categories:

²⁰⁵ Referred to as internal and external parallelism.

²⁰⁶ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 219.

- (i) Customs Unions, which eliminates customs duties in bilateral trade and establishes a joint customs tariff for foreign importers.
- (ii) Association Agreements, Stabilisation Agreements, (Deep and Comprehensive) Free Trade Agreements and Economic Partnership Agreements, which removes or reduces customs tariffs in bilateral trade.
- (iii) Partnership and Cooperation Agreements, which provides a general framework for bilateral economic relations without eliminating or reducing customs tariffs.²⁰⁷

Agreements precluded as an *economic cooperation* have no specific energy focus, although energy may be mentioned as an object of development aid, included in a customs union and the adoption of EU law. *Associated agreements* on the other hand, are special cases where the EU is given the competence to conclude agreements establishing an association with both third countries and international organisations by the Treaty of Rome.²⁰⁸ Despite no formal definition of the objectives and the scope of these associations, the EU has used this competence over the years to conclude associations with a large number of countries for very different reasons and objectives.²⁰⁹ Article 217 of the TFEU expresses that an association can be established involving reciprocal rights and obligations, common actions and special procedures. This suggests that association agreements can be concluded to cover all areas where the EU is involved with its legislative measures.²¹⁰ Kim Talus presents that Gracia Marin Duran and Elisa Morgera distinguish between four categories of association:

“Association as a prelude to EU membership (as is currently the case with Turkey and certain South-Eastern European countries); association as a substitute for EU membership (as is currently the case with Norway and the countries in the Euro-Mediterranean Partnership); association as a development tool (as is the Cotonou Agreement); and association as an instrument for inter-regional cooperation (e.g. the association agreements with Chile and South Africa).”²¹¹

Another bilateral agreement type is the *Partnership and Cooperation Agreements* in category (iii). These agreements provide a basis for economic and trade policy dialogue. One country where the EU has concluded such an agreement is with Russia, mainly because of its gas supplies to the European continent.²¹²

²⁰⁷ European Commission. *Trade Agreements*. 2016 <http://ec.europa.eu/trade/policy/countries-and-regions/agreements/index_en.htm> (Retrieved 2016-11-18).

²⁰⁸ The Treaty of Rome was signed 1957 in Rome by France, Germany, Italy and the Benelux countries. The Treaty Establishing the European Economic Community (EEC).

²⁰⁹ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 226.

²¹⁰ Similarly see Marin Duran, Gracia and Morgera, Elisa. *Environmental Integration in the EU's External Relations: Beyond Multilateral Dimensions*. Oxford: Hart Publishing, 2012, p. 60.

²¹¹ Marin Duran, Gracia and Morgera, Elisa. *Environmental Integration in the EU's External Relations: Beyond Multilateral Dimensions*. Oxford: Hart Publishing, 2012, p. 58-59. In: Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 226.

²¹² Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 229.

Eminent for the discussion on post-Brexit scenarios is Article 8 of the TEU, which expresses that the Union shall *develop a special relationship with neighbouring countries*. The objective is to establish an area of prosperity and good neighbourliness founded on the values of the EU, which is highly relevant for the UK when entering into the withdrawal negotiation with the EU.

6.2.2. Multilateral Agreements

Multilateral cooperation has been assessed in chapter five, but a collaboration of interest when examining the European external energy policy in this chapter, is the Energy Community presented in section 3.2.3. The Community objective is to extend the EU's IEM to neighbouring countries by exporting EU energy law, enhancing cooperation within energy matters and securing the supply of natural gas.²¹³ This cooperation will be assessed later on in this chapter, as an option for the UK, besides the agreement types presented above.

6.2.3. Agreements Concluded Between the EU and Third Countries

The introduction has now presented the legal basis for the EU's external energy policy. Based on the facts introduced above, the next section will evaluate existing relations that the EU has with third countries, as *these relations may serve as a blueprint for potential options for EU-UK relation post-Brexit on gas security*. The variety of countries selected cover the wide range of different relationship from deep-rooted relationships to loosely coupled relations. When these agreements have been identified, an examination of the access to the IEM will be undertaken, and each agreement's energy security policy will be considered. Following countries collaboration with the EU will be examined:

- (i) Norway
- (ii) Switzerland
- (iii) Turkey
- (iv) Canada
- (v) Albania

6.3. The Norwegian Model

6.3.1. Introduction

The relationship between the EU and Norway falls within category (ii) of the main types of agreements mentioned under bilateral agreements in section 6.2.1. Gracia Marin Duran and Elisa Morgera identify this relationship as an association agreement and the legal basis is provided in Article 217 of the TFEU.

6.3.2. European Economic Area and the European Free Trade Association

Norway is a Member State in the European Economic Area (EEA), which is an intergovernmental organisation governed by the Agreement on the European Economic Area

²¹³ Decision No 2006/500/EC, of the Council of 29 May 2006 on the conclusion by the European Community of the Energy Community Treaty [2006] OJ L 335.

(the EEA Agreement).²¹⁴ Seven countries, which were not members of the European Community in 1961²¹⁵ – Norway, Denmark, Sweden, Switzerland, UK, Austria and Portugal – established the European Free Trade Association (EFTA), with a later membership accession of Iceland. This Association gradually decreased in size over the years as some of the Member States left the Association to become members in the EU instead. The remaining Member States of the EFTA however decided to continue its collaboration by focusing on concluding a future free trade agreement with the EU.²¹⁶

The Convention establishing the European Free Trade Association (the Convention)²¹⁷ forms the legal basis of the EFTA organisation and governs free trade relations between the Member States of Norway, Switzerland, Iceland and Lichtenstein. The EFTA constitutes a free trade agreement between mentioned countries, and liberalisation under such an agreement is traditionally broad in scope and run deep in terms of the level of commitments undertaken.²¹⁸ Article 2 of the Convention expresses the fundamental objectives of the Association as, the promotion of a continued and balanced strengthening of trade and economic relations between the Member States, free trade in goods, a progressively liberalised free movement of persons, a progressive development in the free movement of services and investment, fair conditions for competition, the opening up of a public procurement market of the Member States and the need for appropriate protection of intellectual property. The objective of the EFTA is to contribute to the expansion of trade globally, which is done through the management of the EFTA Convention (intra-EFTA trade), the EEA Agreement (EFTA-EU relations) and the EFTA Free Trade Agreements (third country relations). The Association has concluded many free trade agreements with third countries, which has enhanced the trade regime in the cooperation. This cooperation also led to the EEA Agreement, which enabled three of four EFTA Member States *to access the European internal market*.²¹⁹

In 1991 the EEA was signed and entered into force the 1 of January 1994.²²⁰ The EEA cooperation brings together EU Member States and three of four Member States of the EFTA – namely Norway, Iceland and Lichtenstein – in the internal market. The EEA goes beyond traditional free trade agreements by extending the full rights and obligations of the EU's

²¹⁴ Agreement on the European Economic Area of 17 March 1997. OJ L NO L 1, 3.1.1994.

²¹⁵ The European Community was the economic and political organisation formed from the consolidation of three European treaty organisations: the European Economic Community, the European Coal and Steel Community and the European Atomic Energy Community. The European Community was later integrated to the European Union [Hereinafter referred to as the European Union (EU)]. For a deeper understanding see European Union. *A Europe Without Frontiers*. 2016 <https://europa.eu/european-union/about-eu/history/1990-1999_en> (Retrieved 2016-11-20).

²¹⁶ Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Portland: Hart Publishing, 2007, p. 109-110.

²¹⁷ Convention Establishing the European Free Trade Association of 1 July 2013. Rue de Varembe, Geneva.

²¹⁸ Evans, David. Bilateral and Plurilateral. PTAs. In *Bilateral and Regional Trade Agreements*. Lester, Simon and Mercurio, Bryan (ed.), p. 52-77. Cambridge University Press, 2009. p. 52-54.

²¹⁹ European Free Trade Association. *The European Free Trade Association*. <<http://www.efta.int/eea/eea-agreement>> (Retrieved 2016-10-02).

²²⁰ Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Portland: Hart Publishing, 2007, p. 109-110.

internal market to the EFTA countries (with the exception of Switzerland, which will be examined further in section 6.4).²²¹ The EEA Agreement provides for the inclusion of EU legislation covering the four freedoms – the free movement of goods, services, persons and capital – throughout the 31 EEA States. In addition, the Agreement covers cooperation in important areas such as *energy*, environmental and social policy, as well as ensuring that competition is not distorted (Article 2 of the EEA Agreement). The objective of the EEA Agreement is to guarantee equal rights and obligations within the internal market for economic operators and citizens of the EEA. The Agreement provides that certain areas are exempted from EU legislation such as agricultural, fisheries, customs union, common foreign and security policy, monetary union and common trade policy.²²² In contrast to the EU, the EEA is not a customs union but constitutes a free trade area. Norway, Iceland and Lichtenstein are not parties to any of the third-country agreements that the EU has concluded through its Member States, but instead bound by third-country agreements concluded through the EFTA.²²³

6.3.2.1. Incorporation of European Union Legislation

The objective of the EEA is to promote a continuous and balanced *strengthening of trade and economic relationship* between the Contracting Parties²²⁴ according to Article 1 of the EEA Agreement. The Contracting Parties must strive to ensure that the rules are actually or presumably interpreted in the same manner and in conformity with EU legislation. Accordingly where the scope of the provision is the same, ruling from the European Court of Justice should be applied in EEA law (Article 6 of the EEA Agreement).²²⁵ After the internal market legislation has been extended to the EEA/EFTA countries, the EFTA Surveillance Authority and the EFTA Court monitor transposition and application. The EEA Joint Committee shall ensure the *effective implementation of EU legislation in areas covered by the EEA Agreement*.²²⁶

6.3.2.2. Access to the Internal Energy Market

Norway is much like a EU Member State despite its earlier negative referendums regarding the accession to the EU (held in 1972 and 1994).²²⁷ One of the main objectives of the EEA

²²¹ European Parliament. *The European Economic Area (EEA), Switzerland and the North*. 2016.

<http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_6.5.3.html> (Retrieved 2016-10-10).

²²² European Free Trade Association. *EEA Agreement*. <<http://www.efta.int/eea/eea-agreement>> (Retrieved 2016-10-02).

²²³ Compare provisions in the EEA Agreement and Article 28 of the TFEU.

²²⁴ Defined in Article 2(c) of the EEA Agreement as the Community and the EC Member States, or the Community, or the EC Member States.

²²⁵ Referred to as the '*Principle of Homogeneity*'

²²⁶ The legal effect of EU law, and the way in which it should be implemented in the EEA (EFTA) countries, is to be found in the Annexes attached to the EEA Agreement. For a deeper understanding see European Economic Area. *How EU Acts Become EEA Acts and the Need for Adaptions*. 2013.

<<http://www.efta.int/media/documents/eea/1113623-How-EU-acts-become-EEA-acts.pdf>> (Retrieved 2016-11-19).

²²⁷ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 232.

was held to be the access to the internal market, and this is now guaranteed in Article 2 of the EEA Agreement.

Norway has always been an important supplier of natural gas for the EU, and it was therefore of vital importance to allow Norway access to the IEM. This would provide for the secure supply of natural gas from Norway to the EU, by introducing internal market measures such as the free movement provisions and EU competition law.²²⁸

Article 24 of the EEA Agreement refers to Annex IV, which contains specific provisions on energy-related matters. This provision forms the foundation of the EU energy law now adopted in Norway. As Norway has to incorporate EU energy law as it evolves, it is under the obligation to implement IEM legislation,²²⁹ guaranteeing *access to the IEM*.

6.3.2.3. Energy Security

The EEA/EFTA countries have now adopted the *majority of EU legislation concerning the energy sector*. For the purpose of abundance natural gas reserves in Norway, one of the most important actions was the adoption of the Gas Directive in the EEA. Today, both the Third Energy Package and the Security of Gas Supply Regulation are legislative frameworks with EEA relevance. The European energy legislation presented in chapter three is therefore as relevant for Norway, as for any other Member State of the EU.

6.3.2.4. The Process of Decision-making

The design of the EEA allows Norway to participate in the internal market, without the full responsibilities of EU membership. The constitution provides that as EU legislation evolves, Norway has to adopt relevant provisions. However, as Norway is only allowed to take part as a consultant party in the beginning of the law drafting, it has to adopt legislation without taking part in the decision-making (Norway is not allowed to vote in specific matters even though the regulation about to be adopted concerns it). Accordingly, Norway has to adopt legislative frameworks with EEA relevance without comprehensive participation.²³⁰ This is not only the case with energy security measures, but also applicable for a wider range of arrangements (see section 6.3.2.1).

6.3.3. The Norwegian Model Applied to the UK

Norway as an EEA/EFTA State takes part in the IEM and adopts regulations thereto, and if the UK were to negotiate this arrangement with the EU, it would *continue to access the IEM and adopt regulations thereto*. The Norwegian model as a post-withdrawal option for the UK therefore results in similar energy arrangements as status quo. The vast majority of energy-related legislation is texts with EEA relevance, meaning that the UK would be under the obligation to adopt both the Gas Directive and the Security of Gas Supply Regulation, which

²²⁸ Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Portland: Hart Publishing, 2007, p. 109-110.

²²⁹ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 213.

²³⁰ Haghghi, Sanam. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Portland: Hart Publishing, 2007, p. 109-110.

is recognised as the two fundamental regulations drafted by the EU in order to safeguard the supply of gas in the EU (see chapter three).

Another fundamental change for the UK within its energy security regime is that if the UK sought to become a Member State in the EEA/EFTA, it would have to apply a substantial portion of energy legislation with just a minimal level of influence regarding the legislation's content. This is referred to as 'democratic deficit',²³¹ and under this option the UK would therefore only participate in the consultative part of the drafting progress within energy related matters. Essentially after a provision regarding energy security has passed, or any other provision with EEA relevance, the UK would have to pass the provision without the right to vote on it, which would leave the UK with less saying over rules regarding its security of gas supply.²³²

6.4. The Swiss Model

6.4.1. Introduction

The relationship between the EU and Switzerland does not fall within any of the categories presented in section 6.2.1 for bilateral agreements, or for multilateral agreements in section 6.2.2. Instead, the Swiss relationship with the EU rests on individual *bilateral trade agreements negotiated on a case-by-case basis*. The legal base for the Swiss-EU cooperation is the Insurance Agreement of 1989, Bilateral Agreements I of 1999 and Bilateral Agreements II of 2004.²³³ Switzerland is also a Member State of the EFTA, but not a member of the EEA.

6.4.2. Bilateral Agreements and the European Free Trade Association

Switzerland is as mentioned a Member State of the EFTA, however the EFTA has already been examined under the Norwegian model, and will therefore only be mentioned briefly in this section. As an EFTA member, Switzerland took part in the negotiations of the EEA Agreement, which it signed in May 1992. Immediately after that, the Swiss Government submitted an application for accession to the EU. However, following the referendum held in the end of 1992 that yielded a vote against participating in the EEA and the EU, the Swiss Federal Council stopped pursuing the country's EEA and EU membership.²³⁴

Since then, Switzerland has retained observer status within the EEA and developed its relations with the EU through bilateral agreements in areas of mutual interest. Following the

²³¹ *Democratic deficit* is defined as an insufficient level of democracy in political institutions and procedures in comparison with a theoretical ideal of a democratic government. Evaluations of the level of democratic deficit focus on the procedural aspects of democracy, reflected in the mechanisms of representation and decision-making. The concept is most often used in the context of supranational institutions, such as the EU and the EEA. For a deeper understanding see: Letki, Natalia. *Democratic Deficit*. *Encyclopædia Britannica* (2016).

²³² This can be referred to as '*regulation without representation*'

²³³ Swiss Confederation. Integration Office FDFA/FDEA. *Swiss European Policy – the Bilateral Path*. 2009 <http://www.europarl.europa.eu/meetdocs/2009_2014/documents/deea/dv/2203_07/2203_07en.pdf> (Retrieved 2016-10-10).

²³⁴ European Parliament. *The European Economic Area (EEA), Switzerland and the North*. 2016 <http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_6.5.3.html> (Retrieved 2016-10-10).

1972 Free Trade Agreement and the subsequent Insurance Agreement in 1989, the system of bilateral agreements has been continuously extended.²³⁵ To date the EU and Switzerland have signed over 120 bilateral agreements with two major series of sectorial bilateral agreements (Bilateral Agreements I and Bilateral Agreements II). The first set of sectorial agreements consists of seven agreements, covering the issue of free movement and market opening, providing Switzerland with extensive access to the internal market.²³⁶ The second set of sectorial agreements covers additional economic interest and the extension of the existing political cooperation.²³⁷ Accordingly, EU legislative areas not covered by bilateral Swiss-EU agreements are not applicable in Switzerland.

6.4.2.1. Incorporation of European Union Legislation

The Swiss model keeps a sense of sovereignty, since *changes in EU law will only apply after a joint bilateral commission decides so in consensus*. New protocols must therefore be negotiated from time to time, thus creating a static relationship rather than a flexible relationship.²³⁸ Even though Switzerland remains opposed to the automatic adoption of EU legislation, and wants to retain the right to say ‘no’ to the adoption of EU regulation, the Swiss Government stated that:

“In the area of market access, it is as much in Switzerland’s interests as in those of the EU to find mechanisms to allow for a rapid adjustment to developments in the EU «Acquis», guaranteeing legal homogeneity and legal certainty. Problems with regard to the implementation of the agreements and delays in adjusting them to new developments in relevant EU law can create new obstacles to access to the EU market, legal insecurity, and discrimination against some economic actors involved.”²³⁹

The complex relationship between the EU and Switzerland has required it to balance closeness to the EU by an approach allowing for a continued adaptation. Recent literature

²³⁵ Swiss Confederation. Integration Office FDFA/FDEA. *Swiss European Policy – the Bilateral Path*. 2009 <http://www.europarl.europa.eu/meetdocs/2009_2014/documents/deea/dv/2203_07/2203_07en.pdf> (Retrieved 2016-10-10).

²³⁶ Bilateral Agreements I of 1999 is on the free movement of persons, trade in agricultural products, air transport, land transport, technical trade barriers, public procurement and research cooperation. Available at: Directorate for European Affairs (DEA). Swiss Confederation. *The Major Bilateral Agreements Switzerland-EU*. 2016 <https://www.eda.admin.ch/dam/dea/en/documents/folien/Folien-Abkommen_en.pdf> (Retrieved 2016-10-11).

²³⁷ Bilateral Agreements II of 2004 relate to Switzerland’s participation in Schengen and Dublin, agreements on taxation savings, processed agricultural products, statistics and combating fraud, participation in the EU’s MEDIA programme and the European Environment Agency, and Swiss financial contributions to economic and social cohesion in the new EU Member States. Available at: Swiss Directorate For European Affairs. *The Major Bilateral Agreements Switzerland - EU*. 2016 <https://www.eda.admin.ch/dam/dea/en/documents/folien/Folien-Abkommen_en.pdf> (Retrieved 2016-10-11).

²³⁸ European Parliament. *The European Economic Area (EEA), Switzerland and the North*. 2016 <http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_6.5.3.html> (Retrieved 2016-10-10).

²³⁹ Swiss Directorate For European Affairs. *Institutional Issues*. 2016 <https://www.eda.admin.ch/dam/dea/en/documents/fs/11-FS-Institutionelle-Fragen_en.pdf> Retrieved 2016-10-17).

confirms that non-EU Member States, like Switzerland, autonomously adopt legislation deriving from the EU, which is commonly referred to as '*indirect Europeanization*'.²⁴⁰

6.4.2.2. Access to the Internal Energy Market

In accordance with the incorporation process presented above, Switzerland only *gains access to the internal market in return for adopting legislation equivalent to the EU's legislation governing the internal market*. Bilateral agreements concluded between Switzerland and the EU regulate most of the conditions of the free movement of persons, goods, services and capital; thus providing Switzerland with *extensive access to the internal market*. Yet, Switzerland *gains no access to the IEM*, since no bilateral agreement concerning the energy market has been concluded.

Switzerland is of central importance to the European IEM, given its position and role in transmitting electricity, and its reliance on imports of natural gas. However, as a non-member Switzerland is not automatically bound by EU energy policy.²⁴¹ Switzerland has therefore engaged in negotiations with the EU on a bilateral agreement in the electricity sector since 2007 and in 2010, the Federal Council expanded the negotiation mandate to also encompass the latest legal developments in the field of energy law.²⁴²

In 2014 the Council of the EU adopted a decision authorising the opening of negotiations on an institutional agreement between the EU and Switzerland. The institutional agreement shall govern EU-Swiss bilateral relations addressing institutional issues distorting the relationship between the EU and Switzerland.²⁴³ These negotiations were aimed at settling the problems stemming from the evolving nature of the EU *acquis* related to the internal market and at introducing a dispute settlement mechanism governing current bilateral legislation. The negotiations on the institutional agreement are considered crucial for the functioning of EU-Swiss relationship.²⁴⁴ However, the EU has now declared that *no further bilateral agreements concerning Switzerland's market integration will be negotiated* until the institutional agreement is settled (including the negotiation that started in 2010 to enhance the cooperation within energy related matters). At the same time, Swiss voters' rejection in 2014 on the free movement of persons threatens further integration (Switzerland wants to restrain the free movement of persons).²⁴⁵ Implementing the results of the vote would not only be

²⁴⁰ Pusterla, Elia. *The Credibility of Sovereignty – the Political Fiction of a Concept*. Springer, 2016, p. 191.

²⁴¹ Swiss Federal Office of Energy. *International Energy Policy*. 2016

<<http://www.bfe.admin.ch/themen/00526/00530/index.html?lang=en>> (Retrieved 2016-10-17).

²⁴² Swiss Federal Office of Energy. *Energy Negotiations between Switzerland and the EU*. 2012.

<<http://www.bfe.admin.ch/themen/00612/00618/?lang=en>> (Retrieved 2016-10-17).

²⁴³ Council of the European Union. Negotiation Mandate for an EU-Switzerland Institutional Framework Agreement of 6 May 2014 in Brussels. 9525/14 (OR.en) PRESSE 267.

²⁴⁴ European Union External Action. *Switzerland and the EU*. 2016

<https://eeas.europa.eu/headquarters/headquarters-homepage/7700/switzerland-and-eu_en> (Retrieved 2016-10-25).

²⁴⁵ The Guardian. *EU tells Swiss no Single Market Access if no Free Movement of Citizens*. 2016-07-03

<<https://www.theguardian.com/world/2016/jul/03/eu-swiss-single-market-access-no-free-movement-citizens>> (Retrieved 2016-11-05).

incompatible with the free movement of person provision in the EU, adopted in Bilateral I, but would also impose a potential threat to the country's entire network of bilateral agreements with the EU under the 'guillotine clause'. Accordingly, if one agreement governing access to the internal market were to be terminated, other agreements concerning access to the internal market would as a result cease to apply.²⁴⁶

There are on-going negotiations between Switzerland and the EU to conclude a bilateral agreement concerning energy law. However, following the above mentioned, Switzerland has *no preferential access to the IEM*.

6.4.2.3. Energy Security

The Swiss Government wants an extensive energy agreement, which allows them to participate in the energy security development in Europe. The ambition is to improve Switzerland's access to the IEM by harmonising energy standards.²⁴⁷ Switzerland therefore wishes for a more comprehensive energy agreement, with the adoption of the Third Energy Package.²⁴⁸ Yet, none of this will be possible if Switzerland unilateral imposes restrictions on the free movement of persons, or if it refuses to conclude the institutional agreement mentioned above.

6.4.2.4. The Process of Decision-making

Switzerland takes no part in the drafting of EU legislation. Since every bilateral agreement is adopted on a sector-by-sector basis, it is only obliged to adopt developed legislation concerning areas already covered by a bilateral agreement.

6.4.3. The Swiss Model Applied to the UK

Crucial, from the UK's perspective in securing the supply of gas, is that Switzerland has no bilateral agreement with the EU regarding energy related matters. The UK would therefore have to regulate the secure supply of gas individually, not participating in the IEM. Even though the UK could choose to apply energy law deriving from the EU indirectly, there would be no provisions guaranteeing protection within the secure supply of gas currently provided for in the IEM and the regulations thereto, since neither the Third Energy Package nor the Security of Gas Supply Regulation would be applicable in the UK.

Although the Swiss Model provides an option for the UK to continue its relations with the EU and access the internal market, it *does not provide for access to the IEM, whereby the energy security legislation presented in chapter three is not applicable*. This post-withdrawal option therefore means that the UK ends up in the same position within energy related matters as if it

²⁴⁶ European Parliament. *The European Economic Area (EEA), Switzerland and the North*. 2016
<http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_6.5.3.html> (Retrieved 2016-10-10).

²⁴⁷ Swiss Federal Office of Energy. *International Energy Policy*. 2016
<<http://www.bfe.admin.ch/themen/00526/00530/index.html?lang=en>> (Retrieved 2016-10-17).

²⁴⁸ Swiss Federal Office of Energy. *Energy Negotiations between Switzerland and the EU*. 2012
<<http://www.bfe.admin.ch/themen/00612/00618/?lang=en>> (Retrieved 2016-10-17).

had undertaken a unilateral withdrawal or was to be unsuccessful in negotiating a withdrawal agreement within the timeframe provided for in Article 50 TEU. Accordingly, if the UK aims to negotiate the Swiss Model it would have to regulate energy security individually, and therefore the study in chapter five, on bilateral- and multilateral agreements, would be the approach for the UK to secure its supply of gas.

Furthermore, the Swiss model as a post-withdrawal option, with a series of agreements on specific issues, would be very *difficult for the UK to negotiate with the EU*. Unlike the EEA Agreement, bilateral agreements are adopted on a case-by-case basis, which means that there are no proper mechanisms to adopt evolving EU legislation. With an increasing number of sectors being incorporated in bilateral agreements, it has become more difficult to effectively manage the significant number of separate agreements. The task to keep all the agreements updated becomes both time and resource consuming.²⁴⁹ Not only is it time demanding to keep all agreements updated, it will also take a huge amount of time to negotiate bilateral agreements covering all the areas mentioned above. Switzerland is still engaging in negotiations with the EU to harmonise market actions, even though it completed its first agreement over 40 years ago.

6.5. The Turkish Model

6.5.1. Introduction

The relationship between the EU and Turkey falls within category (i) and (ii) of the main types of agreements mentioned under bilateral agreements in section 6.2.1. In 1963, Turkey signed an Association Agreement with the EU, the ‘Ankara Agreement’,²⁵⁰ and the EU envisioned three steps – preparatory, transition and completion – for Turkey’s gradual accession to the European common market (internal market). This would be achieved through the establishment of a *customs union*. In 1995 when the transition period eventually was completed, the ‘Customs Union Decision’²⁵¹ was adopted, and Turkey managed to eliminate customs duties for EU industrial goods.

Turkey now participates in the EU’s customs union with an association agreement as the instrument for inter-regional cooperation. The legal basis for the EU to conclude an association agreement is provided in Article 217 of the TFEU.

6.5.2. Customs Union

The EU comprises a customs union, and it is established in Article 28 TFEU that the customs union shall cover all trade in goods and involve the prohibition for one Member State to impose custom duties on imports and exports, and charges having equivalent effect, on

²⁴⁹ European Parliament. *The European Economic Area (EEA), Switzerland and the North*. 2016
<http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_6.5.3.html> (Retrieved 2016-10-10).

²⁵⁰ Agreements establishing an Association between the European Economic Community and Turkey of 12 September 1963. OJ L NO 361/29.

²⁵¹ Decision No 1/95, of the EC-Turkey Association Council of 22 December on Implementing the Final Phase of the Customs Union 96/142/EC [1996] OJ L 035.

another Member State. Same provision also confirms the adoption of a CET in EU relations with third countries, as well as confirms that the EU negotiates as a single entity in international trade deals (see section 3.2.2). Customs unions are accordingly achieved through removing trade barriers, and reduce or eliminate customs duty on mutual trade. In contrast to a free trade agreement, a customs union imposes a CET on imports from non-member countries. Unlike a common market a customs union usually *does not allow* for the free movement of capital and persons among member countries.²⁵²

The European Union Customs Union (EUCU) is a customs union between all Member States of the EU, some territories of the UK and Monaco.²⁵³ Beside the EUCU, the EU has concluded individual agreements, paving the opportunity for non-Member States of the EU to participate in the European customs union. These separate agreements have been negotiated with Andorra, San Marino and Turkey, and include certain exceptions to specific goods.²⁵⁴

The Customs Union Agreement,²⁵⁵ between the EU and Turkey, was the EU's first substantial functioning customs union with a non-Member State. Turkey has adopted the EU's CET for most industrial products and industrial components of agricultural products. The parties have engaged in increased trade by eliminating all customs duties, quantitative restrictions and charges having equivalent effect in their bilateral trade. Turkey's accession to the European customs union has supported the growth between Turkey and the EU and investment regimes have promoted Turkish productivity gains.²⁵⁶ This has furthered Turkey's alignment with the *EU acquis*.²⁵⁷

6.5.2.1. Incorporation of European Union Legislation

The enlargement of the EU is one of its most powerful policy tools and it is a carefully managed process, which helps the transformation of the countries involved by promoting political, economic and societal reforms. Any state in Europe may apply to become a Member State in the EU if it respects the common values of the Member States and remains committed to its promotion according to Article 49 of the TEU. The European council incorporated

²⁵² Business Dictionary. *Customs Union*. <<http://www.businessdictionary.com/definition/customs-union.html>> (Retrieved 2016-11-21).

²⁵³ European Union External Action. *Monaco and the EU*. 2016 <<http://www.businessdictionary.com/definition/customs-union.html>> (Retrieved 2016-11-21)

²⁵⁴ European Commission. *Customs Union*. 2016 <https://ec.europa.eu/taxation_customs/business/calculation-customs-duties/rules-origin/customs-unions_en> (Retrieved 2016-11-03).

²⁵⁵ Customs Union Agreement 96/142/EC.

²⁵⁶ Delegation of the European Union to Turkey. *Customs Union*. 2016 <<http://avrupa.info.tr/eu-trade-and-economy/customs-union.html>> (Retrieved 2016-11-12).

²⁵⁷ The *acquis* is the body of common rights and obligations that is binding on all the EU Member States. It is constantly evolving and comprises chapters all relevant as conditions for membership (e.g. free movement provisions, energy, environment, customs union, external relations) available at: European Commission. *European Commission, Enlargement and Acquis*. 2016 <http://ec.europa.eu/neighbourhood-enlargement/policy/glossary/terms/acquis_en> (Retrieved 2016-12-15).

conditions for a ‘gradual, harmonious integration’ of accession by requiring the country of concern to align its legislation to that of the EU and to ensure its implementation.²⁵⁸

The association agreement concluded between the EU and Turkey was the first step towards Turkey’s full membership in the Union and the agreement with Turkey addresses regulatory areas of so-called ‘deep integration’ contributing to Turkey’s adaption to EU legislation. The EU enlargement process took a major step forward in 2005 when accession negotiations were opened with, among others, Turkey. After years of preparation Turkey formally opened the next stage of the accession process. With the EU-Turkey Customs Union Agreement in force, Turkey already eliminates customs duties on imports and exports, and charges having equivalent effect towards EU Member States, and participates in the adoption of the CET. However, with the accession process there is a need to *adapt a considerable part of its national legislation in line with EU law*. In order to become a Member State in the EU, Turkey must bring its institutions, management capacity and administrative and judicial systems up to EU standards, both at a national and regional level; the result being an effective implementation of EU laws before the potential accession. Accordingly, Turkey does not negotiate on the *acquis communautaire* itself with the EU, as the rules must be fully adopted by them upon accession.²⁵⁹ In this sense Turkey already engage, *indirectly*, in a large portion of internal EU legislation, beside the EU legislation it already adopts due to its participation in the customs union.

6.5.2.2. Access to the Internal Energy Market

Regarding Turkey’s internal market access it can be concluded that Turkey, in addition to eliminating internal tariffs and agree on the CETs, already foresees to align to the *acquis communautaire* in several essential internal market areas.²⁶⁰ The EU customs union is directly authorised to control international trade. However it is also devoted to the external aspect of the internal market, namely the promotion of an open market aiming at fair trade without discrimination; the function of the internal market can therefore be considered somewhat dependent on the function of the customs union, since goods entering through the common EU border are allowed equal treatment to domestic goods. Considering all these factors, Turkey as a non-EU Member State, still *needs to adopt a vast majority of EU legislation closely connected to the functioning of the internal market*.

With the potential accession of Turkey’s membership in the EU, Turkey is already being *encouraged to adopt regulatory standards relating to EU energy legislation*, but also this there is; the European Commission released the Energy Union Communication in 2015,

²⁵⁸ European Parliament. *The Enlargement of the European Union*. 2016

<http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_6.5.1.html> (Retrieved 2016-11-12).

²⁵⁹ Delegation of the European Union to Turkey. *Customs Union*. 2016 <<http://avrupa.info.tr/eu-trade-and-economy/customs-union.html>> (Retrieved 2016-11-12).

²⁶⁰ European Commission. *Countries and Regions: Turkey*. 2016 <<http://ec.europa.eu/trade/policy/countries-and-regions/countries/turkey/>> (Retrieved 2016-11-21).

calling for intensified work on the establishment of a *new strategic energy partnership with Turkey*.²⁶¹

6.5.2.3. Energy Security

The establishment of a new strategic energy partnership with Turkey brings the EU and Turkey *closer in energy related matters*. The *energy dialogue* expressed the parties' willingness to cooperate further in securing and diversifying energy supplies.²⁶²

In the 'Turkey-EU High Level Energy Dialogue' in Istanbul 2016, both sides underlined the importance of Turkey as a key country for Europe's energy security (Turkey is currently a regional energy hub and transition country for the EU). Because of the Southern Gas Corridor project (see section 3.2.4), *Turkey plays a major role in the EU's energy security strategy*. Turkey is ready to fulfil its responsibilities in terms of contributing to EU's security of gas supplies through various pipeline and interconnection projects. Furthermore, Turkey is already participating physically in the electricity market after the agreement signed in January 2016 between the Turkish national transmission system operator and the European Network of Transmission System Operators for Electricity. This means that Turkey is connected to the transmission network in Europe and electricity can flow freely both ways.²⁶³ The on-going project with the Southern Gas Corridor indicates that it will not take long before the gas market is physically integrated between Turkey and the EU as well, which will result in Turkey's physical access to the European gas market.

Notable is that the High Energy Dialogue stresses the importance of both the EU's and Turkey's energy security. This statement presumes that Turkey is already *partially included in the European energy security strategy*. The EU and Turkey accentuate the mutual interest in a competitive market preserving energy supplies to an affordable price for both parties.²⁶⁴

6.5.2.4. The Process of Decision-making

In line with earlier presented models, Turkey has no influence over the rules of the customs union, or the rules it has to implement to comply with in accordance with the agreement establishing the EU-Turkey customs union.

6.5.3. The Turkish Model applied to the UK

The Turkish Model, as a customs union, provides for no preferential access to the IEM. However, the establishment of a new strategic energy partnership between the EU and Turkey

²⁶¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank the 25 of February 2015. Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM (2015) 80 Final.

²⁶² European Commission. *EU-Turkey High Level Energy Dialogue and Strategic Energy Cooperation*. 2015 <https://ec.europa.eu/commission/2014-2019/arias-canete/announcements/eu-turkey-high-level-energy-dialogue-and-strategic-energy-cooperation_en> (Retrieved 2016-09-20).

²⁶³ Ibid.

²⁶⁴ Ibid.

brings the latter closer to access the IEM, since Turkey is now interconnected in the electricity grid and soon to be in the pipeline interconnection. Turkey therefore needs to adopt legislation in line with EU legislation governing these interconnections (see section 3.3.2.4 regarding cross-border cooperation in the EU). In these matters Turkey and the UK is somewhat similar to each other. The UK is also physically connected to the gas market through its pipelines, and would under this model be required to adapt to EU energy legislation to regulate the interconnection. However, this option would only provide the UK *partial access to the IEM*, and no further rights or obligations under the energy security regulations than that of regulating the physical interconnections.

Additionally, a major difference between the UK and Turkey is present, as Turkey has been a *candidate to join the EU* since 1995. Accordingly, a customs union agreement is usually an option for pre-accession for a country to become a future EU Member State. It is important to mention that the EU, through the EU enlargement programme, extends certain benefits to Turkey (such as deepened cooperation in energy security matters) because of its upcoming accession as a Member State. It is therefore questionable, whether the EU would be as generous with a country like the UK de facto withdrawing its membership in the EU.

Turkey is also a candidate state for the European Energy Community,²⁶⁵ however this option will be examined later on under the Albanian Model (see section 6.7).

6.6. The Canadian Model

6.6.1. Introduction

The relationship between the EU and Canada falls within category (ii) and (iii) of the main types of agreements mentioned under bilateral agreements in section 6.2.1. The EU and its Member States, of the one part, and Canada, of the other part signed two agreements in October 2016, namely the Comprehensive Economic and Trade Agreement (CETA)²⁶⁶ and the Strategic Partnership Agreement (SPA).²⁶⁷

6.6.2. Comprehensive Economic and Trade Agreement

CETA is the most comprehensive and progressive *trade agreement* the EU has ever committed to, removing over 99 per cent of tariffs that currently hinders trade between the parties.²⁶⁸ Article 1.4 of the CETA defines the collaboration as a free trade agreement and provides for market access and liberalisation beyond the GATT.^{269,270} The scope of the CETA

²⁶⁵ Report from the Commission to the European Parliament, the Council and the European Economic and Social Committee of November 2011 on Implementation of the Communication on Security of Energy Supply and International Cooperation and of the Energy Council COM/2013/638 Final.

²⁶⁶ Comprehensive Economic and Trade Agreement of 14 September 2016 between Canada, of the one part, and the European Union and its Member States, of the other part. COM (2016) 470 Final.

²⁶⁷ Strategic Partnership Agreement (SPA) of 5 August 2016 between the European Union and its Member States, of the one part, and Canada, of the other part. JOIN/2015/0010 final – NLE/2015/0073.

²⁶⁸ Council of the European Union. *EU-Canada Summit, Brussels, 30/10/2016*. 2016

<<http://www.consilium.europa.eu/en/meetings/international-summit/2016/10/30/>> (Retrieved 2016-11-01).

²⁶⁹ European Commission. *Bilateral Investment Dialogues and Trade Agreements*. 2016

<http://ec.europa.eu/finance/capital/third-countries/bilateral_relations/index_en.htm> (Retrieved 2016-11-01).

is broad and covers a range of areas, which will not be covered in this thesis due to little relevance for the evaluation of energy security matters.²⁷¹

6.6.2.1. Strategic Partnership Agreement

The EU-Canada SPA was adopted to deepen and broaden the scope of the bilateral cooperation on a range of issues. Once ratified, it will form the base upon, which the EU-Canada political relations will be based. Together with the CETA, the SPA will take EU and Canada relations to a new level of intensified and structured engagement.²⁷²

6.6.2.2. Access to the IEM and Energy Security

Canada has *access to the internal market* through the CETA. This access is however *restricted to certain areas* such as goods and services. Because of the geographical location of Canada there is little to mention regarding energy related matters. Article 12 of the SPA however stresses energy related concerns, and paragraph 6 provides for the following:

“The Parties recognise the importance of the energy sector to economic prosperity and international peace and stability. They agree on the need to improve and diversify energy supplies, promote innovation and increase energy efficiency in order to strengthen energy opportunity, energy security, and sustainable and affordable energy. The Parties shall maintain a high-level dialogue on energy and continue to collaborate through bilateral and multilateral means in order to support open and competitive markets, share best practices, promote science-based, transparent regulation, and discuss areas of cooperation on energy issues.”

The CETA and the SPA provide for a *comprehensive cooperation in trade and also addresses the importance of energy security*. However, Canada retains *no access to the IEM and is under no protection of EU legislation governing the secure supply of gas*.

6.6.3. The Canadian Model Applied to the UK

The Canadian Model is similar to the Swiss Model in many respects and Canada was chosen specifically to give an example of a *free trade agreement* and a *partnership agreement* concluded between the EU and a third country. The Swiss Model consists of a broad network of accession agreements and sectorial bilateral agreements, providing Switzerland with certain access to the internal market, demanding the country to apply a vast majority of EU legislation. The Canadian Model however, unlike the Swiss Model, provides that an extensive

²⁷⁰ Both the EU and Canada are members of the WTO and therefore obliged to apply provisions under the GATT (see chapter five) and Article 1.4 of the CETA expresses that the free trade agreement has been established in conformity with Article XXIV of the GATT 1994.

²⁷¹ Areas covered by the CETA is available in the Explanatory Memorandum of the Decision of the Council Decision of 5 July 2016 on the provisional application of the Comprehensive Economic and Trade Agreement between Canada of the one part, and the European Union and its Member States, of the other part, COM (2016) 470 Final. 2016/0220(NLE).

²⁷² Government of Canada. *Strategic Partnership Agreement (SPA)*. 2016

<http://www.international.gc.ca/world-monde/international_relations-relations_internationales/spa-aps.aspx?lang=eng> (Retrieved 2016-11-02).

amount of EU legislation would cease to apply if this model were to be negotiated. Another major difference is also that Switzerland, unlike Canada, is participating in the EFTA.

The Canadian Model entails the negotiation of a free trade agreement with the EU post-withdrawal, in order to gain access to the internal market (for goods, and to some extent for services). The market access is however not as broad as for Switzerland or the Member States participating in the EU/EEA.²⁷³ Another considerable aspect is also that the UK, under the Canadian Model, would have little, if any influence over internal market legislation.

The Canadian Model provides the option to negotiate specific energy matters with the EU. Unlike Canada, the UK is already physically connected into the European gas market, and highly dependent on gas imports from continental Europe. As with the Strategic Partnership Agreement, enhancing a deeper cooperation, the UK could endeavour to conclude specific provisions addressing the secure supply of gas. The risk is however, that this would only guarantee the UK energy dialogues and no specific obligations – substantive actions – for the EU to follow the aims set out between the parties.

As with the Swiss Model, this model would be very time demanding for all parties involved, and would probably take longer to negotiate than the two years provided for in Article 50 of the TEU. In the end, it all comes down to in what areas the UK has an interest to conclude a deal with the EU, and whether the EU has a mutual interest for an agreement in this specific area. A free trade deal is however of *no interest when addressing energy security matters*, other than the fact that the EU and the UK *could negotiate preferential conditions governing trade in gas between the parties*.²⁷⁴

As with the Swiss Model, the UK would under the Canadian Model, end up in the same position within energy related matters as if it had undertaken a unilateral withdrawal or was to be unsuccessful in negotiating a withdrawal agreement within the timeframe provided for in Article 50 of the TEU. Accordingly, if the UK aims to negotiate the Canadian Model the UK would have to *regulate energy security individually*, and therefore the analysis undertaken in chapter five, the bilateral- and multilateral agreements, would be the approach for the UK to secure its supply of gas under this option.

²⁷³ This option is dependent on whether the UK takes part in the WTO or not, since there are some restrictions to free trade agreements. Member States of the WTO that enters into a regional integration arrangement through which they grant each other more favourable terms and conditions than that of other Member States departs from the fundamental objective of non-discrimination expressed in Article 1 of the GATT (see section 5.2.2.1.1). WTO members are however allowed to conclude such agreements under specific conditions (Article XXIV of GATT formation and operation of customs unions and free trade areas covering goods, Article V of GATT in the area of trade in services and the Enabling Clause referring to preferential trade arrangements in trade in goods between developing countries). Available at: World Trade Organisation. *The WTO's Rules*. <https://www.wto.org/english/tratop_e/region_e/regrul_e.htm> (Retrieved 2016-09-18).

²⁷⁴ The EU and the UK can negotiate better conditions than those provided in the GATT (see footnote 273).

6.7. The Albanian Model

6.7.1. Introduction

The relationship between the EU and Albania is diversified. Firstly, Albania participates as a *CS in the Energy Community* mentioned in section 6.2.2. Its participation in the Energy Community is the reason for including Albania in this study.²⁷⁵ Secondly, it is however mentionable that the EU and Albania have concluded a Stabilisation and Association Agreement (SAA),²⁷⁶ which falls within category (ii) of the main types of agreements under bilateral agreements mentioned in section 6.2.1. As with Turkey, Albania has applied for accession to EU membership. The association agreement is concluded to strengthen the parties' cooperation and establish a closer relationship based on reciprocity and mutual interest, which would allow Albania to further extend its relations with the EU. The association agreement also addresses energy matters; Article 107 of the SAA provides:

“Energy Cooperation shall focus on priority areas related to the Community acquis in the field of energy [...] it shall be based on the signed regional Energy Community Treaty with a view to the gradual integration of Albania into Europe’s energy markets”

6.7.2. Energy Community

The Energy Community is an international organisation containing the EU, represented by the European Commission, and the countries of Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Kosovo, Moldova, Montenegro, Serbia and Ukraine; these countries are known as the CS (mentioned in section 3.2.2).²⁷⁷ The Treaty establishing the Energy Community was signed in October 2005 and entered into force in July 2006. The Energy Community Treaty was valid until July 2016, but was extended until 2026 by the unanimous agreement of the Ministerial Council, which is the highest decision-making body of the Energy Community.²⁷⁸

The objective of the Energy Community is to expand the EU's IEM to neighbouring countries presented in the Preamble of the Energy Community Treaty.²⁷⁹ The Energy Community Treaty requires all CS to adopt EU energy legislation, creating an *expanded internal market for energy encompassing EU and CS*. In doing so the Energy Community has developed its own body of law, known as the Energy Community acquis, which all CS must transpose into its national legislation and subsequently enforce according to Article 9-21 of the Energy Community Treaty.

²⁷⁵ The Albanian Model is applied to state an example of being a Contracting State in the Energy Community. As this thesis *focuses on energy security*, it is therefore only of interest to understand what the relationship as a CS with the Energy Community will mean for the UK post-withdrawal.

²⁷⁶ Stabilisation and Association Agreement between the European Communities and their Member States, of the one part, and the Republic of Albania, of the other part of 12 June 2006. COM/2006/0138 Final.

²⁷⁷ European Commission. *Energy Community*. 2016 <<https://ec.europa.eu/energy/en/topics/international-cooperation/energy-community>> (Retrieved 2016-11-07).

²⁷⁸ European Parliament. *Energy Community: Prospects and Challenges*. 2015 <[http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/569011/EPRS_BRI\(2015\)569011_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/569011/EPRS_BRI(2015)569011_EN.pdf)> (Retrieved 2016-09-18).

²⁷⁹ Energy Community Treaty 2006/500/EC.

6.7.2.1. Access to the IEM and Energy Security

All CS are obliged to comply with the EU energy acquis. It has been presented by Stephen Padgett, an academic expert in the field, that the Energy Community is not only active in transposing the ‘pre-signature acquis’ (i.e. the body of energy law in force at the time of the signature) but also the ‘dynamic acquis’ (i.e. the body of energy law recently incorporated in the field of energy in the EU). Expanding the scope of the Energy Community acquis requires a positive decision by the Ministerial Council, which endorsed the transposition of the *Third Energy Package*. This flexible mechanism has also allowed the Energy Community to incorporate new energy legislation – e.g. the *Security of Gas Supply Regulation* – and continues to allow incorporation of changes in EU energy law.²⁸⁰

6.7.3. The Albanian Model Applied to the UK

The option to become a CS in the Energy Community, as the Albanian Model implies, would require the UK to adopt the EU’s energy acquis communautaire through the ratification of the Energy Community Treaty. If the UK were to become a CS in the Energy Community post-withdrawal, the UK would *retain access to the IEM and adopt regulations thereto*. This option, would give the same result as the Norwegian Model, as the UK would have to adopt both the Gas Directive and the Security of Gas Supply Regulation, which is recognised as the two fundamental regulations in the EU in order to safeguard the secure supply of gas in the EU (see chapter three).

6.8. The Outcome of the Soft and the Grey Brexit

The *goal for the UK, presented in section 2.4, is to adopt legislative measures safeguarding the supply of gas post-Brexit*. Given this fact, it needs to be taken into consideration, that the current energy legislation applicable in the UK addresses energy security issues and provide mechanisms to attain a constant flow of gas to the UK. As presented in chapter three, the current legislative framework is not yet flawless, but at least provides a certain level of security to safeguard the supply of gas for its Member States.

If the UK were to negotiate participation as a Member State in the EEA/EFTA or as a CS in the Energy Community, the UK *would retain its preferential access to the IEM*. By negotiating either the Norwegian Model or the Albanian Model with the EU, the UK would adopt the same energy legislation as status quo (see section 6.3.3 and 6.7.3).

If the UK were to negotiate a customs union with the EU, the UK would participate in the EU’s external trade policy and to some extent harmonise regulations governing the internal market. By negotiating the Turkish Model, the UK *would partially retain its preferential access to the IEM*. This is due to the fact that Turkey gains partial access to the IEM because of its interconnection with the European electricity grid, and future interconnection with the

²⁸⁰ European Parliament. *Energy Community: Prospects and Challenges*. 2015
<[http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/569011/EPRS_BRI\(2015\)569011_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/569011/EPRS_BRI(2015)569011_EN.pdf)>
(Retrieved 2016-09-18).

European gas market. With the UK already physically interconnected to the European gas market through pipelines, its future relations with the EU could look somewhat similar to that of Turkey. The UK would, under this existing option, *indirectly have to adopt energy legislation* similar to status quo, as the physical interconnection with the European gas market and interaction between actors in the gas market needs to be harmonised (see section 6.5.3).

However, if the UK were to negotiate sectorial bilateral agreements or a free trade agreement with the EU, the UK *would not retain its preferential access to the IEM*. By negotiating either the Swiss Model or the Canadian Model, the UK would not apply the same energy legislation as status quo (see section 6.4.3 and 6.6.3). Accordingly, negotiating one of these existing options would provide for the same analysis undertaken in chapter five (see section 5.2.3), where no EU-relation within energy matters is settled.

The ‘soft’ and the ‘grey’ Brexit accordingly refer to a *continued relationship with the EU* by negotiating a withdrawal agreement, however only some of the existing models allow for the UK to retain its current preferential access to the IEM and adopt the EU’s regulations governing energy security. Accordingly, the only way to collaborate with the EU upon gas security, given these options, is for the UK to participate in the IEM. As the ‘soft’ Brexit allows the UK to retain access to the IEM, both the ‘grey’ and the ‘hard’ Brexit imply that the UK break relations with the EU upon gas security.

The ‘soft’ Brexit (the Norwegian and the Albanian and the Turkish models) where the UK retains somewhat preferential access to the IEM guarantees a legislative framework safeguarding the supply of gas. Although the ‘grey’ option (the Swiss Model and the Canadian Model) refers to a continued relationship with the EU, this option does not include a relationship with the EU upon energy security and therefore provides for the same outcome within energy matters as the ‘hard’ Brexit. Therefore, the country based models concerned as the ‘grey’ Brexit, secure gas supply through the same legislative measures as the ‘hard’ Brexit by negotiating and committing to bilateral- and multilateral trade and energy agreements with other countries than the EU’s Member States (see section 5.2.3 and 5.4).

7. Discussion of Results – Energy Security

7.1. Introduction

In the previous chapters I have studied options of the ‘hard’, the ‘grey’ and the ‘soft’ Brexit safeguarding the supply of gas and a variety of legislative measures safeguarding the supply of gas have been identified. The self-sufficiency option however, has been evaluated as an insecure option to the UK in section 5.3-5.4. Whether the other options available for the UK post-Brexit can be considered to *safeguard the supply of gas in the UK* will be discussed next.

Previously in this research I have made the distinction between the ‘hard’ Brexit on the one hand, and the ‘grey’ and the ‘soft’ Brexit on the other hand. However, after the analysis in chapter five and six I have concluded in section 6.8 that this distinction is no longer valid for energy related matters. As the examination of the existing options for the UK post-Brexit in these chapters shows that the *main distinction between the existing options available, specifically for the energy sector, is whether the UK retain the current preferential access to the IEM and adopts the regulations thereto.*

If a withdrawal agreement is negotiated with the EU not allowing the UK access to the IEM, a ‘grey’ Brexit, or if a unilateral withdrawal were undertaken by the UK, a ‘hard’ Brexit, the UK would be excluded from the current regional cooperation within energy related matters in the EU. In contrast the ‘soft’ Brexit provides for a continued cooperation with the EU in energy related matters. The following can be concluded regarding *access to the IEM* from the existing options presented in chapter five and six.

Existing options	Type of Brexit regarding the energy sector	Access to the IEM
The Norwegian Model	Soft	Yes
The Swiss Model	Grey	No
The Turkish Model	Soft	Partially*
The Canadian Model	Grey	No
The Albanian Model	Soft	Yes
Bilateral agreements	Hard	No
Multilateral agreements	Hard	No
Self-sufficiency	Hard	No

*Access with restrictions. Turkey is currently being integrated into the IEM by adopting European energy acquis for further membership accession in the EU. Turkey has also been integrated to the electricity grid and is awaiting interconnection into the pipeline market.

7.2. The Regional or the National Gas Market?

The ‘grey’ and the ‘hard’ Brexit will result in the UK regulating energy security on a *national level*, adopting its actions to the international gas market, whilst the ‘soft’ Brexit will result in the UK participating in the IEM where energy security is regulated on a *regional level*. This

section therefore discusses potential benefits and disadvantages with regulating energy security on a regional or a national level.²⁸¹

Bartłomiej Nowak indicates in his research paper that energy specialists are divided, some arguing that the liberalisation of the energy market, together with the entire range of legal instruments, may contribute to undermining energy security for countries participating in the liberalisation of the energy market. Following this argument energy experts argue that countries, as a result of the liberalisation, lose *control over the gas market decreasing energy security*.²⁸² Others argue that the liberalisation of the energy market is followed by an increased level of competition, in sectors earlier dominated by natural monopolies, which will *contribute to enhance energy security*, as there will be an increased number of gas sellers in the market.²⁸³ Following this line, it is argued that the third party access regime, regulation of natural monopolies, unbundling and the abolition of price caps²⁸⁴ in the European energy market have increased the number of gas sellers in the market. Additionally, a market with many competitors renders the gas market's functioning more *flexible*, which further leads to the promotion of competition, resulting in benefits for consumers due to a variety of choices and higher quality of services.²⁸⁵ According to theory, the larger the market is and the fewer barriers to trade within gas, the higher the level of competition and the lower the prices for end consumers will be. Kim Talus indicates in his research that it is of significant importance to remember that the pre-liberalisation era consisted of government-cantered systems with monopolies guaranteeing the secure supply of natural gas. Although this was usually done successfully in many countries, it usually resulted in over-investment with cost passed on to the end-user.²⁸⁶ This *national approach of organisation was therefore deemed economically inefficient*. The idea in the EU was therefore that a geographically larger market would provide a safety net for national problems (see section 3.2.3 and 3.3.3.3).²⁸⁷

To summarize, there are both arguments in favour of safeguarding energy on a regional ('soft' Brexit), as well as on a national level ('grey'/'hard' Brexit), and energy specialists are therefore divided on the subject. Whether these options fit the UK is greatly *dependent upon*

²⁸¹ See section 3.3.3.4 and 5.4.

²⁸² Stern, Jonathan. *Competition and Liberalisation in European Gas Markets: A Diversity of Models*. London: Royal Institute of International Affairs, 1998, p. 91 in: Nowak, Bartłomiej. Polish Gas Market in Transition – Challenges Of Liberalization in the Context of Energy Security. *OGEL*, Vol. 13, no. 2 (2015): p. 4.

²⁸³ Egenhofer, Christian and Egge, Thomas. Security of Energy Supply: A Question for Policy or the Markets? *Centre for European Policy Studies*, Vol. 41 (2001): p. 1 in: Nowak, Bartłomiej. Polish Gas Market in Transition – Challenges Of Liberalization in the Context of Energy Security. *OGEL*, Vol. 13, no. 2 (2015): p. 4.

²⁸⁴ A *price cap* regulation is a form of economic regulation generally specific to the utility industry in the UK. Price cap regulation sets a cap on the price that the utility providers can charge. Available at: Investopedia. *Price Cap Regulation*. 2016 <<http://www.investopedia.com/terms/r/revenue-cap-regulation.asp>> (Retrieved 2016-11-13).

²⁸⁵ Nowak, Bartłomiej. Polish Gas Market in Transition – Challenges Of Liberalization in the Context of Energy Security. *OGEL*, Vol. 13, no. 2 (2015): p. 5.

²⁸⁶ Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 98-99.

²⁸⁷ Von Hirschhausen, Christian, Beckers, Thorsten and Brenck, Andreas. Regulation and Long-Term Investment in Infrastructure Provision – Theory and Policy. *Utilities Policy*. Vol. 12, no. 4 (2004): p. 206-207 in: Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013, p. 98-99.

the UK's individual gas conditions. In the next section I will discuss which of the legal frameworks providing measures for gas security that may safeguard the UK's gas supplies.²⁸⁸

7.3. UK Specific Comparison of Existing Options

Chapter two identified three vital aspects of energy security. It was presented that if a country's size of domestic gas production does not cover the demand, the country is considered to be dependent on imports of gas. To provide sufficient gas, trans boundary trade needs to be enhanced to guarantee the *availability* of gas, secured through gas supply agreements or purchase of gas in the spot-market. This will allow the country of concern to diversify its gas routes. Furthermore, an import dependent country needs to guarantee the *accessibility* of gas by investing in the necessary infrastructure and transportation needs, as well as the adequate import- and storage capacity. Another aspect is the *affordability*, as a country needs to make sure that gas is not too expensive as this might restrain the possibility to safeguard the supply of gas. Although this is to prevent a *gas crisis*, the country of concern also needs to be able to cope in case of one whereby legislation should address necessary actions needed. Next, I will discuss to what extent the 'grey'/'hard' and the 'soft' Brexit meet these criteria.

7.3.1. Availability

The 'grey'/'hard' Brexit would allow the UK to decide, without the involvement of the EU, to keep gas as the key energy source in its energy mix, as well as how to *diversify its sources of energy* as the EU through the Renewable Energy Directive sets a binding target of 20 per cent final energy consumption from renewable sources by 2020.²⁸⁹ The UK could for example focus on gas trade in the LNG market, as this is not bound to the EU, in contrast to natural gas exports from continental Europe. However, whether the UK will be an attractive destination for spare LNG volumes or not, is more likely to be driven by the price of gas in the UK market, more than any other factor. The UK could also focus its gas trade in the pipeline market, importing gas from Norway rather than continental Europe, since the entire infrastructure is already in place for such transportation of gas. Gas trade in the LNG market and the pipeline market would be governed by *bilateral supply agreements* and protected against discriminatory behaviour by the application of the *GATT* and the *ECT*, under the *MFN clause (Article I:1 of the GATT and Article 29(2)(a) of the ECT)*, the *national treatment principle (Article III:1 of the GATT of the Article 29(2)(a))* and the *prohibition on quantitative restrictions (Article XI of the GATT)*.

However, the UK's gas trade would look fairly the same if it were to continue its participation with the EU in energy related matters ('soft' Brexit). Trade in the LNG market and the pipeline market with third countries (other than the EU's Member States) would also be governed by *bilateral agreements* and *protected under the provisions mentioned in the GATT*

²⁸⁸ See chapter two regarding a country's gas particularities (e.g. adequate infrastructure, storage and import capacity, domestic gas production).

²⁸⁹ Directive 2009/28/EC of the European Parliament and the Council of 23 April 2009 on the Promotion of the Use of Energy from Renewable Sources and amending and subsequently repealing Directive 2001/77/EC and 2003/20/EC.

and the ECT. However, the main difference would be that *gas trade with continental Europe would not be subjected to external tariffs, as the UK would participate in the IEM, where the EU has removed numerous of obstacles and trade barriers due to its measures creating an integrated and liberalised energy market (legal basis in Article 194 of the TFEU)*. This is a vital concern for the UK, as it currently imports a large share of gas yearly from continental Europe. Furthermore, such participation in the integrated and the liberalised European gas market is believed to create a stronger *bargaining position* for European gas companies. The IEM is said to act as a guarantor of energy security for its participating states because of its adoption of *the Third Energy Package and the Security of Gas Supply Regulation*, providing a better negotiation position in the international gas market.²⁹⁰

7.3.2. Accessibility

The UK already has mitigation against security of supply risks built into the gas infrastructure system, as the existing import infrastructure allows multiple sources of supply via its gas pipeline interconnection and LNG import facilities. It is therefore likely that the infrastructure, the connection the UK has with Norway, continental Europe and the LNG market, will continue to be used.²⁹¹ In case of a ‘grey’ or a ‘hard’ Brexit, transport of gas through these facilities will be *protected against discriminatory behaviour* in the transmission of gas, while also allowing for an *unrestricted transit of gas* during imports in accordance with the provisions adopted in *Article V of the GATT* and in *Article 7.5 of the ECT*. However, if the UK were to continue its participation with the EU in energy related matters (a ‘soft’ Brexit), the UK would also gain protection concerning cross-border interconnection in the regional market (see section 3.3.2.4).

7.3.3. During Crisis

The UK possesses *adequate import facilities* and has the possibility to respond with increased imports of gas in case of a peak-demand in the foreseeable future. The UK has a total import infrastructure capacity of some 150 billion cubic metre (bcm), whilst the country’s annual gas consumption lies between 80 and 100 bcm.²⁹² Furthermore, additional integration of the UK to gas markets is probably not necessary, although an increased demand in natural gas might require a higher storage capacity in the UK. However, the UK already *possesses excess storage capacity*, and Vivid Economics presented that there would have to be a simultaneous loss of 60-70 per cent of gas sources to cause supply interruption to domestic consumers.²⁹³ In case such a disruption occurs, the ‘grey’ and the ‘hard’ Brexit imply that the UK will be excluded from the EU’s energy security regime. With the EU’s principle of solidarity, the Member States of the EU and the CS of the Energy Community are *obliged to assist each*

²⁹⁰ Nowak, Bartłomiej. Polish Gas Market in Transition – Challenges of Liberalization in the Context of Energy Security. *OGEL*, Vol. 13, no. 2 (2015): p. 2.

²⁹¹ See chapter 2, section 5.2.1, section 5.2.3 and section 5.4.

²⁹² Kopp, Sandu-Daniel. *Politics, Markets and EU Gas Supply Security: Case Studies of the UK and Germany*. Wiesbaden: Springer, 2015, p. 124-126.

²⁹³ Vivid Economics. *The Impact of Brexit on the UK Energy Sector: An Assessment of the Risks and Opportunities for Electricity and Gas in the UK*. 2016 <<http://www.vivideconomics.com/wp-content/uploads/2016/03/VE-note-on-impact-of-Brexit-on-the-UK-energy-system.pdf>> (Retrieved 2016-09-16).

other during a supply shock.²⁹⁴ Accordingly, the UK could face security of supply risks in the longer term, due to the *exclusion from the European energy security regime*. The EU is not obliged to assist third countries during supply shocks and this could affect the UK negatively during a shortage in gas supplies or when additional gas is needed for peak demands (e.g. cold weather). To enhance the secure supply of natural gas the UK Government would therefore have to aim to diversify gas routes and lower the dependence on gas coming from continental Europe by incentivising gas trade through bilateral supply agreements, discussed in section 5.2.1 (e.g. with Norway or Qatar).

Additionally, in line with chapter three, another important aspect is the preparation of risk assessments, preventive action plans and emergency plans, which require *all Member States to identify energy security risks together in accordance with Article 4, 5, 9 and 10 of the Security of Gas Supply Regulation*. By participating in the IEM the UK would therefore not bare the burden of energy security itself, but rather cooperate to access gas reserves and safeguard the supply of gas together with the EU. The general consensus in the UK is that the country's growing import dependence represents a serious challenge. However, despite the risk of exclusion it is presented by Sandu-Daniel Kopp that *the UK nonetheless has means to meet emergency supply situations. Imports have not been an outspoken supply challenge for the UK, because of the construction of extensive gas import infrastructure as well as the flourished LNG gas trade*.²⁹⁵ Gas supply emergency events since the year of 2000 have proven the UK to be able to react to extreme gas supply and demand challenges.²⁹⁶ However, this might change in the future due to higher competition from gas-hungry economies (e.g. Asia), and the change of perspective from major gas producing countries (e.g. Russia) towards the east.

7.3.4. Affordability

Additionally, to what has been mentioned above, gas supply emergency events since 2000 have proven the UK to be able to react to extreme supply and demand challenges. Although the UK has succeeded in ensuring the accessibility of gas, *the affordability of gas remains a concern*. Regardless of its participation in the IEM prices have become too volatile.²⁹⁷ The UK's current framework does not allow absorbing any sudden incidents; for example, the fire at Rough storage facility in 2006 pushed the consumer price for gas up for many months.²⁹⁸

²⁹⁴ *The Solidarity Principle*, established by the EU, ensures solidarity among Member States in case of an emergency (e.g. supply shocks). EU countries are obliged to help out a neighbouring EU country if they are experiencing gas supply trouble. In the event of a gas crisis in a Member State, neighbouring countries will ensure the gas supply to households, essential services such as healthcare and district heating. Available at: European Commission. *New Rules to Boost Gas Supply Security and Solidarity*. 2016 <<https://ec.europa.eu/energy/en/news/new-rules-boost-gas-supply-security-and-solidarity>> (Retrieved 2016-09-20).

²⁹⁵ Kopp, Sandu-Daniel. *Politics, Markets and EU Gas Supply Security: Case Studies of the UK and Germany*. Wiesbaden: Springer, 2015, p. 169.

²⁹⁶ *Ibid.*

²⁹⁷ Heffron, Raphael J. *Energy Law: An Introduction*. Springer, 2014, p. 44-45.

²⁹⁸ Kopp, Sandu-Daniel. *Politics, Markets and EU Gas Supply Security: Case Studies of the UK and Germany*. Wiesbaden: Springer, 2015, p. 169.

However, the price of gas is a matter for the market and will not be greatly affected by whether the UK participates in the IEM or not.

Another factor important to mention regarding cost implications is that if the UK undertakes a unilateral withdrawal it would be subjected to *drastic changes* in the energy sector due to the termination of the current energy legislation. If the UK however succeeds to negotiate a continued participation in the IEM and therefore continues to adopt regulations thereto, it would not be subjected to any legislative changes in the energy sector. As *cost implications* are often driven by drastic changes, this latter option would probably be less keen to increase the price of gas as a commodity being imported by the UK.

Not accessing the IEM and adopting the regulations thereto might pose a *considerable risk* for the UK to safeguard its supply of gas since it is acting outside the compliance of the EU's energy security regime, which has proven to provide its members with a secure supply of gas. In line with the discussion above however there are aspects that suggest that the UK is not dependent on the EU's regulation concerning energy security, for it to safeguard the supply of gas. The UK has better individual gas ratio than most other Member States of the EU. Accordingly, the 'grey' and the 'hard' Brexit might not affect the UK's ability to safeguard gas supply to the same extent than other participants in the IEM. This assumption is based on the facts that the UK *produces domestic gas, possesses adequate infrastructure* for import and storage of gas, and is *well integrated* to the pipeline- and LNG markets. These are particularities that many other Member States of the EU lack.

8. Discussion of Results – the Political Perspective of the Brexit

8.1. Introduction

As this thesis is written from a state perspective, intended to be of guiding principle to inform the decision process of the UK, this research provides existing options available to the UK, safeguarding its supply of gas post-Brexit. However, to be able to recommend a certain existing option to the UK the different existing options safeguarding the supply of gas needs to be placed within the political perspective of the Brexit, as to evaluate whether these options meet the requirements of the pro-Brexit camp.

8.2. Reasons for the UK to Leave the EU

Reasons for the UK voting out of the EU was introduced in section 1.1. One of the main reasons for the UK's residents to vote out of the EU seems to be the *free movement of persons*.²⁹⁹ When entering negotiations with the EU, there is a probability that the UK will aim to restrict this freedom. However, the UK might contrarily aim to preserve the benefits gained from the free market access in other areas, such as the free movement of goods, protecting the profit it brings to its economy.³⁰⁰ To address this complex situation, the EU is already consulting with Switzerland in these matters, since Switzerland decided to restrict the free movement of persons referred to in section 6.4.2.2. Switzerland has negotiated a 'safeguard clause' allowing them to introduce limits on the free movement of persons, if immigration becomes too high.³⁰¹ After a decision to invoke this clause, the EU determined that further cooperation with Switzerland would be dependent on this development.³⁰² The EU ensures that it does not intend to complete further deals within areas concerning market access, until Switzerland decides to repeal the restriction on the free movement of persons, meaning that it cannot 'cherry-pick' rules it find preferable for itself, as the free movement of persons is a part of a package deal also granting it access to the internal market.³⁰³ It is of importance, to keep in mind that Switzerland's case proves that restricting one area affecting the internal market also affect other areas connected to the internal market, such as energy related matters. Furthermore, there is a wish among the UK's pro Brexit camp to become an *independent sovereign state*. 'Euro sceptics' have been campaigning for a sovereign UK,

²⁹⁹ *Eight Reasons Leave Won the UK's Referendum*. BBC News. 2016-06-24 <<http://www.bbc.co.uk/news/uk-politics-eu-referendum-36574526>> (Retrieved 2016-09-09).

³⁰⁰ Although Theresa May states that the UK will be a fully independent and sovereign state, there is a probability that the UK's politicians will aim to negotiate a deal allowing the UK access to the internal market in particular areas.

³⁰¹ *Switzerland to Limit Immigration from all EU States*. BBC. 2013-04-25 <<http://www.bbc.com/news/world-europe-22285886>> (Retrieved 2016-10-31).

³⁰² Swiss Confederation, The Federal Department of Foreign Affairs. *Free Movement of Persons – functioning and current state of play*. Schweizerische Eidgenossenschaft. 2016 <<https://www.eda.admin.ch/missions/mission-eu-brussels/en/home/dossiers/personenfreizuegigkeit.html>> (Retrieved 2016-10-31).

³⁰³ Swidlicki, Pawel. *Swiss told to vote again on free movement – except this time stakes are higher*. Open Europe. 2015 <<http://openeurope.org.uk/today/blog/swiss-told-to-vote-again-on-free-movement-except-this-time-the-stakes-are-higher/>> (Retrieved 2016-10-31).

independent from European legislative framework overriding UK law, for a long time.³⁰⁴ This is a delicate balance of the pro-Brexit camp arguments and access to the IEM, and this will be discussed below.

8.3. Pro-Brexit Arguments in Contrast to the Existing Models

Breaking with the EU on energy matters, referred to as the ‘hard’ Brexit, implies per definition that there will be *no further relations with the EU* and therefore the wishes of the pro-Brexit camp will be fulfilled. Furthermore also the ‘grey Brexit’ implies that the UK will break with the EU on energy matters, however *relations with the EU will proceed* within other areas (e.g. the free movement of persons). For the ‘soft’ Brexit, *relations with the EU will proceed* both on energy matters as well as within other areas (e.g. the free movement of persons). For the ‘grey’ and the ‘soft’ Brexit it therefore need to be evaluated whether the existing models (Norway, Switzerland, Turkey, Canada and Albania) fulfil the wishes of the pro-Brexit camp.

8.3.1. Free Movement of Persons

Most EU law applies universally throughout Norway (the EEA) and Switzerland (sectorial bilateral agreements), providing most of the conditions of the free movement of persons, goods, services and capital that applies to Member States in the EU presented in section 3.2.2 regarding the internal market. At one extreme *the Norwegian Model* provides relatively little change to status quo, and this existing model would require the UK to adopt the provision on the free movement of persons as this is a provision with EEA relevance covered in Article 28 of the EEA Agreement (together with Annex V of the EEA Agreement on the free movement of workers). *The Swiss Model* also provides for the free movement of persons under Bilateral I in the Agreement on the Free Movement of Persons.³⁰⁵

Also *the Turkish Model* and *the Canadian Model* provides for the free movement of goods and to some extent the free movement of services. However, these models would allow the UK to restrain the free movement of persons, as this is neither a right nor an obligation under the customs union agreement respectively the free trade agreement.³⁰⁶ Furthermore, *the Albanian Model* as a model applied to exemplify the framework applicable for a CS participating in the Energy Community, does not provide for the free movement of persons.³⁰⁷

³⁰⁴ Mason, Rowena. *How did UK End Up Voting to Leave the European Union?* The Guardian. 2016-06-24 <<https://www.theguardian.com/politics/2016/jun/24/how-did-uk-end-up-voting-leave-european-union>> (Retrieved 2016-10-26).

³⁰⁵ Agreement between the European Community and its Member States, of the one part, and the Swiss Confederation, of the other, on the free movement of persons, June the 21st 1999, 2002 O.J. (L 114) 6

³⁰⁶ A contrario in the Customs Union Agreement 96/142/EC and the Comprehensive Economic and Trade Agreement COM (2016) 470 Final.

³⁰⁷ This thesis *focuses on energy security* and Albania is mainly chosen to state an example on a Contracting State in the Energy Community. Other relations that Albania has with the EU are irrelevant since it is just the relationship in energy related matters that is being analysed in this model (see section 6.7.1). The fact that Albania aims for further integration in the internal market, and adopt the provision on the free movement of persons, is therefore not relevant for this discussion.

The following can be concluded regarding the *requirement to adopt the provision on the free movement of persons* under the existing models.

Existing options	Free movement of persons
The Norwegian Model	Yes
The Swiss Model	Yes
The Turkish Model	No
The Canadian Model	No
The Albanian Model	No

Existing options requiring the UK to allow the provision on the free movement of persons, such as *the Norwegian Model* and *the Swiss Model*, are unattractive post-Brexit as this goes against the wishes of the pro-Brexit camp to restrain the free movement of persons.

8.3.2. EU Law Overriding National Law

EU law takes precedence over national law, meaning that EU law is superior to the national laws of the Member States of the EU, referred to as the precedence principle. The precedence of EU law is confirmed in Article 288 of the TFEU, whereby a regulation shall be binding and directly applicable in all Member States. Therefore, Member States of the EU may not apply a national law that contradicts to EU law, which was enshrined by the Court of Justice of the European Union in the *Costa versus ENEL Case*.³⁰⁸

The wish of the pro-Brexit camp is to become an independent sovereign state. However, most of the existing models available for a continued relation between the EU and the UK, results in the UK adopting EU law superior to UK law. Within areas where a country allow for the application of EU law, the country of concern needs to accept that EU law will take precedent over national law in this specific matter.

The following can be concluded regarding *EU law overriding national law* under the existing models.

Existing options	EU law overriding national law	Areas of concern
The Norwegian Model	Partially	Areas covered by the EEA Agreement*
The Swiss Model	Partially	Areas covered by sectorial bilateral agreements**
The Turkish Model	Partially	Areas covered by the customs union agreement***
The Canadian Model	No	-
The Albanian Model	Partially	Areas related to the energy sector****

³⁰⁸ *Case 6/64 Flaminio Costa v ENEL* [1964] ECR 585.

* The EEA Agreements does *not cover* the following EU policies: Common Agricultural, Fisheries Policies, Customs Union, Common Trade Policy, Common Foreign and Security Policy, Justice and Home Affairs, Monetary Union (see section 6.4.2.4).

** The Sectorial Bilateral Agreements *includes* the following policies: free movement provisions, trade in agricultural products, air transport, land transport, technical trade barriers, public procurement, research cooperation, taxation savings, processed agricultural products, statistics and combating fraud, participation in the EU's MEDIA programme and the European Environment Agency, and Swiss financial contributions to economic and social cohesion in the new EU Member States (see section 6.4).

*** The Customs Union Agreement *includes* the following: free movement of goods and Common Trade Policy. However, Turkey indirect adopts EU law, whereby energy law is also included to some extent (see section 6.5.2).

**** The Energy Community Treaty *includes* the following: energy law (see section 6.7).

Accordingly, only the *Canadian Model* would fulfil the wish among the pro-Brexit camp to make the UK an independent sovereign state again. However, the *Albanian Model* might also be an attractive model, as this would only concern the energy sector, compared to the Norwegian, the Swiss and the Turkish models with far deeper integration.

9. Conclusion

This thesis is of importance as it is one of the first written comparative studies of potential options for Member States withdrawing from the EU. It addresses a question, which is currently being reviewed by the UK Government with many specialists trying to identify post-Brexit relations. A lot of writing upon this subject has been done in newspapers suggesting many post-Brexit relations based on the political climate and gut feelings, however this research provides the theoretical and the law aspects of what existing options there actually are for the UK within energy security post-Brexit.

The Brexit threatens the UK's ability to safeguard its supply of gas, as the UK is currently not self-sufficient in its gas supply through its domestic gas production and the current legal framework providing the UK with measures to safeguard the supply of gas, following the EU, will be terminated upon withdrawal. With the UK withdrawing from the EU, there is a need to adopt legislation with protection against gas supply shortage: the *identified problem* in this thesis is therefore the need for the UK to safeguard its supply of gas post-withdrawal. The aim of this research was to study and compare the legal aspects of the existing options available to the UK safeguarding the supply of gas, and these options were divided into two broad categories, namely I) options not involving the EU (examined in chapter five) and, II) options involving the EU (examined in chapter six). These options were compared upon their function to safeguard the supply of gas and from this comparison I came to two conclusions: Firstly, the main distinction between the Brexit options is not whether the UK participates in the EU or not, but rather *whether the UK retain preferential access to the IEM or not*, and secondly *all existing options available for the UK post-withdrawal would provide legislative measures safeguarding the supply of gas, with the exception of the self-sufficiency option*.

If the UK wants to collaborate with the Member States of the EU to safeguard its supply of gas, the UK needs to negotiate a withdrawal agreement allowing the UK to participate in the IEM and adopt the regulations thereto (the 'soft' Brexit). Through this collaboration the UK would take part in the EU's energy security regime, adopted inter alia, to provide all the participating states with a satisfactory legislative framework safeguarding the supply of gas. For the UK to retain such preferential access to the IEM, it needs to negotiate to become a Member State in the EEA or a CS in the Energy Community. The first relationship is based on a bilateral relation concluded as an associated agreement between the EU and its Member States on the one hand, and the country of concern, on the other hand, while the latter is based on a participation as a CS in the multilateral framework of the Energy Community.

Next to participating in the IEM the UK could, as if it was unsuccessful in negotiating a withdrawal agreement with the EU regarding energy related matters (the 'grey' Brexit), or if the UK withdraw unilaterally (the 'hard' Brexit), commit to multilateral trade and energy agreements for protection against discriminatory treatment in the gas market. Next to the commitment to multilateral agreements, the UK could engage in bilateral energy dialogues with supplier countries as well as incentivise gas trade in bilateral supply agreements, for example if the supplier country is not part of the multilateral agreement mentioned or if the multilateral framework is not providing sufficient security. Also discussed is the self-

sufficiency option, which provides an insecure future for the UK as it is not possible to determine at this point whether new gas fields will be discovered and whether techniques such as fracking will cover domestic gas demands in the future.

The UK can because of its particularities such as domestic gas production, interconnectedness in the gas market and adequate infrastructure, safeguard its gas supply without participating in the EU's energy security regime. However, following the arguments brought forward in this thesis I argue that it is an appealing option for the UK to negotiate a withdrawal agreement with the EU allowing for a continued participation in the regional integrated and liberalised IEM, implying a 'soft' Brexit, since 1) the UK is already physically connected to continental Europe and Norway and participation in the IEM allows for preferential access to continental Europe and Norway (since Norway is a participant in the IEM as well). Furthermore, it appears likely that the *energy market arrangements would still need to be harmonised with the EU in order to facilitate cross-border trade*. This is very similar to the Turkey case, where Turkey and the EU had to enforce regulations governing the interconnection between the parties, when Turkey was connected to the European electricity grid; 2) a 'grey' or a 'hard' Brexit is not preferred as major gas producing countries are not part of the ECT (e.g. Iran, Qatar and Saudi-Arabia) and the WTO has a poor record of lifting trade barriers (even though it aims to internationalise trade); 3) a political change (i.e. leaving the IEM) may cause fluctuating gas prices in the UK, although market forces mainly drive the price of gas and this cannot be predicted with certainty; and 4) the IEM has a higher gas demand than the UK alone and the UK will therefore have, as a participant in the IEM, a better position competing with other gas consuming giants such as China.

The 'grey' and the 'hard' Brexit therefore seem less attractive despite the UK's particularities. Although, it seems like the UK would be provided with legislative measures safeguarding the supply of gas without the involvement of the EU, retaining access to the IEM would provide the *smoothest transition for the UK in the energy sector*. It must be mentioned though that gas is a commodity, which is very sensitive to political instability. Therefore, regardless of whether the UK chooses to withdraw unilaterally or negotiate a withdrawal agreement, all existing options presented will always impose a potential risk for the UK to safeguard its supply of gas, which is clearly highlighted by earlier occurred gas crises.

9.1. Recommendations

Whether any of the existing options will be *possible* for the UK to negotiate is beyond the academic scope of this thesis, as the negotiation consist of two parties and the intention of the EU are not yet known. However, *according to the arguments forwarded in the previous section, it is preferable for the UK to engage in the regional energy collaboration with the EU in order to safeguard its supply of gas post-Brexit*. Existing options allowing the UK preferential access to the IEM and the adoption of the EU's energy security regulations are the Norwegian Model and the Albanian Model, as well as the Turkish Model to some extent. In order for this thesis to be of guidance for the UK Government, the existing options need to be placed within the political perspective of Brexit presented in chapter 8, in order to evaluate whether they meet the requirements of the pro-Brexit camp.

Existing options	Type of Brexit regarding the energy sector	Access to the IEM	Free movement of persons	EU law overriding national law
The Norwegian Model	Soft	Yes	Yes	Partially
The Swiss Model	Grey	No	Yes	Partially
The Turkish Model	Soft	Partially	No	Partially
The Canadian Model	Grey	No	No	No
The Albanian Model	Soft	Yes	No	Partially
Bilateral agreement	Hard	No	No	No
Multilateral agreement	Hard	No	No	No
Self-Sufficiency	Hard	No	No	No

The Norwegian Model is unattractive to the UK, as this model requires the UK to adopt the vast majority of the EU's legislation, including the free movement of persons. The Turkish Model is fairly unattractive, as it deprives the UK of sovereignty on external trade policy, although allowing the UK to restrict the free movement of persons. However, the Albanian Model, where the UK applies to become a CS in the Energy Community, neither demands the UK to accept the free movement of persons, nor deprive the UK of its sovereignty on external trade policy. The Albanian Model is however not flawless, as it would demand the UK to accept that EU law takes precedence in energy policy. Although this is against the wishes of the pro-Brexit camp, it needs to be highlighted that this is just within energy matters, and that this 'flaw' is actually one of the strengths of this model, as a regional energy market has proven to be *successful within safeguarding a participating state's supply of gas*.

10. Bibliography

International Agreements

Agreement between Japan and the Republic of Indonesia for an Economic Partnership of August 2017 (JIEPA).

Agreements establishing an Association between the European Economic Community and Turkey of 12 September 1963. OJ L NO 361/29.

Agreement on the European Economic Area of 17 March 1997. OJ L NO L 1, 3.1.1994.

Comprehensive Economic and Trade Agreement of 14 September 2016 between Canada, of the one part, and the European Union and its Member States, of the other part. COM (2016) 470 Final.

Stabilisation and Association Agreement between the European Communities and their Member States, of the one part, and the Republic of Albania, of the other part of 12 June 2006. COM/2006/0138 Final.

Strategic Partnership Agreement (SPA) of 5 August 2016 between the European Union and its Member States, of the one part, and Canada, of the other part. JOIN/2015/0010 final – NLE/2015/0073.

Treaties

Convention Establishing the European Free Trade Association of 1 July 1960. Rue de Varembe, Geneva.

General Agreement on Tariffs and Trade of 15 April 1947 (1947) LT/UR/A-1A/1/GATT/1.

International Energy Charter Treaty of May 2015. The Hague, the Netherlands.

Vienna Convention on the Law of Treaties of 23 May 1969. 1155 UNTS 331 [Vienna Convention].

Primary Legislation of the European Union

Consolidated version of the Treaty on the European Union of the 26 October 2012, OJ C 326.

Consolidated version of the Treaty on the Functioning of the European Union of the 26 October 2012, OJ C 326.

Secondary Legislation of the European Union

Communication

Communication from the Commission to the European Parliament and the Council the 28 of May 2014. European Energy Security Strategy, COM (2014) 330 Final.

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank the 25 of February 2015. Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM (2015) 80 Final.

Decision

Decision No 1/95, of the EC-Turkey Association Council of 22 December on Implementing the Final Phase of the Customs Union 96/142/EC [1996] OJ L 035.

Decision No 98/181/EC, ECSC, Euratom, of the Commission and of the Council of 23 September 1997 on the conclusion, by the European Communities, of the Energy Charter Treaty and the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects [1998] OJ L 69.

Decision No 2006/500/EC, of the Council of 29 May 2006 on the conclusion by the European Community of the Energy Community Treaty [2006] OJ L 335.

Decision of the Council Decision of 5 July 2016 on the provisional application of the Comprehensive Economic and Trade Agreement between Canada of the one part, and the European Union and its Member States, of the other part, COM (2016) 470 Final. 2016/0220(NLE).

Directive

Directive 2003/55/EC of the European Parliament and the Council of 26 June 2003 concerning Common Rules for the Internal Market in Natural Gas and repealing 98/30/EC.

Directive 2009/28/EC of the European Parliament and the Council of 23 April 2009 on the Promotion of the Use of Energy from Renewable Sources and amending and subsequently repealing Directive 2001/77/EC and 2003/20/EC.

Directive 2009/72/EC of the European Parliament and the Council of 13 July 2009 concerning Common Rules for the Internal Market in Electricity and repealing Directive 2003/54/EC.

Directive 2009/73/EC of the European Parliament and the Council of 13 July 2009 concerning Common Rules for the Internal Market in Natural gas and repealing Directive 2003/55/EC.

Green Paper

European Commission. Green Paper on the Security of Energy Supply of the 29 November 2000. Towards a European Strategy for the Security of Energy Supply. COM (2000) 769 Final.

Regulation

Regulation, No 713/2009 of 13 July 2009 of the European Parliament and of the Council establishing an Agency for the Cooperation of Energy Regulators.

Regulation (EC) No 714/2009 of 12 July 2009 of the European Parliament and the Council on Conditions for Access to the Network for Cross-border Exchanges in Electricity and repealing Regulation (EC) No 1228/2003.

Regulation (EC) No 715/2009 of 13 July 2009 of the European Parliament and the Council on Conditions for Access to the Natural Gas Transmission Networks and repealing Regulation (EC) No 1775/2005.

Regulation (EU) No 994/2010 of 20 October 2010 concerning Measures to Safeguard Security of Gas Supply repealing Council Directive 2004/67/EC.

Regulation, No 0030/2016 of 16 February 2016 of the European Parliament and of the Council concerning Measures to Safeguard the Security of Gas Supply and repealing Regulation (EU) No 994/2010. COM (2016) 52 Final.

Report

Report from the Commission to the European Parliament, the Council and the European Economic and Social Committee of November 2011 on Implementation of the Communication on Security of Energy Supply and International Cooperation and of the Energy Council COM/2013/638 Final.

Working Document

The Internal Energy Market. Commission Working Document of the 2 May 1988, COM (88) 238 Final.

Case Law European Court of Justice

Case 6/64 Flaminio Costa v ENEL [1964] ECR 585.

Case 72/83 Campus Oil [1984] ECR 2727.

Declaration

The Bratislava Declaration and Roadmap of 16 September 2016 [The Bratislava Declaration].

National Law

European Communities Act 1972 (c. 68), an act to make provision in connection with the enlargement of the European Communities to include the United Kingdom, together with (for certain purposes) the Channel Islands, the Isle of Man and Gibraltar, enacted the 17th of October 1972.

Literature

Barnard, Catherine. *The Substantive Law of the EU – The Four Freedoms*, 4 ed. Oxford University Press, 2013.

Cattaneo, Olivier. The Political Economy of PTAs. In *Bilateral and Regional Trade Agreements*. Lester, Simon and Mercurio, Bryan (ed.), p. 28-51. Cambridge University Press, 2009.

Cross, Eugene and Delvaux, Bram and Hancher, Leigh and Slot, Piet Jan and Van Calster, Geert and Vandenberghe, Wim. EU Energy Law. In *Energy Law in Europe - National, EU, and International Regulation*, Roggenkamp, Martha and Redgwell, Catherine and Del Guayo, Inigo and Rønne, Anita (ed.), p. 225-382. 2 ed., Oxford University Press, 2008.

Evans, David. Bilateral and Plurilateral. PTAs. In *Bilateral and Regional Trade Agreements*. Lester, Simon and Mercurio, Bryan (ed.), p. 52-77. Cambridge University Press, 2009.

Foster, Nigel. *EU Law*. 2 ed. New York: Oxford University Press, 2010.

Haghighi, Sanam Salem. *Energy Security: The External Legal Relations of the European Union with Major Oil and Gas Supplying Countries*. Oxford: Hart Publishing, 2007.

Hartley, Trevor C. *European Union Law in a Global Context*. Cambridge: University Press, 2004.

Heffron, Raphael J. *Energy Law: An Introduction*. Springer, 2014.

Hobér, Kaj. Recent Trends in Energy Disputes. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 225-240. Edward Elgar Publishing Limited, 2014.

Johnstone, Angus and Block, Guy. *EU Energy Law*. Oxford University Press, 2012.

Konoplyanik, Andrey A. Multilateral and Bilateral Energy Investment Treaties: Do We Need a Global Solution? The Energy Charter Treaty as an Objective Result of the Evolution of International Energy Markets and Instruments of Investment Protection and Stimulation. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 79-123 . Edward Elgar Publishing Limited, 2014.

Kopp, Sandu-Daniel. *Politics, Markets and EU Gas Supply Security: Case Studies of the UK and Germany*. Wiesbaden: Springer, 2015.

Marin Duran, Gracia and Morgera, Elisa. *Environmental Integration in the EU's External Relations: Beyond Multilateral Dimensions*. Oxford: Hart Publishing, 2012, p. 60.

Penttinen, Sirja-Leena. The Role of the Court of Justice of the European Union in the Energy Market Liberalization In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 241-271. Edward Elgar Publishing Limited, 2014. p. 242.

Pusterla, Elia. *The Credibility of Sovereignty – the Political Fiction of a Concept*. Springer, 2016.

Ralf, Michaels. The Functional Method of Comparative Law. In: *The Oxford Handbook of Comparative Law*. Reimann, Mathias and Zimmermann, Reinhard (ed.) p. 339-382. 2006.

Roberts, Peter and Maalouf, Ruchdi. Contractual Issues in the International Gas Trade: LNG – the Key to the Golden Age of Gas. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 329-358. Edward Elgar Publishing Limited, 2014.

Selivanova, Yulia. The WTO Agreements and Energy. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 275-307. Edward Elgar Publishing Limited, 2014

Shill, Stephan W. The interface between national and international energy law. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 44-76. Edward Elgar Publishing Limited, 2014.

Siddiky, Ishrak Ahmed. The International Legal Instruments for Cross-border Pipelines. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 308-328. Edward Elgar Publishing Limited, 2014.

Stern, Jonathan. *Competition and Liberalisation in European Gas Markets: A Diversity of Models*. London: Royal Institute of International Affairs, 1998.

Stern, Jonathan. *Security of European Natural Gas Supplies: The impact of Import Dependence and Liberalization*. London: RIIA, 2002.

Talus, Kim. *EU Energy Law and Policy: A Critical Account*. UK: Oxford University Press, 2013.

Talus, Kim and Hünt, Michaël. Ownership Unbundling: What End to the Saga? In *European Energy Law, Droit Européen de l'Énergie*. Buschle, Dirk, Hirsbrunner, Simon and Kaddous, Christine (ed.). Helbing Lichtenhahn, 2011.

Talus, Kim. Internationalization of Energy Law. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 3-17. Edward Elgar Publishing Limited, 2014.

Yafimava, Katja. Transit: The EU Energy Acquis and the Energy Charter Treaty. In *Research Handbook on International Energy Law*, Talus, Kim (ed.), p. 593-623. Edward Elgar Publishing Limited, 2014.

Zweigert, Konrad and Kotz, Hein. *An Introduction to Comparative Law*. Oxford: Clarendon Press. 1998.

Articles

Atwater, Gordon and Riva, Joseph. Petroleum. *Encyclopædia Britannica* (2012).

De Hauteclocque, Adrien and Talus, Kim. Third Party Access: A Comparative Study on Access Regimes in EU Electricity Grids and Natural Gas Pipelines. *OGEL*, Vol. 9, no. 3 (2011).

De Jong, Sijbren and Widdershoven, Cyril and Kertysova, Katarina and Miladinova, Vesela and Auping, Willem. Running out of Gas – Natural Gas Diversification Efforts in the EU Neighborhood. *OGEL*, Vol. 12, no. 6 (2015).

Dincer, Imbrahim. Renewable Energy and Sustainable Development: a crucial review. *Renewable and Sustainable Reviews*. Vol. 4, no. 2 (2002).

Egenhofer, Christian and Egge, Thomas. Security of Energy Supply: A Question for Policy or the Markets? *Centre for European Policy Studies*, Vol. 41 (2001).

European Commission. Quarterly Report on European Gas Markets. *DG Energy*. Vol. 7, no. 3 (2014).

Hunter, Tina. Comparative Law as an Instrument in Transnational Law: the example of Petroleum Regulation. *Bond Law Review*. Vol. 21 (2009).

Lazowski, Adam. How to Withdraw from the European Union? Confronting hard reality. *European Law Review*. (2013).

Leal-Arcas, Rafael, Costantino Grasso, and Juan, Alemany Ríos. Multilateral, Regional and Bilateral Energy Trade Governance. *Renewable Energy L. & Pol'y Rev.* (2015).

Letki, Natalia. Democratic Deficit. *Encyclopædia Britannica* (2016).

Levine, Steven, Carpenter, Paul and Thapa, Anul. Understanding Natural Gas Markets. *The Brattle Group Inc.* American Petroleum Institute (2014).

Nicolaides, Phedon. Withdrawal from the European Union: A Typology of Effects. *Maastricht Journal*, Vol. 20. (2013).

Nowak, Bartłomiej. Polish Gas Market in Transition – Challenges Of Liberalization in the Context of Energy Security. *OGEL*, Vol. 13, no. 2 (2015).

Menon, Anand and Fowler, Brigid. Hard or Soft? The Politics of Brexit. *National Institute Economic Review*. Vol. 1, no. 238 (2016).

Oyewunmi, Tade. Energy Security and Gas Supply Regulation in the European Union's Internal Market. *Eur. Networks L. & Reg. Q.* Vol. 3 (2015).

Poptcheva, Eva-Maria. Article 50: Withdrawal of a Member State from the EU. *European Parliamentary Research Service, The European Parliament* (2016).

Razak, Adilah Adb. Understanding Legal Research. *Integration & Dissemination*. Vol. 4. (2009).

Talus, Kim. One Cold Winter Day? EC Competition Law and Security of Supply. *OGEL*, Vol. 5, no. 4 (2007).

Von Hirschhausen, Christian, Beckers, Thorsten and Brenck, Andreas. Regulation and Long-Term Investment in Infrastructure Provision – Theory and Policy. *Utilities Policy*. Vol. 12, no. 4 (2004).

Wilson, Alex. Energy Community – Prospects and Challenges. *European Parliamentary Research Service, The European Parliament* (2015).

Yergin, Daniel. Energy Security in the 1990s. *Foreign Affairs*, Vol. 67, no. 1 (1998).

Public Sources

Asia-Pacific Economic Cooperation

Asia Pacific Energy Research Centre. *A Quest for Energy Security in the 21st Century*. 2007, p. 6 <http://aperc.iecej.or.jp/file/2010/9/26/APERC_2007_A_Quest_for_Energy_Security.pdf>

Canada Government

Government of Canada. *Strategic Partnership Agreement (SPA)*. 2016 <http://www.international.gc.ca/world-monde/international_relations-relations_internationales/spa-aps.aspx?lang=eng> (Retrieved 2016-11-02).

Energy Community

Energy Community. *Stress tests*. 2016 <https://www.energy-community.org/portal/page/portal/ENC_HOME/AREAS_OF_WORK/Instruments/Security_of_Supply/Stress_tests> (Retrieved 2016-11-11).

European Economic Area

European Economic Area. *How EU Acts Become EEA Acts and the Need for Adaptions*. 2013. <<http://www.efta.int/media/documents/eea/1113623-How-EU-acts-become-EEA-acts.pdf>> (Retrieved 2016-11-19).

European Free Trade Association

European Free Trade Association. *EEA Agreement*. <<http://www.efta.int/eea/eea-agreement>> (Retrieved 2016-10-02).

European Free Trade Association. *The European Free Trade Association*. <<http://www.efta.int/eea/eea-agreement>> (Retrieved 2016-10-02).

European Commission

European Commission. *Bilateral Investment Dialogues and Trade Agreements*. 2016 <http://ec.europa.eu/finance/capital/third-countries/bilateral_relations/index_en.htm> (Retrieved 2016-11-01).

European Commission. *Countries and Regions: Turkey*. 2016 <<http://ec.europa.eu/trade/policy/countries-and-regions/countries/turkey/>> (Retrieved 2016-11-21).

European Commission. *Customs Union*. 2016 <https://ec.europa.eu/taxation_customs/business/calculation-customs-duties/rules-origin/customs-unions_en> (Retrieved 2016-11-03).

European Commission. *Energy Community*. 2016 <<https://ec.europa.eu/energy/en/topics/international-cooperation/energy-community>> (Retrieved 2016-11-07).

European Commission. *EU and WTO*. 2016 <<http://ec.europa.eu/trade/policy/eu-and-wto/>> (Retrieved 2016-11-17).

European Commission. *EU-Turkey High Level Energy Dialogue and Strategic Energy Cooperation*. 2015 <https://ec.europa.eu/commission/2014-2019/arias-canete/announcements/eu-turkey-high-level-energy-dialogue-and-strategic-energy-cooperation_en> (Retrieved 2016-09-20).

European Commission. *European Commission, Enlargement and Acquis*. 2016 <http://ec.europa.eu/neighbourhood-enlargement/policy/glossary/terms/acquis_en> (Retrieved 2016-12-15).

European Commission. *Internal Energy Market*. 2016 <http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_5.7.2.html> (Retrieved 2016-11-07).

European Commission. *Imports and Secure Supplies: Diverse, Affordable, and Reliable Energy from Abroad*. 2016 <<https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies>> (Retrieved 2016-11-09).

European Commission. *Market Legislation*. 2016 <<https://ec.europa.eu/energy/en/topics/markets-and-consumers/market-legislation>> (Retrieved 2016-11-10).

European Commission. *New Rules to Boost Gas Supply Security and Solidarity*. 2016 <<https://ec.europa.eu/energy/en/news/new-rules-boost-gas-supply-security-and-solidarity>> (Retrieved 2016-09-20).

European Commission. *Russia*. 2016 <<https://ec.europa.eu/energy/en/topics/international-cooperation/russia>> (Retrieved 2016-11-10).

European Commission. *Secure Gas Supplies*, 2016 <<https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies/secure-gas-supplies>> (Retrieved 2016-11-09).

European Commission. *Security of Gas Supply Regulation*. 2016 <http://europa.eu/rapid/press-release_MEMO-16-308_sv.htm> (Retrieved 2016-11-03).

European Commission. *Supplier Countries*. 2016 <<https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies/supplier-countries>> (Retrieved 2016-11-09).

European Commission. *The Internal Market: A Deeper and Fairer Internal Market*. <https://ec.europa.eu/priorities/internal-market_en> (Retrieved 2016-11-04).

European Commission. *Trade Agreements*. 2016 <http://ec.europa.eu/trade/policy/countries-and-regions/agreements/index_en.htm> (Retrieved 2016-11-18).

European Commission. *What is the Common Customs Tariff?* 2016. <https://ec.europa.eu/taxation_customs/business/calculation-customs-duties/what-is-common-customs-tariff_en> (Retrieved 2016-11-18).

European Council

Council of the European Union. *EU-Canada Summit, Brussels, 30/10/2016*. 2016 <<http://www.consilium.europa.eu/en/meetings/international-summit/2016/10/30/>> (Retrieved 2016-11-01).

Council of the European Union. Negotiation Mandate for an EU-Switzerland Institutional Framework Agreement of 6 May 2014 in Brussels. 9525/14 (OR.en) PRESSE 267.

European Network for Transmission System Operators for Gas

European Network for Transmission System Operators for Gas. <<http://www.entsog.eu>> (Retrieved 2016-11-10).

European Parliament

European Parliament. *Energy Community: Prospects and Challenges*. 2015 <[http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/569011/EPRS_BRI\(2015\)569011_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/569011/EPRS_BRI(2015)569011_EN.pdf)> (Retrieved 2016-09-18).

European Parliament. *The Enlargement of the European Union*. 2016 <http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_6.5.1.html> (Retrieved 2016-11-12).

European Parliament. *The European Economic Area (EEA), Switzerland and the North*. 2016 <http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_6.5.3.html> (Retrieved 2016-10-10).

European Union

Delegation of the European Union to Turkey. *Customs Union*. 2016 <<http://avrupa.info.tr/eu-trade-and-economy/customs-union.html>> (Retrieved 2016-11-12).

EUR-Lex. Access to European Union Law. *Withdrawal Clause* <http://eur-lex.europa.eu/summary/glossary/withdrawal_clause.html> (Retrieved 2016-09-26).

European Union. *A Europe Without Frontiers*. 2016 <https://europa.eu/european-union/about-eu/history/1990-1999_en> (Retrieved 2016-11-20).

European Union External Action. *Monaco and the EU*. 2016 <<http://www.businessdictionary.com/definition/customs-union.html>> (Retrieved 2016-11-21)

European Union External Action. *Switzerland and the EU*. 2016 <https://eeas.europa.eu/headquarters/headquarters-homepage/7700/switzerland-and-eu_en> (Retrieved 2016-10-25).

Eurostat

Eurostat. *Electricity and Heat Statistics*. 2016 <<http://ec.europa.eu/eurostat/statistics-explained/images/0/0a/Derived-heat-production-by-fuel-GWh-EU28-2014-TABLE.png>> (Retrieved 2016-11-29).

Eurostat. *Natural Gas Consumption Statistics*. 2016 <http://ec.europa.eu/eurostat/statistics-explained/index.php/Natural_gas_consumption_statistics> (Retrieved 2016-11-12).

International Energy Agency

International Energy Agency. *Energy Supply Security 2014*. 2014

<http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_PART1.pdf> (Retrieved 2016-10-21).

International Energy Agency. *Member Countries*. 2016

<<http://www.iea.org/countries/membercountries/>> (Retrieved 2016-10-25).

Jewell, Jessica. *The IEA Model of Short-term Energy Security (MOSES): Primary Energy Sources and Secondary Fuels*. International Energy Agency. 2011

<https://www.iea.org/publications/freepublications/publication/moses_paper.pdf>

Switzerland Government

Directorate for European Affairs (DEA). Swiss Confederation. *The Major Bilateral Agreements Switzerland-EU*. 2016

<https://www.eda.admin.ch/dam/dea/en/documents/fohlen/Folien-Abkommen_en.pdf> (Retrieved 2016-10-11).

Swiss Confederation. Integration Office FDFA/FDEA. *Swiss European Policy – the Bilateral Path*. 2009

<http://www.europarl.europa.eu/meetdocs/2009_2014/documents/deea/dv/2203_07/2203_07en.pdf> (Retrieved 2016-10-10).

Swiss Confederation, The Federal Department of Foreign Affairs. *Free Movement of Persons – functioning and current state of play*. Schweizerische Eidgenossenschaft. 2016

<<https://www.eda.admin.ch/missions/mission-eu-brussels/en/home/dossiers/personenfreizuegigkeit.html>> (Retrieved 2016-10-31).

Swiss Directorate For European Affairs. *Institutional Issues*. 2016

<https://www.eda.admin.ch/dam/dea/en/documents/fs/11-FS-Institutionelle-Fragen_en.pdf> Retrieved 2016-10-17).

Swiss Directorate For European Affairs. *The Major Bilateral Agreements Switzerland - EU*. 2016

<https://www.eda.admin.ch/dam/dea/en/documents/fohlen/Folien-Abkommen_en.pdf> (Retrieved 2016-10-11).

Swiss Federal Office of Energy. *Energy Negotiations between Switzerland and the EU*. 2012.

<<http://www.bfe.admin.ch/themen/00612/00618/?lang=en>> (Retrieved 2016-10-17).

Swiss Federal Office of Energy. *International Energy Policy*. 2016

<<http://www.bfe.admin.ch/themen/00526/00530/index.html?lang=en>> (Retrieved 2016-10-17).

UK Government

United Kingdom Government. *UK Energy Statistics*. 2015

<https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/513244/Press_Notice_March_2016.pdf> (Retrieved 2016-11-12).

World Energy Council

World Energy Council, *World Energy Resources – 2013 Survey*, London, 2013.

World Trade Organisation

World Trade Organisation. *Key GATT Principles*. 2016

<https://www.wto.org/english/tratop_e/envir_e/envt_rules_gatt_e.htm> (Retrieved 2016-11-17).

World Trade Organisation. *The WTO's Rules*.

<https://www.wto.org/english/tratop_e/region_e/regrul_e.htm> (Retrieved 2016-09-18).

World Trade Organisation. *Who We Are*. 2016.

<https://www.wto.org/english/thewto_e/whatis_e/who_we_are_e.htm> (Retrieved 2016-11-17).

World Trade Organisation. *World Trade Report 2014*. 2014

<https://www.wto.org/english/res_e/booksp_e/world_trade_report14_e.pdf> (Retrieved 2016-12-08).

Private Sources

BP Global. *Natural Gas: 2015 in Review*. 2015

<<http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/natural-gas.html>> (Retrieved 2016-11-12).

Capital Economics of Woodford Investment Management. *The Economic Impact of Brexit*.

2016 <<https://woodfordfunds.com/economic-impact-brex-report/>> (Retrieved 2016-09-13).

Vivid Economics. *The Impact of Brexit on the UK Energy Sector: An Assessment of the Risks and Opportunities for Electricity and Gas in the UK*. 2016

<<http://www.vivideconomics.com/wp-content/uploads/2016/03/VE-note-on-impact-of-Brexit-on-the-UK-energy-system.pdf>> (Retrieved 2016-09-16).

Electronic Newspaper

BBC News. *Fracking in Lancashire Given Go-ahead by Government*. 2016-10-06

<<http://www.bbc.com/news/uk-england-lancashire-37567866>> (Retrieved 2016-11-14).

BBC News. *Total Turns on Gas from West of Shetland Laggan and Tormore Fields*. 2016-02-08 <<http://www.bbc.com/news/uk-scotland-north-east-orkney-shetland-35516144>>

(Retrieved 2016-11-30).

Brexit: Theresa May to trigger Article 50 by end of March. BBC News. 2016-10-02 <<http://www.bbc.com/news/uk-politics-37532364>> (Retrieved 2016-10-16).

Chu, Ben. *Why did People Really Vote for Brexit? If we don't face the psychological reasons, we'll never bring Britain together.* Independent. 2016-06-26 <<http://www.independent.co.uk/voices/brexit-eureferendum-why-did-people-vote-leave-immigration-nhs-a7104071.html>> (Retrieved 2016-09-09).

Eight Reasons Leave Won the UK's referendum. BBC News. 2016-06-24 <<http://www.bbc.co.uk/news/uk-politics-eu-referendum-36574526>> (Retrieved 2016-09-09).

Foster, Peter and Rothwell, James. *Bratislava Summit: Europe's 'United front' proves a fragile façade as leaders refuse to share a stage.* The Telegraph. 2016-09-16 <<http://www.telegraph.co.uk/news/2016/09/16/eu-bratislava-summit-donald-tusk-calls-for-sober-and-brutally-ho1/>> (Retrieved 2016-10-21).

Lyengar, Rishi. *These 3 facts explain why the UK held the Brexit Referendum.* Time. 2016-06-24 <<http://time.com/4381184/uk-brexit-european-union-referendum-cameron/>> (Retrieved 2016-10-06).

Mason, Rowena. *How did UK End Up Voting to Leave the European Union?* The Guardian. 2016-06-24 <<https://www.theguardian.com/politics/2016/jun/24/how-did-uk-end-up-voting-leave-european-union>> (Retrieved 2016-10-26).

Swidlicki, Pawel. *Swiss told to vote again on free movement – except this time stakes are higher.* Open Europe. 2015 <<http://openeurope.org.uk/today/blog/swiss-told-to-vote-again-on-free-movement-except-this-time-the-stakes-are-higher/>> (Retrieved 2016-10-31).

Switzerland to Limit Immigration from all EU States. BBC. 2013-04-25 <<http://www.bbc.com/news/world-europe-22285886>> (Retrieved 2016-10-31).

The Guardian. *EU tells Swiss no Single Market Access if no Free Movement of Citizens.* 2016-07-03 <<https://www.theguardian.com/world/2016/jul/03/eu-swiss-single-market-access-no-free-movement-citizens>> (Retrieved 2016-11-05).

Wheeler, Brian and Hunt, Alex. *Brexit: All You Need to Know About the UK Leaving the EU.* BBC News. 2016-09-01 <<http://www.bbc.co.uk/news/uk-politics-32810887>> (Retrieved 2016-09-09).

Internet

British Gas. *Where Does UK Gas Come From?* 2015 <<https://www.britishgas.co.uk/the-source/our-world-of-energy/energys-grand-journey/where-does-uk-gas-come-from>> (Retrieved 2016-12-01).

Business Dictionary. *Customs Union*.

<<http://www.businessdictionary.com/definition/customs-union.html>> (Retrieved 2016-11-21).

Energy Information Administration (EIA). *Norway's Oil Production Increases, but new Investment is declining* <<https://www.eia.gov/todayinenergy/detail.php?id=23372>> (Retrieved 2016-11-11).

Gas generation, Energy Industry. *Energy UK*. 2015 <<http://www.energy-uk.org.uk/energy-industry/gas-generation/gas-supplies.html>> (Retrieved 2016-09-13).

Investopedia. *Price Cap Regulation*. 2016 <<http://www.investopedia.com/terms/r/revenue-cap-regulation.asp>> (Retrieved 2016-11-13).

LNG Industry. *Britain Position for Additional LNG as Reloads Begin* <<https://www.lngindustry.com/special-reports/23072015/britain-positions-for-additional-lng-as-reloads-begin-/>> (Retrieved 2016-11-25).

Natgas. *The Transportation of Natural Gas*. 2013.

<<http://naturalgas.org/naturalgas/transport/>> (Retrieved 2016-11-01).

Norwegian Petroleum Directorate. *Undiscovered Sources*. 2016.

<<http://www.npd.no/en/Publications/Resource-Reports/2016/Chapter-3/>> (Retrieved 2016-09-04).

Shell Global, *Liquefied Natural Gas (LNG)* <<http://www.shell.com/energy-and-innovation/natural-gas/liquefied-natural-gas-lng.html>> (Retrieved 2016-11-01).

Slowikowski, Matt. *Can Norway Supply Europe with Gas Long-Term?* 2016-09-02

<<http://oilprice.com/Energy/Natural-Gas/Can-Norway-Supply-Europe-With-Gas-Long-Term.html>> (Retrieved 2016-09-04).

The Global Counsel. *Brexit: the Impact on the UK and the EU*. 2015 <[https://www.global-counsel.co.uk/sites/default/files/special-](https://www.global-counsel.co.uk/sites/default/files/special-reports/downloads/Global%20Counsel_Impact_of_Brexit.pdf)

[reports/downloads/Global%20Counsel_Impact_of_Brexit.pdf](https://www.global-counsel.co.uk/sites/default/files/special-reports/downloads/Global%20Counsel_Impact_of_Brexit.pdf)> (Retrieved 2016-09-13).

The Law Dictionary. *What Are Bilateral Agreements?*

<<http://thelawdictionary.org/article/what-are-bilateral-agreements/>> (Retrieved 2016-11-22).

Trans Adriatic Pipeline. *Southern Gas Corridor*. 2016 <<https://www.tap-ag.com/the-pipeline/the-big-picture/southern-gas-corridor>> (Retrieved 2016-11-21).

UK Energy. *Gas Supplies*. 2015 <<http://www.energy-uk.org.uk/energy-industry/gas-generation/gas-supplies.html>> (Retrieved 2016-11-25).

UK Energy. *Liquefied Natural Gas*. 2015 <<http://www.energy-uk.org.uk/energy-industry/gas-generation/gas-supplies.html>> (Retrieved 2016-11-25).

United Kingdom Onshore Oil and Gas. *Natural Gas Uses*. 2016 <<http://www.ukoog.org.uk/onshore-extraction/uses>> (Retrieved 2016-10-24).

Figures

Jones Day Publications. *International Remedies for Foreign Investors in Bulgaria's Renewable Energy Sector*. 2015. Chart: Energy Charter Treaty Ratification <<http://www.jonesday.com/international-remedies-for-foreign-investors-in-bulgarias-renewable-energy-sector-09-11-2015/>> (Retrieved 2016-10-01).

Natural Gas Proved Reserves Holders [online] <<http://www.eia.gov/todayinenergy/detail.php?id=23472>> (Retrieved 2016-10-01).

UK Government, Department for Business, Energy & Industrial Strategy. *Energy Consumption in the UK*. 2016. Chart: 1.04 [online] <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/541163/ECUK_2016.pdf> (Retrieve 2016-11-29).

U.S. Energy Information Administration (EIA), International Energy Statistics. *United Arab Emirates Plans to Increase Crude Oil and Natural Gas Production*. 2015. Chart: Top 10

World Trade Organisation. *WTO Accession Map*. 2016. Chart: WTO Accession Map [online] <https://www.wto.org/english/thewto_e/acc_e/acc_map_e.htm> (Retrieved 2016-12-10).

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