Master's thesis

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Energising Europe

A qualitative study of the consequences of EU liberalisation for the Norwegian gas regime

Master's thesis in European Studies

Trondheim, autumn 2013

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List of Abbreviations

ACER – Agency for the Cooperation between Energy Regulators

EEA – European Economic Area

EU – The European Union

DG Energy – Directorate-General Energy

FU – Forsyningsutvalget

GFU – Gas Negotiating Committee (Gassforhandlingsutvalget)

IEA – International Energy Agency

IEM – Internal Energy Market

LNG – Liquefied Natural Gas

MEP – (The Norwegian) Ministry of Energy and Petroleum

NCS – Norwegian Continental Shelf

NPD – Norwegian Petroleum Directorate

PCA – Partnership and Co-operation Agreement (between Russia and the EU)

SDFI – The State's Direct Financial Interests

TCM – Troll Commercial Model

TPA – Third Party Access

TOP – Take-or-pay contract

TSO – Transmission system operators

1 Introduction

The liberalisation of the energy market within the EU began in 1988 and had major consequences for the organisation of gas exports from the Norwegian continental shelf. The EU's purpose of establishing an internal energy market was to improve the conditions for consumers and secure future supplies of energy for its member states. Europe is the most important market for Norwegian gas and liberalising the European gas market caused a reorganisation of the Norwegian gas regime. The reasons for this were the extensive economic ties between EU member states and Norway and the EEA agreement.

Energy is a necessity of almost all economic activity, which makes it an important part of both national and international politics. The energy sector's vital importance for the Norwegian economy makes it a suitable topic for further analysis of the relationship with the European Union. By analyzing the impact of EU directives concerning natural gas and their impact on Norwegian petroleum industry I hope to illustrate the workings of the Norway-EU relationship as a whole and the implications of EU energy policy on national regulations. Comparing this to the impact of the liberalisation process in Russia will shed light on what changes can be attributed to the EEA agreement and what has been caused by other factors in the market for natural gas.

The topic is academically interesting because Norway's role as an oil- and gas producing country and exporter has become increasingly vital to the Norwegian economy and society for the last 40 years. At the same time it is of significant importance in shaping Norway's role in international relations, especially facing the EU. Historians and engineers alike are claimed to regard "energy as the most important input factor in the industrial and economic development", which further underlines the importance of energy politics in both Norway and Europe (Nordeng, 2006).

Energy policy is a large topic concerning three major political fields: security policy, environmental policy and economical policy. The best way to analyse the Norwegian relationship with the EU is through the economical part of energy policies. This does not mean that environmental or security policy is less important, but this is a side to energy policy that has a more global dimension, through NATO and international climate agreements, among others.

The share of natural gas in petroleum exports has risen from almost insignificance in the 1970s to accounting for over half of the total Norwegian petroleum export since 2010 (Norwegian Petroelum Directorate, 2013b). During the 25 years since the European Commission introduced its plan for an Internal Energy Market, the Norwegian gas regime has been reorganised. I attribute this to a combination of factors mainly caused by the liberalisation of the European gas market. By dividing EU influence into two channels I have been able to systematise the sources for effects on the Norwegian and the Russian gas regimes. It is the total influence through these channels; the political channel and the commercial channel, which has accounted for the different outcomes of EU liberalisation in Norway and Russia.

1.1 Relevant research

Several scholars have provided their insights on energy relations between Norway and the EU, most notably Ole Gunnar Austvik and Dag Harald Claes. It is a field that has been heavily researched, probably because of its major impact on Norwegian society. Some studies focus on the political aspects of Norway and EU relations and others are rooted in political economy. Austvik's research concerns mainly political economy. Claes, together with Janne Haaland Matlary, have provided heavily to the field of political science. Here follows a presentation of the existing research on energy policies in Norway, the EU and Russia.

Matlary's book, *Energy Policy in the European Union*, was published in 1997 and introduces an account of the situation from before the European liberalisation process had reached full momentum. The nationalised gas industry of Great Britain, France, Germany, Belgium and others is thoroughly explained and provide background information on the controversies the liberalisation caused within the EU, before it was adopted as official EU policy through the several Gas directives. The focus of Matlary's work has remained on the European side, not in the Norwegian area (Matlary, 1997).

The latest work by Austvik and Claes is an external report commissioned by the EEA Review Committee concerning the EEA-agreement and Norwegian energy policy, *EØS-avtalen og norsk energipolitikk. Rapport #8.* The report offers an extensive analysis of how the EEA-agreement has altered the Norwegian system for gas exports. It underlines the clash of two ideologies, the Norwegian model of strong governmental management and the liberalized EU ideology. It also includes a short paragraph on the consequences for other export countries of

gas to the European market, namely Russia and Algeria. The paragraph introduces the idea that the consequences of EU liberalisation have been very different in Russia than in Norway without discussing it any further. The main discussion of their report revolves mainly around political impacts, whereas my focus will revolve around the consequences for the whole gas regime (Austvik & Claes, 2011, p. 27).

Claes has written several books and articles concerning the EU's influence in Norway, especially concerning the EEA-agreement, among them *Utenfor, annerledes og suveren?. Norge under EØS-avtalen* first published in 1999. This account assists in contextualising the topic of this thesis by placing the consequences for the Norwegian gas regime into a wider context of EU impact on Norwegian policies (Claes & Tranøy, 1999, pp. 151-173).

Austvik's works focus on the political economy of the liberalisation of the European gas market and the consequences for the Norwegian gas regime. He has provided insights on the system of Norwegian gas exports and how Norway is affected by European liberalisation. The book *Norwegian Natural Gas Liberalisation of the European gas market* analyses the liberalisation process from a Norwegian point of view. Its theories are based on economics and emphasises the economic impacts of EU liberalisation in Norway. Based on his results he encourages the Norwegian state to form a strategy to secure Norwegian interests in the future. In addition he addresses a topic he often returns to in his works, the fact that Norway stands alone in the global energy market. The arguments for this loneliness is the fact that despite common interest with the EU culturally and economically (in terms of welfare), Norway has conflicting interests with the EU when it comes to gas exports (Austvik, 2003, pp. 14-16).

Together with Svein S. Andersen Austvik has written a report where they discuss how EU legislation and development in several fields has become a central premise for Norwegian policies. It also questions to what degree the Norwegian government has the freedom to act inside a framework provided by EU law (Andersen & Austvik, 2000, p. 8).

As previously mentioned, the report by Claes and Austvik launches the idea of a comparison with Russia, another large exporter of gas without taking the discussion much further. None of the above mentioned books or articles provide an in-depth analysis of the consequences in Russia of EU liberalisation. By examining the situation in Russia, who does not have an equivalent of the EEA-agreement with the EU, it is possible to show the difference in the degree of influence the EU has over Norwegian and Russian gas exports.

The research concerning the Russian gas industry is vast and it has been a challenge selecting the relevant sources for this thesis. Much of the available literature in English is written from a European perspective and there is an almost hostile undertone in some articles concerning Russia, especially in newspapers and magazines. The sources have therefore been selected after careful evaluation of their credibility. Jonathan P. Stern has published *The Future of Russian Gas and Gazprom* and "Soviet and Russian Gas*"* as a part of the book *Gas to Europe. The Strategies of Four Major Suppliers*, which both provide a neutral description and analysis of Russian gas industry and EU relations. The analysis revolves around the primarily state owned Gazprom, the Russian counterpart to Norwegian Statoil. Gazprom holds the largest reserves of natural gas in the world and is responsible for all gas sales to Europe from Russia and is effectively a monopolist. The Russian giant has been forced to restructure its production and exports and Stern discusses whether this has been a result of EU liberalisation or if it has other causes (Stern, 2005). Erik Houlleberghs and Alexander Zaslavsky have written *Power, Personalities and Political Risk. Inside Russia's Oil and Gas Industry* which deals with the political landscape of Russian gas exports and the reformation of the Russian gas industry. However, the study was published in 2004 and can therefore be outdated in some fields (Houlleberghs & Zaslavsky, 2004). This has been taken in to account and supplemented by several articles of a newer date from renowned journals like *International Affairs* and *Europe-Asia Studies*. Together they provide a neutral account of the consequences of EU liberalisation in Russia.

1.2 Main research question

The purpose of this thesis is to determine how and if the EU as an importer of natural gas changes the conditions for Norway as an exporter. Norway is integrated with the European Union through the EEA agreement and through extensive economic ties between private actors in the natural gas industry. The deepening of the integration towards the EU has greatly influenced the Norwegian gas regime. Global, European and national conditions have changed since the early 1990s when the EEA agreement was negotiated. Together with the deepening of the integration towards the EU, it has altered the Norwegian gas regime far more than was expected. One of the reasons for this is the EEA agreement, which first was thought not to greatly affect the energy sector in Norway. But the liberalisation of the Internal energy market inside the EU the affected the Norwegian gas regime and ended up being one of the

biggest conflicts between Norway and the EU, despite Norway not being a complete EU member.

Petroleum resource management, the Norwegian policy of concession management and the power market are areas that have undergone big changes and influenced the development of the Norwegian gas regime. When analyzing the effects of market liberalisation on the Norwegian gas regime, there are two main areas that must be considered: the consequences for the gas industry and the adaptations in Norwegian gas policy. My primary concern will be the effects on the participants in the gas regime and I will shed further light on the topic by comparing it to its Russian counterpart.

The main research question for the analysis in this master thesis will be as follows:

What are the consequences of the liberalisation of the European gas market for the Norwegian gas regime?

This will be complemented by sub questions and two hypotheses to help investigate and answer the proposed research question. To improve the analysis I will compare the consequences of EU liberalisation in Norway with the consequences in Russia.

1.3 Method, approach and sources

This thesis will address the relation between Norway and the EU from the perspective of contemporary history. I will provide a qualitative analysis of the different participants in the Internal Energy Market both on the supply and demand side and discuss the consequences of the liberalisation process for the Norwegian gas regime. Thus I will provide deeper insights and understanding to the way EU policies affect both national regulations and the economy in Norway.

The paper will provide an analytical narrative and cover the history of the Norwegian gas regime. The relevant timeframe will begin in 1988, when the European Commission decided to include the energy market in the Single market and continue to 2013 (EU, 1988). The narrative is not limited to this period and some background information from the 1960-70s is also provided. Adding up to date statistics will also contribute to a productive discussion.

The thesis is composed of two units of qualitative analysis concerning Norway and Russia. In order to evaluate the main research question it is necessary to provide the details of the

Norwegian gas regime to clarify how it has been affected by the European liberalisation process and later compare it to the Russian system. The Norwegian gas regime includes the framework of national regulations and participants on the supply side of the European energy market and together with the analysis of the consequences for the Norwegian gas regime, it will make up the first unit of the thesis, which deals with Norway. The second unit will concern Russia and involves a similar, but shorter, analysis of the Russian gas regime. Finally, the thesis will be completed by a comparison between the two units based on the findings in the qualitative analysis. The comparison with Russia is included to provide further insights in the reasons for the strong influence of EU law on Norwegian society and industry.

Included in this analysis is the study of relevant primary sources together with secondary sources. The primary sources are EU directives, reports to the Norwegian Storting ("Stortingsmeldinger"), speeches and other official documents from the EU and the Norwegian authorities, in addition to the vast amount of statistics available online.

Secondary sources provide data of primary sources and render an interpretation based on the information. These sources include a selection of articles, reports and books. The use of different types of sources provides enough insights to evaluate the topic thoroughly.

Some sources must be approached with caution, especially articles from newspaper and magazines. The chosen newspaper articles are only from periodicals with a clear focus on energy, namely Dagens Næringsliv and Teknisk Ukeblad and used mainly to provide additional perspective, not as a primary source of information.

The same caution applies to websites. I rely heavily on information found online and have considered each source carefully. Especially the online resources of energy companies seek to present themselves in a positive light. Therefore I have only used these resources for statistics and facts about operations and ownership.

The amount of available literature and easy access to primary sources has made the need for interviewing representatives from the different sectors superfluous and would probably not have provided further insights. Therefore I chose not to include this in the final thesis.

1.4 Structure and arguments

The Norwegian management of the energy sector, specifically natural gas, is described in the second chapter. It provides an immediate presentation of the consequences of the internal gas

market for the Norwegian gas regime. It explains the development of the gas industry from small scale exports to today's situation where Norway is the second largest exporter of natural gas to the European Union. The Norwegian government's official goal for its gas policies is to maximize profits to the best of Norwegian society and welfare and this will also be described. A presentation of the export management and an explanation of the relationship between the Norwegian state and Statoil, the largest gas export company on the Norwegian Continental Shelf (NCS), are included as an important part of the second chapter.

Chapter three deals with the function and purpose of the liberalisation of the European gas market and makes use of the following proposition: What are the driving forces behind the EU liberalisation and what is its purpose? By providing an answer to this question I can explain the EU liberalisation process and show its effects. In this chapter I show how the European Union's interest towards the gas market deviates from Norwegian interests and how the EU has implemented a package system of several directives during the last 25 years to create an Internal Energy Market (IEM). The members of the EU are highly dependent on importing energy and wish to secure future supplies by integrating the energy markets and ensure low energy prices for consumers and the industry (Eurostat, 2012). Explaining the function and purpose of the liberalisation through the package system of directives will provide a necessary foundation for further analysis of the main research question.

Chapter four contains the main analysis of the consequences of the liberalisation of the European gas market on the Norwegian gas regime based on the results from the presentations above. In the first part of the chapter I will investigate the claim that the dissolution of GFU was a direct consequence of the liberalisation by providing insights on the historical development of Norwegian gas sales and discussing the first hypothesis:

Without the pressure from the EU, Norway would have kept the GFU arrangement and long-term contracts.

In the second part I will concentrate my study around the following hypothesis:

The establishing of Gassco and Gassled is a direct consequence of the liberalisation of the European gas market.

A discussion focused around these hypotheses will provide an answer to the main research question by illustrating the consequences by the two cases.

The purpose of chapter five is to evaluate the influence of EU liberalisation in Norway by applying the case of Russian gas exports as a backdrop to emphasize the case of Norway. By comparing two states in a similar situation in their role opposite the EU, but with different forms of EU cooperation, I will be able to determine the reason for the reorganisation of the Norwegian gas regime. The first part of chapter five includes a presentation of the Russian gas regime and answers the question of the consequences for Russia, the largest supplier of natural gas to Europe, from the liberalisation of the European gas market. The second part is a comparison of the consequences for the Russian and Norwegian gas regime based on the following question: What are the similarities between the Russian and Norwegian gas regime and why have they been affected differently by the gas market liberalisation? The comparison shows that the total impact of the IEM have had similar outcomes for the industry and both Gazprom and Statoil have had to implement similar measures in dealing with the increased competition on the EU market. But the governmental involvement in each country's gas sector has been affected differently due to the different range of the legal cooperation between the EU and each country.

Chapter six will make the conclusion that the framework of Norwegian gas exports has been altered by the process towards an IEM. However, the income from gas exports has continued to rise and Norwegian gas policy of maximizing the profit from petroleum export does not seem to have been affected. It will also contextualise the conclusion by showing how the chosen topic can illustrate the relationship between Norway and the European Union in general.

2 The Norwegian gas regime

The Norwegian gas regime is a part of a larger international system and the complex organisation designed to serve national interests has had to adapt to international conditions. By providing a presentation of the organisation of the Norwegian gas regime, I will provide a foundation for further analysis of the main research question in the following chapters.

The EU liberalisation process has been a crucial factor in the development of a Norwegian gas regime. By presenting the shape of today's gas regime I illustrate the consequences of EU liberalisation and thereby answer part of the main research question. The reasoning behind the EU influence and the progression of the consequences are given in the analysis in chapter four, but it is important to determine the structure of today's gas regime early on in the analysis, to gain a clear image of the end results.

The construction and operation of the Norwegian gas delivery network and the organizational structure of the gas sector has grown into its currents shape over the last forty years. By presenting the enormity and sophistication of the whole system concerning gas exports from the Norwegian Continental Shelf (NCS), I can show that the Norwegian gas regime has not been reorganised easily. The term "Norwegian gas regime" describes the first parts of the supply chain for gas from the Norwegian Continental Shelf (NCS) to Europe, namely production and transmission. This system includes the production companies, the operator of the gas delivery network in the North Sea and the Norwegian Government who operate within a framework given by Norwegian Law with the aim of maximising value creation from petroleum activities and includes prudent resource management. The term includes the framework of national regulations and participants on the supply side of the European energy market. Norwegian law is highly influenced by the European Union through the EEA-agreement and it is the goal of this thesis to clarify the consequences of EU involvement on the Norwegian gas regime.

In this chapter I will also provide an answer for the following question: What is the reason for government involvement on the Norwegian continental shelf? The answer lies mainly with the major source of income that the petroleum export represents for the Norwegian state and it is also given in the ten oil commandments, featured in chapter 2.3. The large income accumulated by the Norwegian state emphasises the importance of gas exports for Norwegian

society and politics. The changes the gas regime has undergone since the start-up in the early 1970s can be attributed to both external and internal factors and the subsequent chapters will determine which ones can be attributed to the EU and how it was achieved.

The Norwegian official policy for the petroleum sector and export of natural gas is clearly stated in Report to the Storting no. 38 (2001-02).[1] The stated goal is to maximise the total socioeconomic performance from activities on the NCS. The state ownership in the petroleum sector is meant to secure a strong Norwegian involvement and achieve high returns to the State through the SDFI arrangement and the taxation system. This chapter will provide a detailed description of the Norwegian management of the energy sector to show how, and if, the State achieves the set goals for the export of natural gas. The following description is together with the account of the Internal Gas Market in chapter three, important to lay the groundwork for a productive discussion of the main research question in chapter four. It will also contain an account of the Norwegian gas regime, including the set framework and the participants, and the income from gas exports, to further underline its' importance to Norwegian economy.

2.1 From small scale to big producer

Natural gas consists primarily of methane (CH_4), but also contains other hydrocarbons such as ethane, butane, propane and naphtha. In its primary form, natural gas can be used for residential heating and cooking, for industrial purposes and as fuel, or it can be converted into electricity at a gas power plant. The majority of Norwegian gas production comes from associated gas which is found together with oil deposits (Statoil, 2008b). Several gas fields were developed during the 1970s and the position of natural gas from the NCS grew rapidly and continued to rise during the 80s. The income from petroleum exports became even larger than anticipated and the petroleum sector became indispensable in the Norwegian economy (Andersen & Austvik, 2000, p. 12). This is clearly illustrated by the petroleum sector's share

[1] *"Statens overordnede mål er å maksimere det samlede samfunnsøkonomiske resultatet fra virksomheten på norsk kontinentalsokkel. I tillegg til direkte inntekter fra petroleumsvirksomheten, vil også verdien av for eksempel industriutvikling, nasjonal kompetanse, arbeidsplasser mv. inngå i totalbildet av det samfunnsøkonomiske resultatet av virksomheten. Det statlige eierskapet i petroleumsvirksomheten har som mål å sikre at selskapene beholder en sterk forankring i Norge, samt å oppnå en størst mulig avkastning til staten. SDØE er sammen med skattesystemet viktig for å sikre fellesskapet inntekter fra petroleumssektoren."* (Ministry of Petroelum and Energy, 2001-02, p. 109)

of GDP from 1972 to 2012, see table 1. In 1972 the share of GDP was 0, 18 percent and rose sharply in only ten years. It then remained fairly stable throughout the 1980s and 90s and reached 23, 24 % by 2012. The table also shows the rise in exports from the early 1970s and the increased share of state revenues during this 40 year period. By 2012 the petroleum industry's share of Norway's total value creation was 23 percent (Norwegian Petroleum Directorate, 2013e).

	Share of GDP	Share of exports	Share of state revenues
1972	0,18	0,92	0,12
1982	15,50	35,17	19,90
1992	12,87	33,70	9,49
2002	18,50	45,14	24,50
2012	23,24	51,70	30,27

Table 1: Macroeconomic indicators for the petroleum sector (Norwegian Petroelum Directorate, 2013b)

The NCS was dominated by Norwegian companies and SDFI throughout the nineties, with Statoil as the largest company. Statoil is still the largest company on the NCS and is responsible for 75 percent of Norway's gas exports (Statoil, 2008a).

2.2 The gas delivery network

The gas sector involves three main areas; production, transmission and sales. The production is performed by the company which owns the license to a specific gas field and transmission involves the transport of natural gas through high pressure pipelines with large capacity from the production site to the consumer. The step concerning sales involves local distribution by distribution companies in Europe (Claes, 2003, p. 16). The Norwegian government controls the two first steps of the supply chain involving gas from the NCS and make up what I refer to as the Norwegian gas regime.

94,7 % of the natural gas from the NCS is transported through high pressure pipelines from 63 gas producing field on the NCS to receiving terminals on the Continent and in Great Britain. 4,1% of the total export is LNG (liquefied natural gas). LNG is transported from the Snøhvit-field by ship to Spain and Japan among others. The total Norwegian natural gas export was about 113, 7 billion Sm^3 in 2012.[2] See appendix A for a list of receiving terminals

[2] Sm^3: Standard cubic meter. Volume measurement for natural gas.

and percentage of total volume distribution (SSB, 2013) & (Norwegian Petroleum Directorate, 2013c). These enormous volumes and the large share of transmission by fixed pipelines, highlights the Norwegian dependence on stability and predictability in the supplied region to ensure a stable income to the Norwegian Treasury.

As mentioned above, natural gas consists of ethane, methane, butane, propane and naphtha. The quality of natural gas varies and the costumers request different varieties, so the gas has to processed. This mainly happens in the largest processing plant on the mainland, Kårstø in Rogaland, where the gas is processed in to dry gas and wet gas. Dry gas is mainly composed of methane and is transported through the high pressure pipelines to one of the 8 receiving terminals on the European Continent and Great Britain. As of 2013, the transport capacity of the Norwegian pipelines is about 120 billion Sm^3 per year. In 2012, 107, 6 billion Sm^3 was delivered to the market from the NCS. The pipelines are 7975 km long; this equals the distance from Oslo to Cuba (Valmot, 2013). The actual gas delivery network is managed by Gassco and owned by Gassled, which will be further described in chapter 2.4.2. The production companies sell their own gas, mainly to large companies on the European continent. Statoil is the largest among the export companies on the NCS. One of Statoil's largest customers is E.ON (formerly known as Ruhrgas), Germany's biggest distribution company, which delivers gas to the customers through a network of local distributors. See figure1 & 2.

A typical supply chain for Norwegian natural gas starts in the Åsgard-field on Haltenbanken in the Norwegian Sea. The development of the Åsgard-field was completed in 1999 and involved the building of Europipe 2. It was the largest in the history of Statoil and meant that Haltenbanken would be connected to Germany through the gas delivery network. The gas is extracted from subsea reservoirs and transported to Kårstø where it is processed. From there the gas delivery is sent through Europipe 2 and reaches Dornum in Germany a couple of days later. From the receiving terminal a local distributor sells the gas to consumers and local industry. The Åsgard-field delivers about 11 billion Sm^3 to the European continent each year and enables a house in Hamburg to be heated with gas from the Norwegian Sea. This project illustrates very clearly how the European demand for natural gas led to huge investments on the NCS and also explains the industries preference for long-term contracts, an issue that will be further addressed below (Statoil, 2007).

Figure 1 Norwegian gas infrastructure. Existing and projected pipelines (Norwegian Petroleum Directorate, 2010)

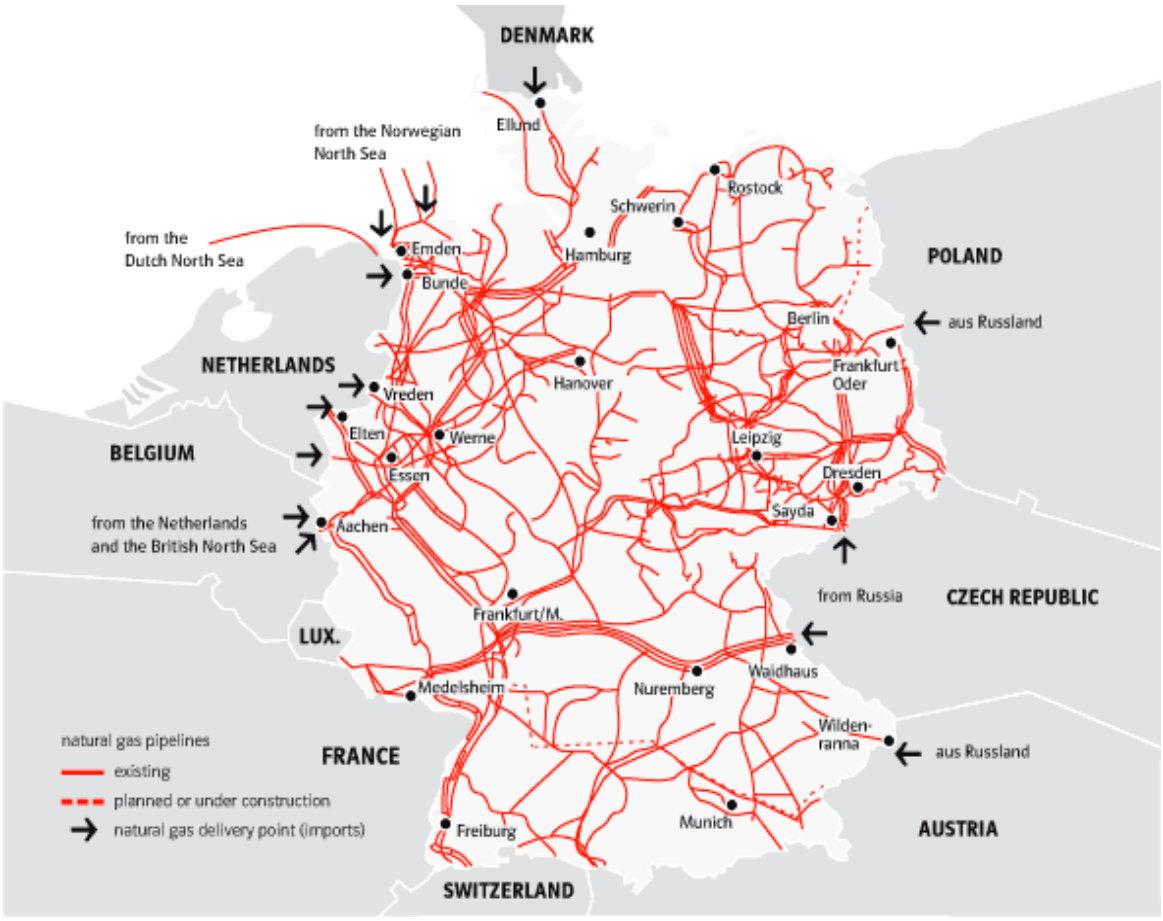

Figure 2 Pipelines in Germany (E.ON, 2013b)

2.3 Export management

Development and operation of the gas delivery network is very capital intensive and therefore a large provision has to be secured before development. Because of this, long term contracts, was favoured by the Norwegian government and all gas sales used to be administered by the Gas Negotiating Committee (Gassforhandlingsutvalget, GFU). The EU viewed this as an obstacle to free trade and it was discontinued in 2001 after a long conflict with the Commission. I will discuss this further in chapter 4.4.

Today, each production company on the NCS have individual sales agreements with buyers in Germany, France, Great Britain, Belgium, The Netherlands, Italy, Spain, The Czech Republic, Austria and Denmark. Gas can be sold to a country without it having a direct contact point with the Norwegian gas delivery network. For example, gas can be sold to Austria, which does not have a direct contact with the NCS due to the lack of coastline. This

is made possible by the extensive gas network on the European continent and third-party access to the network, which is a consequence of EU liberalisation (Norwegian Petroleum Directorate, 2013c). This will be thoroughly explained in chapter 3.

2.4 The participants of the Norwegian gas regime

The Norwegian gas regime involves several participants and describes a system of private actors with a strong state, operating both as regulator and owner. This is a presentation of all actors present in the Norwegian gas regime and their role within the given framework in the current situation. In chapter four I will provide a narrative of the circumstances during the 1990s and 2000s in my evaluation of the effects of the IEM on the Norwegian gas regime.

The Ministry of petroleum and energy (MPE) represents the Government in the Norwegian gas regime and is responsible for the SDFI and for the State's shareholdings in Statoil, Petoro and Gassco (Ministry of Petroelum and Energy, 2013b).

The MPE is also responsible for the licensing system on the NCS. The system is an expression of the Norwegian government's exclusive right to the management of resources on the NCS. The MPE awards production licenses to able production companies after an application process. When Norway became an EEA member, the MPE could no longer award production licenses based on nationality or the State's share in the company. This will be further discussed in chapter 3.3.8.

The State's direct financial interest (SDFI) is an arrangement that entails the Norwegian state's involvement as an investor in the Norwegian petroleum sector. It was established in 1985 by splitting the license share held by Statoil in two between the state and the company. In contemporary media it was referred to as the wing clipping of Statoil. The claim was that the government implemented the division to prevent Statoil from becoming too powerful and potentially threaten the democracy (Krogh, 1987, p. 50). However, this is a discussion demanding a thesis of its own. But it shows that this process was not easy or without conflict.

As a result of the SDFI-arrangement every investor in projects on the NCS pays a share of the exploration costs and operating costs and in return receives a matching share of the revenues. The SDFI operates as any other investor in this matter and the resulting income, expenses and investments are channelled in to the central government budget. The net cash flow is transferred in to "The Government Pension Fund – Global". As of October 2013 the SDFI has

a direct financial interest in 158 fields and 15 joint ventures for pipelines and inshore facilities. The SDFI represents a large source of income for the Norwegian state and was estimated to be valued at NOK 1,140 billion as of January 2012. The SDFI holdings are managed by Petoro AS (Ministry of Petroelum and Energy, 2013c).

Petoro is in charge of managing the aim of maximizing the State's profit from the petroleum sector. The company also has responsibilities in monitoring Statoil. The foundation of Petoro is a result of the privatisation of Statoil. Before 2001 Statoil was the manager of SDFI, but this arrangement could not continue when the company was opened up to private ownership. The solution was to set up a new state owned company, Petoro (Petoro, 2013).

Gassco is the neutral and independent operator of all gas transport from the NCS and is owned by the Norwegian state. The enterprise was founded by MPE in May 2001 and has been responsible for the gas delivery network since January 2002. Before that, the pipelines had been operated by several companies but was then reorganised into one company. The neutrality of Gassco is important in order to ensure equal treatment of all users and efficient use of the resources on the NCS (Gassco, 2013a). This is a requirement brought on by the EU and the establishing of Gassco will be discussed further in chapter 4.5 where I hypothesise that the liberalisation of the European gas market was the reason for the foundation of Gassco.

Gassled is the owner of the gas delivery network. It is a partnership of mainly petroleum companies operating on the NCS. The major owner is Petoro with a share of 45, 793 %. (Gassco, 2012) In recent years German, Canadian and Arabic State funds have bought shares in Gassled after Statoil, among others, sold 24,1 percent of its shares in 2011 for NOK 17,35 billion (Lindeberg, 2013). The selling companies founded the sale of their shares in the need for reorganising their investment portfolios (Fadnes, 2011). For details on ownership of Gassled, see Appendix B.

As stated earlier, the Norwegian government's goal for the gas sector is to maximize profits for the good of Norwegian society. Therefore, the government regards it as very important for the state to play a role as a substantial, long term and stable owner in order to retain a Norwegian base for Statoil (Ministry of Petroelum and Energy, 2013a). Statoil is the largest operator on the NCS with 80 percent of oil- and gas production and is also responsible for the technical operation of the high pressure pipelines. (Statoil, 2012) As of October 2013 the largest shareholder is the Norwegian state with 67 percent ownership. Statoil promotes and

sells its own gas together with gas from SDFI and is responsible for the sales of 75 percent of Norwegian gas. As a result, Statoil is the second largest seller of natural gas in Europe with a market share of 14 percent (Statoil, 2008a).

Currently there are a total of 37 companies operating on the NCS, both Norwegian and foreign. Among them are E.ON and GDF Suez, large distributors of natural gas in Europe (Norwegian Petroelum Directorate, 2013a). The European distributors and import countries are also participants in the value chain, but remain primarily on the demand side and will be further described in chapter 3.

2.5 Statoil and the Norwegian government – relations and partnership

The objective of the government's oil- and gas policy is to contribute to the best possible management of the resources on the NCS to secure a high value creation and that a high amount of the revenue is for the benefit of the community (Ministry of Petroelum and Energy, 2001-02, p. 101). State ownership in Statoil is a prerequisite to achieve the set goals because of Statoil's dominant position on the NCS and as of March 2013 the State's share was 67 % (Statoil, 2013).

The Norwegian state's intentions concerning energy policy were stated in a Report to the Storting in 1971. It included a 10 point declaration of how the oil operations on the NCS would benefit the whole country and became known as the ten oil commandments, see table 2 for details. Although they only referred to oil production, it is relevant for all petroleum production, including natural gas, and contributed to set the course and decide the shape of Norwegian petroleum policy for the next 40 years.

The first and the seventh commandment is especially relevant concerning the heavy government involvement in operations on the NCS and coincides with the goal of maximising profits for the good of Norwegian society. Commandment number eight was fulfilled shortly after the Report to the Storting was submitted by the foundation of Statoil in 1972. Statoil was an important component in the Norwegian model of petroleum governance and remains so today, despite changing conditions and revisions of ownership structure (Lerøen, 2010). Although the company was partly privatised in 2001, the State's role on the NCS is secured through ownership of Statoil as operator and by the role as regulator of the petroleum sector.

	The 10 oil commandments
1	National supervision and control must be ensured for all operations on the NCS.
2	Petroleum discoveries must be exploited in a way which makes Norway as independent as possible of others for its supplies of crude oil.
3	New industry will be developed on the basis of petroleum.
4	The development of an oil industry must take necessary account of existing industrial activities and the protection of nature and the environment.
5	Flaring of exploitable gas on the NCS must not be accepted except during brief periods of testing.
6	Petroleum from the NCS must as a general rule be landed in Norway, except in those cases where socio-political considerations dictate a different solution.
7	The state must become involved at all appropriate levels and contribute to a coordination of Norwegian interests in Norway's petroleum industry as well as the creation of an integrated oil community which sets its sights both nationally and internationally.
8	A state oil company will be established which can look after the government's commercial interests and pursue appropriate collaboration with domestic and foreign oil interests.
9	A pattern of activities must be selected north of the 62nd parallel which reflects the special socio-political conditions prevailing in that part of the country.
10	Large Norwegian petroleum discoveries could present new tasks for Norway's foreign policy.

Table 2: The ten oil commandments (Ministry of Petroleum and Energy, 2011)

2.6 Income from natural gas exports

As indicated in table 1, the importance of petroleum exports in the Norwegian economy has increased dramatically the last 40 years and with it the importance of natural gas. However, it is also important to clarify how the Norwegian government receives its income from natural gas exports.

Norwegian gas deliveries are very stable and therefore well regarded in Europe. Gassco delivered gas to the land terminals on the Continent and Great Britain with a regularity of 99, 69 % in 2012.[3] Consumers in Europe depend on a continuous supply of gas. As a consequence securing regularity is one of the most important goals for Gassco to maintain the

[3] Regularity is measured as the volume delivered from the transport system in relation to shipper orders.

reputation of gas from the NCS and thus sustain the high income from natural gas exports (Gassco, 2013b). Norwegian gas is mainly exported to Germany, Great Britain, Belgium and France and covers between twenty and forty percent of total consumption in Europe (Norwegian Petroleum Directorate, 2013c).

As mentioned earlier, the importance of gas has only increased in the last decade. In addition the share of gas production has risen from 21 % of total petroleum production in 2000, to a total of 51 % in 2012. Production has more than doubled since 2000, from 25,2 million Sm^3 o.e. in the first half of 2000 to 55,4 million Sm^3 o.e. in the first half of 2013 (SSB, 2013).[4] This is a record breaking high and means a 14 % increase from 2011 (Dagens Næringsliv, 2013b). The estimated value is NOK 250 billion, which is equal to a quarter of the total Norwegian state budget (Førde, 2013). There is no doubt that the export of natural gas has been a success story for the Norwegian economy so far.

The State receives its income from gas sales through the direct involvement on the NCS with the SDFI-arrangement and from taxations and fees. It also benefits from the 67 % ownership in Statoil and the resulting surplus. According to the Norwegian Petroleum Directorate (NPD), the State's total income from the petroleum industry in 2011 was around NOK 350 billion. This came mainly from taxation and fees of the production companies (209 billion). Net cash flow from SDFI contributed with NOK 127 billion and the dividend from Statoil was NOK 13 billion. See appendix C for historical statistics of petroleum income. In total, the income from petroleum export has risen dramatically in the last ten years. As of 2010 the quantity of natural gas sold from the NCS has surpassed the amount of oil in the total petroleum export (Norwegian Petroelum Directorate, 2013b). These figures support the ever increasing importance of gas exports for the Norwegian economy and also explain the gas regime's willingness to put up a fight when the EU tries to change the conditions of the energy market, as it did when introducing the IEM by liberalising the European gas market.

An important factor concerning the export of Norwegian gas is that almost all gas production is exported to the EU. Does this make the Norwegian gas regime vulnerable? Security of supply is an often used term which favours multiple suppliers and diversification of energy

[4] Sm^3 o.e.: Standard cubic oil equivalent. 1000 Sm^3 natural gas = 1 Sm^3o.e. Used when comparing oil and gas, typically for statistics concerning total petroleum production. (Petroleum Safety Authority, Norway, 2003)

sources to secure the future supply of energy by reducing vulnerability. But what is Norway's security of demand? 95, 9 % of Norwegian gas was exported to European countries in 2012, divided between eight different receiving terminals on the Continent and Great Britain (Norwegian Petroleum Directorate, 2013c). This highlights an often addressed concern, the Norwegian economy's dependency on exports and subsequent vulnerability towards fluctuation in petroleum prices. The political solution for this is welcoming an EU framework for the gas market to operate within. A common legal framework creates predictability and stability for all parties in the gas value chain. It also explains the reason for the Norwegian depolitisation of gas sales (The EEA-review Committee, 2012, p. 547). By purely relying on commercial factors and not let political considerations, Norway emerges as a professional and trustworthy supplier and thereby contributing to Norway's future as a gas supplier and securing the supply of demand. As will be shown later on, Norwegian protests towards the liberalisation process revolved around EU intervention in the Norwegian gas regime, not the IEM itself.

2.7 Macroeconomic features – the future of Norwegian natural gas

According to the Norwegian Petroleum Directorate, gas sales are expected to peak at a level between 105 and 130 billion Sm^3 in 2020, while sales are expected to be reduced to between 80 and 120 billion Sm^3 in 2025 (Norwegian Petroleum Directorate, 2013c). High oil prices are reducing oil's share of primary energy and is substituted by other fuels outside the transport sector and makes room for more gas. For example, the share of gas fuelled cars is expected to rise and hence expanding the market for natural gas (BP Statistical Review of World Energy 2012, 2013). These expectations are from industry sources and should be approached with caution as they have reason to remain optimistic facing their shareholders. A recent report from the European Gas Advocacy Forum is a prime example of this as it promotes natural gas as the saviour of both the environment and the economy whilst representing the biggest sellers of natural gas on the European Continent (European Gas Advocay Forum, 2011).[5]

[5] The European Gas Advocacy Forum is composed of: Centrica, Eni, E.ON Ruhrgas, Gazprom Export, GDF Suez, Qatar Petroleum, Shell and Statoil. All of them major actors in the European gas market.

In the most recent Report to the Storting concerning the petroleum sector form 2011, the government expresses optimism for the future of Norwegian gas based on the available statistics and the industry's optimism on its own behalf. In the report, the government authorities do however express concerns about the increasing costs of petroleum production due to technological enhancements. Based on this, a certain apprehension can be detected concerning the future income from gas exports (Ministry of Petroleum and Energy, 2011, p. 8).

On the other hand, the EU's aim to reduce dependency on fossil fuels and increase the amount of "green" energy towards 2020 is not promising for the future income of Norwegian gas. Although natural gas is considered to be a greener source of energy than oil, it is still a lot less green than renewable sources, such as wind power, which is a major priority in several member states (Energy 2020). Based on these facts many claim that the Norwegian petroleum industry is facing a leaner future and the income from gas sales will plummet (Dagens Næringsliv, 2013a). Several economists are also slightly pessimistic due to the increasing availability of shale gas from the United States. Some even call it a shale gas revolution and it may force Norwegian production upwards because of lower prices in the coming years (Grimsrud, et al., 2013).

The Norwegian industry and government is generally very optimistic concerning the future of Norwegian gas and foresee a continued large income from gas exports. There is however critical voices, mainly economists and environmental organizations, claiming the future of natural gas is looking bleak and that shale gas from overseas will drive the prices down. Only the future will tell the outcome, but in the meantime, investments in the NCS remain high.

2.8 Chapter conclusion

The complex system that has emerged from the goal of maximising the performance of gas sales from the NCS makes up Norwegian gas regime. This master thesis aims to determine the consequences of EU involvement for gas sales from the NCS and this has been shown by presenting the different participants in Norwegian gas sales and determining the organisation of today's structure.

The EU has conflicting interests with Norway concerning gas sales and permitting it to influence the organisation of operations on the NCS has not been a conflict-free process. By presenting the large revenue the Norwegian gas regime receives from this industry, showing

the complexity and clarifying the method of governmental involvement in the gas sector, I contribute to the understanding of Norwegian resistance towards the consequences of EU liberalisation for the Norwegian gas exports.

3 Function and purpose of the Internal Energy Market

The working proposition for this chapter will be the following: What are the driving forces behind the EU liberalisation and what is its purpose? By providing an answer to this question I can explain the EU liberalisation process and show its effects. As a result I can show both the process and reasons behind the consequences of liberalising the Norwegian gas regime. The presentation of the liberalisation process will also clarify the differences between the EU and Norway in terms of ideology and governmental involvement. The EU tends to favour a liberal approach when faced with a challenge, while heavy governmental involvement has been the solution chosen in Norway. These structural differences meet in the European gas market, together with the differing interests of each party, creating a complicated conflict of interest.

The European Union's interest concerning the gas market partially deviates from Norwegian interests. Natural gas is a crucial part of the European energy mix and a vital piece in the process towards integration of the energy market.[6] This presentation of the construction of the Internal Energy Market will focus on the gas market, but it is important to stress that this process also includes the liberalisation of the electricity market and some of the relevant directives apply to both sectors. The main objective of the liberalisation process is to fully integrate the whole energy market for gas and electricity to provide consumers and businesses with lower prices and improved services. According to the EU this is best achieved by fully integrating the gas market and harmonising energy legislation in each member state (EU, 2013c). Norwegian interests are described in the preceding chapter and involve an energy policy targeted towards maximising income from gas sales. This causes a collision of ideologies which will be discussed further in chapter four. However, the discussion demands insights on the European gas market and the process of liberalisation. The following chapter will provide a detailed description of the purpose and of the implementation of a European Internal Energy Market.

The term liberalisation involves the removal of or reduction in the trade practices that prevent free flow of goods and services from one nation to another (Business Dictionary,

[6] The term energy mix is a general description of the composition of a geographical area's energy supply, including crude oil, natural gas, coal, nuclear energy and renewable energy.

2013a). In this case it concerns the goal of creating a single internal market for energy within the EU by the removal of natural monopolies and facilitating gas transit and transmission between member states. The EU consists of several member states with different policies and priorities. In this context it is the directives already approved by all the member states that are relevant and is the official policy of the Union and represents all the members. The term EU will therefore represent the Commission as an advocate for common EU policies.

The EU has implemented a package system of several directives during the last 25 years to create an Internal Energy Market (IEM). The members of the EU are highly dependent on importing energy and wish to secure future supplies by integrating the energy markets and to ensure low energy prices for consumers and the industry. This chapter will provide a step by step walkthrough of the directives concerning liberalisation of the energy market and will also address the progress and the controversies that have occurred concerning the liberalisation process. The many participants in the European gas market are a major part of the explanation of the slow progress in creating the IEM.

3.1 The European gas market

The discovery of the enormous Groningen gas field in the northern part of the Netherlands in 1959 marks the beginning of the European gas market. The find also opened up the possibility of hydrocarbons north of the field, in the North Sea, and became the driving force that led companies to start drilling for oil and gas in formerly unexplored areas, both onshore and offshore (Whaley, 2009). Since then the European gas market has grown enormously and natural gas has become an important part of the energy mix. In 2010 a little over 25 percent of the total energy consumption in EU member states was natural gas, involving a steady rise in consumption by both households and industry since 1995 (European Commission, 2012, p. 10).

Before the liberalisation process the gas market was characterised by few suppliers and national or regional monopolies on the European side. The monopolies can be described as natural monopolies which occurred because establishing competing, parallel pipelines would not be profitable due to the high costs of development. Maximizing the transport capacity would be far more lucrative. Therefore the owner of the pipeline would have a natural monopoly. The monopoly situation in the gas network on the continent was the main obstacle of liberalisation of the gas market (Feragen, 2005, p. 42). The solution was unbundling, the

separation of the owner of the infrastructure and the owner of the gas, which will be reviewed in chapter 3.3.

3.2 Participants in the European gas market

The participants in the European gas market make up the downstream sector of the European natural gas industry. The term downstream sector refers to the marketing and distribution of natural gas, as opposed to the upstream sector which includes the exploration and production of natural gas. The EU gas market is dominated by the gas companies, but also includes the transmission system operators, the suppliers and the consumers. All participants operate within a framework designed by and monitored by the EU.

The EU is primarily represented by the European Commission, more specifically the Directorate-General Energy (DG Energy). The Commission has been the most important promoter of the Internal Energy Market (IEM) and is responsible for the implementation of the liberalisation process.

Transmission system operators (TSOs) are companies operating within a given geographical area with much of the same responsibilities as Norwegian Gassco. They are independent operators of the transmission system for gas providing non-discriminatory network access. The companies are often partly privatised and partly state owned. Examples are Open Grid Europe in Germany and Fluxys in Belgium (Open Grid Europe, 2013b) & (Fluxys, 2013). The establishment of these companies was a direct result of the liberalisation process, where so called unbundling has been a vital part. This issue will be addressed in chapter 3.5.

Large gas companies buy gas from external suppliers or produce it themselves and sell it to local distributors or distribute it to the consumer themselves. The ownership structure is different for each company; some are largely state owned while others are private. Examples are: GDF Suez in France, ENI Distrigas in Belgium and E.ON in Germany. Several major gas companies have formed an association called Eurogas to promote the use of natural gas in Europe. Eurogas has 48 members (Eurogas, 2013). Some of the European gas companies are also involved in upstream activities, like exploration and production in the supply countries. For example, E.ON holds several licenses for production through its subsidiary E.ON E&P Norge AS in the North Sea and is also involved upstream in Russia and Algeria (E.ON, 2013a).

Costumers in the EU import gas from a few countries and the majority of imports are brought in by high pressure pipelines. The main suppliers from outside the EU are: Russia (Gazprom), Norway (Statoil) and Algeria (Sonatrach), see Figure 3. Several EU countries are gas producers, however only the Netherlands is able to produce adequately for inland consumption. The Netherlands is the largest producer of natural gas in the EU, producing 40 percent of the total consumption in the Union. Germany produced only 13 percent of its own total consumption in 2010 and was largely dependent on imports. The UK produced a little over half of its own consumption. All other EU members are also net importers of natural gas, except the Netherlands and Denmark (European Commission, 2012).

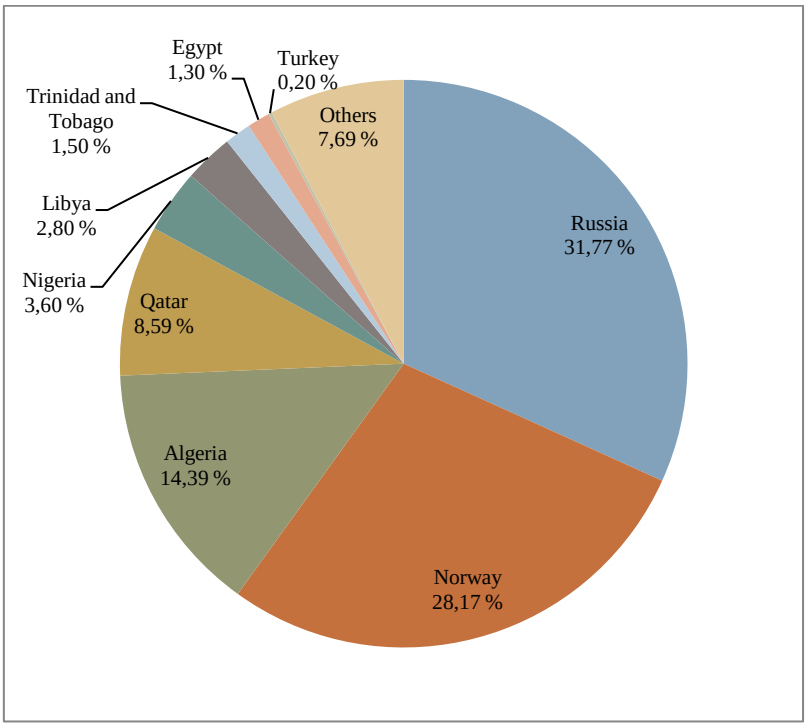

Figure 3: Main origin of natural gas imports EU-27 in 2010 (Eurostat, 2012)

The share of natural gas in the total energy mix in the EU is 25 percent, but this varies widely between member states. It depends on the country's own gas supply and the maturity of the gas market. The share of natural gas is almost 40 percent in the UK energy mix, but in Sweden this share is only 2, 6 percent. The geographical features of each country are also significant as to where the imported gas originates. In Spain, the majority of the imported natural gas originates in Algeria (33 %) and Nigeria (20 %), but in Germany the imports are mainly from Russia (37 %) and Norway (33 %) (European Commission, 2012). It is important

to have these differences in mind when referring to the EU as a large consumer of natural gas, because this does not apply to all countries and each country is supplied by a different mix of countries.

The largest consumer of natural gas in the EU in 2010 was the power generation sector, which accounted for 32 percent of total use in 2010, closely followed by households (27 %) and industry (19 %) (European Commission, 2012).

3.3 The purpose of liberalisation

The EU depends largely on energy imports, both of oil and natural gas. The energy dependency rate for natural gas was 62, 4 % in 2010 and indicates that EU countries are dependent on imports from non member states to sustain today's level of gas consumption (Eurostat, 2012).[7] Therefore, one of its biggest concerns is the security of the supply of energy. A common and consolidated policy is needed to secure international relations concerning energy supply deals. One of the EU's biggest challenges in this concern is the relationship with Russia, the largest supplier of fossil fuels, including natural gas, to the Union. This will be discussed further in chapter 5.

The purpose of the Gas Directives is to gradually open up the market to competition in acquisition, transmission and sales and move towards a liberalised internal gas market. This involves the aim to create internal and external competition based on a competitive unified gas market by integrating the suppliers (Finon & Locatelli, 2002, p. 2). The involvement of the suppliers is a key issue as this involves several non-member states.

A report prepared for DG Energy states: "Greater integration of the gas market will likely produce important economic benefits from price effects and from increased security of supply." (Booz&Company, et al., 2013, p. 3) Although this is a report ordered by DG Energy and one might question the objectivity of the results, it gives a clear indication of the Commissions motives concerning the liberalisation process. According to the Commission, the liberalisation of the gas market will lead to lower prices for the consumer, both

[7] The energy dependency rate shows the proportion of energy that an economy must import. It is defined as net energy imports divided by gross inland energy consumption plus fuel supplied to international maritime bunkers, expressed as a percentage. A negative dependency rate indicates a net exporter of energy while a dependency rate in excess of 100 % indicates that energy products have been stocked.

households and industries, thus increasing European competitiveness globally and ensuring security of supply. The objective of increasing European competitiveness can explain why so much of the liberalisation process has taken place as a result of Directives mainly concerned with competition policy, rather than energy policy.

3.4 The liberalisation process

The European Commission's mission to create an Internal Market for Energy through liberalisation of the energy markets within the European Union started 25 years ago. The liberalisation of the European gas market must be understood as a continuing process which started in 1988 when the Commission decided to include the energy market in the Single European Act. Originally the energy sector was not included when the first move towards a Single market was made in 1985. European Energy markets were considered to be very difficult to change because of strong, national energy policies and monopolies on the import side (Matlary, 1990, p. 78). However, the Commission changed its position in 1988 and released a Commission Working Document entitled "The Internal energy market". The first objectives were very ambitious with a goal of completing a large internal energy market by the end of 1992, by eliminating the obstacles for fully integrating the market. The market is still not fully liberalised and it has been an ongoing process since then, brought forward by several directives (EU, 1988).

The purpose of the directives is to create a liberalised market for energy in the EU and eventually in all of Europe. The goal is a European single market, not just a single gas market reserved for members of the EU (EU, 1998). Part of the explanation for this is of course that the gas market includes many actors from outside the EU, mainly the suppliers from Norway, Russia and Algeria.

The priority for the EU has always been adherence to the principles of competition and in the external report commissioned by the EEA Review Committee, Austvik and Claes argue that the process towards liberalisation of the gas market has been characterised by competition policy rather than energy policy (Austvik & Claes, 2011, p. 14). The directives included in the process are all focused on unbundling, securing third party access and other competition related issues. They say very little about security of supply and environmental topics, even though security of supply is a prioritised area. However, the launch of the Energy 2020 strategy involves more comprehensive thinking concerning energy policy, including

competition, environmental and energy policies. The strategy also included a plan to improve coordination among governments to strengthen the EU when negotiating with energy suppliers (European Commission, 2011c).

3.5 "The Internal Energy Market" from 1988

The Commission working document "The Internal Energy Market" (IEM) released in 1988 marks the starting point of the liberalisation of the European gas market. (EU, 1988). According to this document:

The biggest barriers to the free movement of gas in Europe are government controls on natural gas imports and exports and undertakings holding a monopoly or dominant position enabling them to block movements of natural gas. (EU, 1988, p. 63)

As a result, two areas emerged as priorities: energy prices and infrastructure. The liberalisation process was also dependent on the removal of obstacles. The most important obstacles were monopolies, cartel-like structures and diverging national legislation and technical norms. The proposed solutions for removal of these obstacles were; harmonisation of taxation and technical norms, the opening up of public procurement, price transparency and unbundling as a way of improving the infrastructure and controlling energy prices (EU, 1988, p. 9).

Differences in national legislation and technical norms formed an obstacle towards the creation of an IEM. In accordance with general policy in the EU, the Commission proposed harmonisation of all taxes related to natural gas in adherence to the policy of convergence and to avoid discrimination based on nationality or type of costumer. For example, this would mean a termination of taxes on large industrial consumers that existed in France at the time. (EU, 1988, p. 62) There were also several technical barriers hindering the liberalisation and this issue was later addressed in a Directive implemented in 1997 (Directive 97/23/EC). The directive was developed together with the European gas industry and involved the continued work to interconnect the European gas pipeline network to ensure the possibility of expanding the market (EU, 1997). Interconnecting the infrastructure for gas was also important to achieve full security of supply by securing several points for import. The harmonisation of legislation and technical norms was very important to achieve the desired degree of convergence between member states. The structures of the gas markets varied from one country to another, dependent on geographical features, environmental legislation, degree of

import dependency, population density and more. By harmonising the markets Europe moved towards a more efficient market for natural gas, a requirement for liberalisation.

The opening up of public procurement was together with the harmonisation of rules and technical norms an essential step towards the removal of technical barriers. Because of the importance of energy for industry and households it is a priority for governments to secure future access. This explains the reason for heavy state ownership in the energy sector and the tight regulative framework in most states. State ownership leads to the national authorities being involved in most purchases of energy equipment. It was the Commission's assumption that this led to "national chauvinism", the discrimination of suppliers and producers based on nationality, in all member states. The Single European Act did not apply to energy up until 1988 and subsequently the EU directives concerning the awarding of public contracts and other public procurements did not concern the energy sector. But the muddied processes around public procurements regarding energy was considered a clear obstacle towards an IEM and a process of opening up public procurements was therefore essential in liberalising the energy market (EU, 1988, p. 16).

The removal of fiscal barriers, specifically the differences in taxation of energy in each member state, and the lack of price transparency was also considered to be of tremendous importance. It was widely recognised to be one of the major obstacles in realising an IEM and became a priority in the Commission's implementation of the coming Directives (EU, 1988, p. 17).

One of the key elements of the plan for an IEM was stated in the document "The Internal Energy Market" from 1988 and isolates monopolies as the major obstacle for liberalising the gas market.

Transport of gas in the Member States is characterized by the existence of statutory or de facto monopolies in the market place. (…) The presence of dominant or monopoly transmission undertakings in each Member State gives rise to segmentation of the Community market; these undertakings can restrict the through transport of gas and even where no specific legislation exists, can block the import and export of gas. (EU, 1988, p. 64)

To achieve an Internal Energy Market by liberalising the existing compartmentalised energy market, the removal of the trade practices that prevented the free flow of goods and

services from one nation to another was a requirement. In other words, the monopolies had to be removed. The proposed solution for this was introducing a so called "Common Carriage"-system for transmission of gas by the use of unbundling and third party access (TPA) (Austvik & Claes, 2011, p. 23). TPA involved giving a third party access to the infrastructure for transmission of gas that the owner of the network did not own themselves in exchange for a tariff payment. This can be compared to paying a toll for driving on a private road. A TPA-arrangement is only possible in a system where the owner of the pipelines operates solely as a transporter, and is not the owner of the transported gas. This involved "a structural separation between transmission system operator activities on the one hand, and generation, production and supply activities on the other hand" (European Commission, 2013). The purpose of unbundling was to ensure the neutral behaviour towards all users of the network and avoid conflicts of interest. This resulted in the establishing of TSOs. The Commission was well aware of the controversies this would create and the demand for unbundling was not made until 1998 in the first Gas directive, where it was stressed that the internal market would be established gradually "in order to enable the industry to adjust in a flexible and ordered manner to its new environment". (EU, 1998, p. 1)

3.6 The directives – a package system

As stated above, the plan was to establish the internal energy market gradually and therefore the EU legislation was composed of a package system consisting of three directives, each repealing the previous one. The third and latest package was implemented in the EU legislative system in 2007. However, what is known as the Gas directives was preceded by three other directives made to clear the way for the coming gas package. This is a presentation of the Directives and their contents in order of implementation, resulting in one Gas Directive.

The transit- and transparency directives are considered to be the first steps towards liberalisation of the gas market. The Transparency directive sought to secure energy price transparency to counter distortion of the market (EU, 1990). When pursuing the objectives of the IEM, the Commission realised that the gas sector's "special characteristics" needed to be addressed by specific Directives. The special characteristics referred mainly to the high-pressure transmission grids across Europe. The purpose of the Transit directive issued in 1990 was therefore to improve the EU's security of supply and reduce costs by allowing the transfer of natural gas between grids (EU, 1991). Both directives were approved without

controversy by the EU members and fulfilled the objectives of removing technical barriers in the process towards an IEM. (Austvik & Claes, 2011, p. 23)

Because of the global situation; i.e. the fall of Soviet, the reunification of Germany, the Gulf war and the increased environmental focus, the market for natural gas had already started to change and the Norwegian government had already adapted its legislation accordingly. Therefore, the transit- and transparency directives did not have any direct consequences for the Norwegian gas regime. The directives were even considered to have no relevance for the Norwegian energy sector and were almost ignored by the authorities (Claes, 2002, p. 21).

When the road was paved by the Transparency and Transit directives, it was time to roll out the Gas Market Directives. The first Gas directive (98/30/EC) was introduced in 1998 and its purpose was to create a freer gas market in Europe by establishing the system of TPA and unbundling. It set up common rules for the transmission, distribution, supply and storage of natural gas. This would ease the access to the gas delivery network for producers and buyers, including the upstream pipeline network, which also consisted of the Norwegian pipeline system. The local distribution networks were not affected in this instance. The continued use of take-or-pay contracts (TOP) would be up to each national government to determine (EU, 1998).

By reducing the obstacles to free flow between national markets, the idea was that it would increase the use of spot exchanges and the build up of so called hubs, marketplaces for multilateral exchanges. This in turn would reduce the use of long term contracts by increasing the flexibility of the market. The directives took a long time to be approved because of huge resistance from the gas industry. This was largely due to the demand for TPA and unbundling.

The most relevant part of the Gas directive for the Norwegian gas regime is the so called "Upstream article". (EU, 1998, p. 68) It is organised under the chapter concerning third party access and implies that TPA must apply to all suppliers, including non-members. This article has also been the most controversial among the pipeline-based suppliers, including Norway and Russia (Austvik & Claes, 2011, p. 27).

The second Gas directive (2003/55/EC) was a part of a package including an electricity directive (2003/54/EC) (EU, 2003). Its objective was to increase the functionality of the European gas market by continuing the harmonisation of rules and technical norms and

provisions towards TPA. The Directive emphasised the role of national regulation and legal decoupling in the unbundling progression.

The third and latest Gas Directive (2009/73/EC) was introduced in 2009 and was also part of a package for both natural gas and electricity (Directive 2009/72/EC). It was a result of the lack of progress in the liberalisation and repealed the second Directive. This time the focus was on ownership decoupling in the process towards unbundling and TPA, meaning that a TSO could not be a part of a group involved in the production and sale of natural gas. TSOs would need to be certified by the national authorities and reported to the Commission. It also established a bureau for cooperation between energy regulators on an EU level named ACER (Agency for the Cooperation between Energy Regulators) (EU, 2009).

"The Europe 2020 initiative – Energy 2020" is the EU strategy aimed to secure "competitive, sustainable and secure energy" (EU, 2010, p. 2). It was adopted by the Commission in 2010 and includes the so called "20-20-20" targets. This strategy involves the following; an aim to reduce greenhouse emissions by 20 % within 2020, raising the share of EU energy consumption from renewable resources by 20 % and a 20 % improvement in energy efficiency. Energy 2020 is an ambitious plan involving many plans and strategies where new ones are amended regularly. The five priorities of Energy 2020 are; achieving an energy efficient Europe; building a truly pan-European integrated energy market; empowering consumers and achieving the highest level of safety and security; extending Europe's leadership in energy technology and innovation; strengthening the external dimension of the EU energy market (EU, 2010, pp. 5-6).

The gas sector is specifically mentioned in the strategy and the process of liberalisation is to be given continued priority to ensure improved efficiency of the energy market. The need for national implementation of the Gas directive is also pointed out as an area that will be given special attention by the Commission. This suggests the Commission's dissatisfaction with the progress of the IEM. Although the Commission recognised the high costs of upgrading the energy infrastructure to achieve free flow of natural gas, it was stressed that it was an important part of the IEM and of securing future energy supplies.

Networks outside EU borders were also mentioned and the construction of new interconnections in neighbouring countries will receive rigorous EU monitoring. The construction of new pipelines establishing new corridors of delivery would be especially

prioritized to secure future energy supplies to the EU. This suggests that the adjustments concerning the recent gas directives will not be the last adaptations the Norwegian gas regime will have to make (EU, 2010, p. 10).

3.7 Progress

In 2012 the Commission released a report named "It's time to complete the internal energy market" (European Commission Press Release, 2012). The title alone suggests EU unhappiness concerning gas liberalisation. This report followed the publication of a Commission staff working document on the progress in creating the internal energy market for gas and electricity in 2011 (European Commission, 2011a).

The report mentions certain progressions for the wholesale market; convergence of prices, a certain decrease in prices, better cooperation among power exchanges and TSOs. However, obstacles still exists for an IEM, especially in the retail market. The interconnections between member states are mentioned as insufficient and an absence of harmonisation of market rules in the member states are also significant shortages (EU, 2010, p. 14).

One of the main obstacles for liberalising the energy market has been the investments needed to achieve harmonisation of technical norms in the supply infrastructure. Security of supply has been a crucial motivation for liberalisation because a fully integrated market is necessary to achieve the highest level of security of supply. To achieve a security of supply situation in all 27 member states, investments in the range of 10 – 13 billion Euros is still needed in the gas infrastructure towards 2022 (Booz&Company, et al., 2013, p. 3). Additionally, commitments due to long term "take-or-pay"-contracts have been obstacles in the liberalisation process (Finon & Locatelli, 2002, p. 5).

The initially mentioned report suggests unhappiness concerning the progress of the IEM and in 2011 the EU Heads of State declared the need to complete the internal energy market by 2014 (European Commission Press Release, 2012). The European Gas market is far from liberalised in 2013. But segments of the market have become far more flexible and open, resulting in a more liberalised market and progressions towards an IEM (Austvik & Claes, 2011, p. 13).

It was the Commission who pushed the liberalisation forward, not the member countries. The strong political forces controlling each country's gas sector had very different opinions on the

approach that should be taken towards an internal energy market. While the British favoured a market with little governmental supervision, the French was in favour of strong directive influence from the state. Matlary describes the situation as tensions between "more market" and "more politics" (Matlary, 1990, p. 79). This exemplifies the many obstacles the Commission has met on the road towards liberalisation and also explains why this is a process that is still ongoing since its beginning in 1988.

3.8 Chapter conclusion

Although there have been several challenges facing the realisation of an IEM, the driving forces behind the EU liberalisation remains. The purpose of securing the future energy supply to the EU and lowering prices for consumers permeates all of the Directives implemented by the Commission. So does its resolve to achieve a liberalised gas market in the EU.

The upstream article in the Gas directive caused much conflict with the suppliers to the European market, especially with Norway because of the EEA agreement. The conflict originated in a fundamental difference in the view of organising the gas on the supply side

The intention of removing monopolies by unbundling and introducing TPA to the massive European gas infrastructure initiated a process that is not yet completed and is sure to progress with varying speed in the years to come.

4 The consequences of EU liberalisation in Norway

The following chapter contains the main analysis of the consequences of the liberalisation of the European gas market for the Norwegian gas regime, based on the results from the presentations above. To improve the discussion of the main research question, it will also include further details of the evolution of Norwegian gas sales.

By considering the consequences of the liberalisation of the natural gas market in Europe in Norway I intend to shed light on the relationship between Norway and the EU in more general terms. This is one of many ways to show how the Norwegian society and politics is highly influenced by internal political decisions in the EU, despite not being a member. For this reason, my main research question is:

What are the consequences of the liberalisation of the European gas market for the Norwegian gas regime?

In this chapter I will discuss the liberalisation of the EU gas market and its implementation through various directives and show how this has affected the Norwegian gas regime. The choice of analysing Norway's relationship with the EU as an organisation as opposed to an intergovernmentalist approach, where the most important actors are the individual nation states, is grounded in the decisive role of the Commission in the liberalisation process. The petroleum sector has been characterised by strong Government regulation, especially in France (Gaz de France) and Great Britain (British Gas). Therefore, the liberalisation has been conducted with the Commission at the helm, not the member states (Matlary, 1997, pp. 28-32).

In the first part of the chapter I will look into the claim that the dissolution of the GFU was a direct consequence of the liberalisation. The first hypothesis is:

Without the pressure from the EU, Norway would have kept the GFU arrangement and long-term contracts.

Through an account of the historical development of Norwegian gas sales I will show how EU regulations set a regulative framework for its internal market and simultaneously changed the conditions for the Norwegian gas regime. The EU created the IEM to secure future energy supplies, to reduce prices and improve services for the consumers. In other words, the

liberalisation process was tailored for the import countries, but still it affected the export countries in many ways. The termination of the GFU is a prime example of how the EU's regulative framework conflicted with the governance of Norwegian authorities.

The second part of the chapter will concentrate on the study around the following hypothesis:

The establishing of Gassco and Gassled is a direct consequence of the liberalisation of the European gas market.

Gassco was established the same year as the GFU was terminated. By continuing the historical account of the Norwegian gas sales I will confirm or falsify the hypothesis by discussing the consequences on EU liberalisation for the Norwegian gas regime. The discussion of these hypotheses will provide a response to a major portion of the main research question by illustrating the consequences through two relevant examples.

4.1 Norway's room for self-determination in the gas industry

All energy trade between Norway and European countries operate within an EU framework established by the directives. The Norwegian room for self-determination in the international energy market is controlled by international regulations and legislation. These regulations also affect the gas regime operating within Norwegian borders. The Norwegian gas regime is under constant influence of competition legislation of the EU and changes in the gas market as a result of EU liberalisation.

The EEA agreement has secured Norwegian citizens and businesses equal opportunities in the Internal market through regulations for free movement of goods, capital, labour and services. (Claes, 2002, p. 9) The developments within the EU have become a central premise for Norwegian policies. The liberalisation of the gas market has altered the Norwegian method of governing the gas sector; it has altered the whole gas regime.

The reorganisation of Norwegian gas sales as a consequence of the liberalisation of the gas market includes several changes. I will address what I consider to be the most important; the termination of the GFU and the establishment of Gassco. An important underlying theme of this discussion will be that the changing framework the Norwegian gas regime has been presented with has been brought on by the Union. The EU and the Norwegian government have different priorities concerning gas policies and the conflicting interests of the importer and the exporter comes up to the surface in the case of the liberalisation of the gas market.

The EU liberalisation process has been characterised by strong conflicting interests between Norway and the EU. The directives have largely been met by resistance from Norway, resulting in threats of legal prosecution from the EU. Norway's room for self-determination seems slim in this case and will be explored in this chapter (Claes, 2002, p. 22).

4.2 Organisation of Norwegian gas sales

In their report concerning the EEA agreement and Norwegian energy policy, Austvik and Claes provide a chronological review of the organisation of Norwegian gas sales by dividing it into four significant periods. The four phases are set before the signing of EEA agreement and therefore gives useful background information when evaluating the process leading up to the termination of GFU and the establishment of Gassco (Austvik & Claes, 2011, p. 25). By supplying additional historical information I will present a comprehensive overview of the changing framework for the Norwegian gas regime.

The first phase of Norwegian gas sales takes place during the 1970s. Production on the Ekofisk field in the North Sea began in 1971 and was the first Norwegian field in production. It is a very large field and is expected to be able to produce until 2050 (ConocoPhilips, 2013). Gas sales during the first phase came from Ekofisk and the Frigg field. It was sold by the license holders through depletion contracts. These contracts are also called output contracts and it meant that all production from a specific field was sold to one buyer. In the case of the Ekofisk field, it was sold to a purchasing consortium on the European continent. (Austvik & Claes, 2011, p. 25) As previously mentioned in chapter 2.1, this was a period when gas sales were treated as a purely commercial business and was under minor governmental control.

When the 1980s arrived the market was changing and the second phase of Norwegian gas sales was a seller's market. Due to an increase in gas demand in Europe, the number of buyers rose and subsequently the competition increased. This was good news for the growing gas exploration and production on the NCS. The large deposits of natural gas discovered on the NCS promised long term supplies of Norwegian gas far in to the future. Global conditions also increased the demand for natural gas. The sum of increasing oil prices in the late 1970s, uncertainties concerning deliveries from the Middle East, political conflicts concerning pipelines between the US and Europe and insecurity related to Soviet gas deliveries led to a great interest in Norwegian gas. Gas from the NCS was stable and based on long-term contracts. This gave Norway an advantage in negotiations and in 1981 the price of gas from

the Statfjord field broke the record when achieving the highest ever paid price for natural gas, a so called "price premium"(ibid.).

Austvik and Claes start the third phase of Norwegian gas sales in 1984. The market changed in the favour of the buyer instead of the seller and the industry had to adapt to market value principles. Russia (Soviet) and the Netherlands increased their exports and the market shifted from a sellers' to a buyers' market (Claes, et al., 1990, p. 15). The premier example of the changing market is the failed negations concerning the Sleipner-field. It was followed by a new type of gas sales, based on volume instead of specific fields (ibid.). In this contract, the buyers pushed through a much lower price that would also apply for the Statfjord-deal from 1981, effectively reducing the "premium price" by twenty percent (Halmø, 2012, p. 17).

The Troll-contract resulted in a new system and introduced the fourth phase. The Troll Commercial Model (TCM) included several smaller supply contracts and allowed the production of smaller gas fields that had been evaluated as too small to be profitable. Through the TCM the large Troll-field would guarantee the negotiated volume, but a part of the gas delivery could originate from other smaller fields. (Claes, 2003, p. 17) This involved a complete change in gas sales, from depletion contracts to volume based contracts. Because of the large investments needed in the exploration and production of new fields, the TCM opened up the possibility expanding the operations on the NCS by securing investments in smaller fields (ibid.).

Statoil showed apparent reluctance towards structural changes in the system of gas exports and wanted to keep the system of long term contracts. The company stated that a change in the system could hardly benefit any of the actors involved in the gas market. Nevertheless, Statoil clearly made preparations towards a change in the market structure by negotiating the contract on the Troll-field and constructing Zeepipe, which led to increased flexibility towards the market, see figure 1 (Claes, et al., 1990, p. 16).

Because of declining oil prices, the first part of the decade was characterised by low political involvement, the focus was rather on securing revenue. However, with the failed Sleipner-negotiations the incentive for governmental involvement was strengthened. In 1986 all Norwegian gas sales were centralised through the Gas Negotiating Committee (GFU). Before this, Statoil had the sole responsibility of negotiating gas contracts. The proposition to establish the GFU was presented in the Report to the Storting (St. Meld. Nr 46 (1986-87) and

was established when the Norwegian Parliament approved the report. It was stated that the main assignment of the GFU was to secure long term conditions for Norwegian gas sales (Ministry of Petroelum and Energy, 1997).

The organisation of the GFU was also a reaction to a similar arrangement on the Continent. Several gas companies, among them Ruhrgas and Gaz de France, had organised themselves in to a buyer's monopoly where they negotiated gas imports as one entity. The Norwegian reaction to this was the GFU. Foreign companies were not allowed to participate in order to prevent them from sitting on both sides of the negotiation table and the members were the Norwegian petroleum companies at the time; Statoil, Hydro and Saga. Another reason for the founding of GFU was to secure a certain price level. It was theorised that competition among the sellers on the NCS would drive the prices down, thus reducing the state's income (Austvik & Claes, 2011, p. 13). The increased governmental involvement through the GFU coincide with the seventh oil commandment "The state must become involved at all appropriate levels and contribute to a coordination of Norwegian interests in Norway's petroleum industry". (see 2.5) One of the conditions for the arrangement was that the MPE had to approve each gas contract. This stresses the heavy governmental hand in Norwegian gas sales before the European Commission's working paper on an Internal Energy Market in Europe was introduced in 1988. The GFU had similarities with the arrangements of the other main suppliers to the European gas market; Russia and Algeria, where all gas exports was performed by nationalised gas companies, respectively Gazprom and Sonatrach.

In 1993 an additional agency was established that allowed non-Norwegian companies access to negotiations concerning gas sales as an advisory committee, called "Forsyningsutvalget" (FU). This was a small reform in itself, as it opened up the possibility that European gas companies would sit on both sides of the table, which the establishment of the GFU had sought to avoid. The MPE still had the last word and the GFU was continued to be viewed as discriminatory by the EU (The EEA-review Committee, 2012, p. 555).

In 1992 Norway signed the EEA agreement, initiating an extensive legal cooperation with the EU. It included Norway in the Single market and obliged Norway to implement parts of EU legislation. This meant that the EU as an institution had a new channel for influence in Norway and led to several adaptations in Norwegian legislation and state management, among them the termination of the GFU in 2001. Previously, the changes in the Norwegian

gas sector were a result of variations in the market. The TCM and the initial foundation of the GFU were consequences of a changing gas market, not direct requirements by the EU. By introducing the first Gas directive in 1998, the EU demanded changes from their suppliers as well in addition to the end of gas monopolies in Europe.

The organisation of Norwegian gas sales went through different phases from its beginning in the 1970s and up to the signing of the EEA-agreement. Up until 1992 the changes to the gas regime were mainly caused by global and regional changes to the energy market and a maturation of the Norwegian petroleum sector. The EEA agreement led to a new channel of influence and increased integration of the Norwegian gas regime in to the European gas market.

4.3 Hydrocarbons licensing Directive of 1994

Although the Hydrocarbons licensing directive (94/22/EC) initially did not change a lot to in Norway, it is the first example of how the general EU competitive policies made its way into the energy sector, which previously had been used on other principals for making business. The Commission promoted the Directive for the first time in 1992 (EU, 1992), and it was approved by the Council of Ministers with a few changes in (EU, 1994). The directive was grounded in the Rome treaty's provisions about free competition and intended to secure non-discriminatory awarding of oil- and gas licenses. As a result, the MPE could no longer award licenses based on nationality or to Statoil because of state ownership (Claes, 2003, p. 11). This also meant that Statoil could not remain a participant in every license awarded on the NCS, as had been the rule up until then.

The Norwegian government opposed this directive because it changed the system of licensing. But it caused controversy neither in the industry nor politically. Most Norwegian politicians settled with calling it superfluous and refrained from criticising further (Austvik & Claes, 2011, p. 21). From the industry's point of view the directive could have gone even further and reduced the role of the Government even more. The active role of the Norwegian authorities in the petroleum sector is clearly exemplified by the MPE's role in awarding licensees on the NCS and Claes and Austvik claim that the industry would have preferred an even more liberal direction in the governing of the Norwegian petroleum resources (Austvik & Claes, 2011, p. 18).

Statoil welcomed the Licensing directive and when taking Statoil's positive attitude towards the Licensing Directive in to account, it may also explain why Norwegian authorities did not object more. The Directive did cause changes in the Norwegian model for governing the petroleum sector and one would expect protests. When Norwegian officials didn't protest other than calling it superfluous, I will therefore draw a cautious conclusion, when I assume that Statoil influenced the Government in this matter and that the relationship between Statoil and the State was not as simple as emperor and vassal, but more of a partnership.

4.4 The dissolution of the GFU

The dissolution of the GFU involved the liberalisation of the Norwegian gas market and was a direct consequence of the liberalisation of the European energy market. It became the most extensive conflict between the Norwegian government and the EU and serves well as an example of a lack of balance of power between the two parties. The EU applied all measures available through the EEA agreement to ensure the full liberalisation of the IEM, including the supply side. As mentioned in the introduction I will discuss this by considering the following hypothesis:

Without the pressure from the EU, Norway would have kept the GFU arrangement and long-term contracts.

The outcome of a change in gas sales was a shift away from long-term contracts towards more flexible contracts, a more competition friendly and liberalised approach concerning gas sales.

I will begin by giving an account of the dissolution of the GFU and continue with the discussion revolving around the hypothesis. A major obstacle towards an Internal Energy Market was the monopolies dominating the European gas markets. The package system of gas directives sought to unbundle ownership of the transmission systems and secure TPA. The EU could not accept a monopoly on the supply side while at the same time removing them within its own borders. Therefore, the cartel like structure of the GFU was not accepted by the Commission. Through the EEA agreement Norway was obliged to implement EU directives relevant to policy areas included in the agreement. The EU threatened Norway with legal consequences if the GFU was not terminated with basis in its rights given through the EEA agreement. The termination of the GFU would mean that each license holder on the NCS was free to market and distribute their own gas production.

The German gas company Wingas (a joint venture between Wintershall and Gazprom) tried to gain access to the NCS by entering in to cooperation with Norwegian Saga in the early 1990s, but the deal was stopped by the GFU. The refusal caused the German Bundeskartellamt to bring the case forward to the Commission and the GFU's position as a trade barrier became even more obvious from Brussels. This led to the raiding of Statoil, Hydro and the MPE by the Commission in 1996 and resulted in two investigations for violations of EEA-legislation, respectively article 53 and 59. The investigations were kept on hold while the Gas Directives were being implemented (The EEA-review Committee, 2012, p. 555). The GFU was temporarily terminated by the Government the 1st of June in 2001 and on permanent basis in January 2002. The Commission threatened the Norwegian companies with penalties in the range of NOK 50 billion and the threat of legal action and fines seems to be the reason for the decision to terminate the GFU (NTB, 2002). In the report to the Storting concerning the petroleum sector from 2001, it was argued that the GFU was discontinued due to the maturation of the Norwegian gas regime. The transmission and production systems were well developed and therefore the need for large investments was reduced. It also claims that this was an adaptation to the increased use of short term contracts in the European market due to the liberalisation process (Ministry of Petroelum and Energy, 2001-02, p. 70).

The Commission was not completely satisfied with the discontinuation and a week later it sent a statement of objections to Statoil and Hydro, as former members of the GFU, warning them of the infringement of Article 81 of the EC Treaty and Article 53 of the EEA agreement (European Commission Press Release, 2001). This may seem excessive considering the recent termination of the GFU, but the Commission was of the opinion that the many long-term contracts negotiated by the GFU still had restrictive effects and that the contracts were in fact settled on an illegal foundation. This resulted in a prolonged negotiation process and resulted in the Norwegian state's approval of the Gas directive validity on the NCS and Statoil and Hydro committed to supply an additional 15 billion Sm^3 of natural gas to new customers in Europe over a four year period (The EEA-review Committee, 2012, p. 556).

When analysing the hypothesis' validity, the most important aspect is the channels of EU influence. The GFU was part of the Norwegian authorities' management system for the NCS and appeared as an obstacle to trade to the Commission and it chose to apply pressure by the legal means provided by the EEA agreement. In the mentioned report to the Storting it is however claimed that the discontinuation was a result of the maturity of the NCS and an

adaptation to the European market. The Norwegian gas regime was forced to make adjustments to the management of gas sales by implementing the TCM when the market shifted in the 1980s. The commercial channel of influence was therefore nothing new to the Norwegian authorities. But the implementation of the EEA agreement introduced a political channel for influence from the European continent and the total consequence would be the discontinuation of the GFU. Considering the fact that the Commission took five years to issue a statement of objections after it started the investigation of the Norwegian companies and that the GFU-arrangement was terminated in the mean time, it may appear that the reason for the discontinuation was mainly influence from the commercial channel rather than the political channel. Therefore, the hypothesis does not seem to be valid.

But this interpretation assumes that pressure from the EU came only through the political channel. The implementation of the Gas directive in 1998 came during the five year period of the Commission's investigation of the GFU and applied pressure through the commercial channel of influence. Although the liberalisation is not yet completed and the implementation of TPA was a lengthy process, the promise of what was to come caused changes in the European market which spread to the suppliers, among them Norway. The EU can therefore said to be the reason for the liberalisation of the Norwegian gas regime by way of liberalising the European gas market and applying pressure through the commercial channel, together with the threat of legal action through the political channel.

The argument is supported by the EEA-review who argues that the reorganisation of the Norwegian gas regime would have happened without the EEA-agreement, due to the development of infrastructure, market development, the maturation of the petroleum sector and what is said to be a global liberal trend (The EEA-review Committee, 2012, p. 548). The reorganisation may not have happened in the same way, but a change would have come either way.

There is however the case of the other suppliers to the European market, who does not have a similar agreement with the EU, to consider. Both Libya and Algeria have kept their strong governmental control of gas sales to the European market, despite the EU liberalisation (Austvik & Claes, 2011, p. 30). This issue will be analysed further in chapter 5, but stresses the importance of the total influence from the two channels on the Norwegian gas regime.

When considering the validity of the proposed hypothesis I must take the total influence of the EU liberalisation into consideration. Imagining the European market without some form of liberalisation of the energy market would go against the basic idea of the EU and would be counterproductive. The evaluation of the hypothesis is also challenged by the fact that the Norwegian government itself claims the dissolution of the GFU was a result of a maturing gas sector, not pressure from the EU. By including the influence from the commercial channel as pressure from the EU, together with the political pressure, the existence of a massive pressure from the EU becomes evident. As mentioned earlier, the establishment of the GFU was originally meant as a response to commercial forces in the European market in the 1980s. But this was before the move towards an IEM and the situation on the Continent was characterised by similar arrangements on the buying side. I will therefore make the conclusion that the hypothesis holds some validity, because of the lack of termination of similar arrangements with the other main suppliers. Nevertheless, the GFU was created during a different market situation and may seem old fashioned today. As noted earlier, the arrangement displayed some flexibility when it was modified in 1993 by the adding of the FU. I therefore find it safe to assume that a modernised version of the GFU probably would have been a part of today's Norwegian gas regime had it not been for EU pressure to terminate the arrangement.

As a final comment, it is worth to note that a large amount of the long term contracts negotiated during the GFU arrangement are still in effect and new ones are also being signed. Although the amount of gas sold with spot prices and on short term contracts is rising, the share sold by long term contracts is still around 80-90 % (Statoil, 2008a).

4.5 The foundation of Gassco

The discussion concerning Gassco will show how this was a result of EU liberalisation, both directly and in-directly. The Norwegian gas regime was forced to adapt to the gas directives because of the EEA agreement. At the same time the liberalisation process caused structural changes within Norway's largest gas buyer, the European gas market, and the Norwegian gas regime had to adapt to changing market conditions as well. When analysing the consequences of EU liberalisation for the Norwegian gas regime I will make use of the following hypothesis:

The establishing of Gassco and Gassled is a direct consequence of the liberalisation of the European gas market

The separation of gas sales and access to infrastructure was brought on by the Gas directives through unbundling and TPA. The process of unbundling was already underway on the Continent, but the establishment of Gassco was a result of the same process in Norway. The same day as the GFU was permanently discontinued, January 1st 2002, Gassco took over the operatorship of all gas transport from the NCS. Within a year of its initialisation, Gassco opened up the infrastructure for third party access and with the termination of the GFU, gas sales became the responsibility of each company, resulting in the liberalisation of gas sales from the NCS (Gassco, 2013a).

The neutrality of Gassco was, and still is, important to ensure equal treatment of all users and efficient use of the resources on the NCS (Norwegian Petroleum Directorate, 2013d). This was in compliance with the Gas directive and an important tool to secure the intentions of the liberalisation process; to provide customers with lower prices and improved services.

The validity of the hypothesis is determined by the following statement from the Norwegian Ministry of Petroleum and Energy: "The creation of Gassco complies with the demands of the EU concerning the organization of gas transmission to the European gas market, as it appears in the Gas market directive" (Ministry of Petroleum and Energy, 2013d).[8]

The creation of Gassco was a part of an extensive reorganisation of the Norwegian gas regime. The term reorganisation is the key in the analysis concerning the consequences for the Norwegian gas regime of EU liberalisation. Despite that the Norwegian government had to take drastic steps in adapting its gas sales to the Gas Directive, the income from Norwegian gas sales remain high and the concentration around Statoil and SDFI on the NCS remains high. The effects of the liberalisation can therefore be said to be moderate and the reorganisation of the Norwegian gas regime can in some ways be viewed as modernisation and a process that probably would have been necessary adaptations to a changing global and regional energy market without the influence by the EU through political channels.

[8] The author's translation. Original text: Opprettelsen av Gassco imøtekommer EUs krav til organisering av gasstransportvirksomhet i det europeiske gassmarkedet, slik det kommer fram i gassmarkedsdirektivet.

4.6 Industry consequences

So far, I've focused my discussion on consequences on the governing of the Norwegian gas regime. The production companies are also a vital part of the regime and to illustrate the consequences for them I will use the example of the German gas company Wintershall. As a result of the licensing directive and the liberalisation process in general the company has gained access to the Norwegian Continental Shelf. In 2012 Wintershall exchanged shares with Statoil in several oil and gas fields in the North Sea. This made the company one of the leading producers in Norway. (Wintershall, 2013) What is significant concerning this arrangement is that Wintershall is a subsidiary of BASF, the world's largest chemical company. BASF is a large consumer of natural gas. Wintershall has therefore entered into partnerships with both Statoil and Gazprom, to obtain lower prices and easier access to gas supplies by entering in to competition with Ruhrgas on the German market, on behalf of its owner. According to Jonathan P. Stern, the deal with Gazprom was struck in 1999 after a refusal from the production companies in the North Sea. Stern (1999, p. 164) claims the refusal came because they declined selling to any other than their traditional customers. Considering this was in the years before the Russian deal in 1999, my reasoning attributes this to the GFU. As we know, the GFU controlled all gas sales from Norway and when it was terminated in 2001, the state's control over Norwegian exports was reduced and opened up the NCS to other actors. According to Claes and Austvik the reason for the GFU's rejection was that such a deal would increase competition in the German market and drive gas prices down and thus conflicting with the Norwegian state's instructions of maximizing profits (Austvik & Claes, 2011, p. 29). To no one's surprise, this reinforced the EU's views of the GFU as a cartel and a significant barrier to free trade.

Subsequently, when the GFU was discontinued, Wintershall eventually gained access to the NCS and started a close cooperation with Statoil. This is certainly a result of commercial interests and the premier driving force behind this must be considered to be BASF. This is therefore a premier example of the consequences for the industry because it shows how the liberalisation process have opened up the NCS and allowed partnerships that were not possible before 2001 because of governmental control. The intention of an IEM was to lower the prices for the consumer by increasing competition and if BASF as a consumer of natural gas has succeeded in its mission to achieve lower prices, than the cooperation must be considered a success story by the EU.

4.7 Norway in the middle

The development of the gas market indicates that the scales of power seem to have shifted from the producer to the consumer's favour. The EU as a consumer has clearly set the conditions for Norwegian gas production and export, unlike the situation with the Statfjord-negotiations in the 1980's where gas prices reached an all time high in a seller's market.

The shared interests of Norway and EU are stability and long term investments and both parties will benefit from a predictable market situation. But how does the liberalisation process contribute to this? The conflict between Norway and the EU essentially revolves around the price level of natural gas. Norway has common interests with other exporting countries like Russia and Algeria concerning the issue of price level. This requires a balancing act for Norwegian foreign politics between shared interest with exporting and importing countries (Austvik, 2003, p. 239).

Norwegian gas exports may be seen as being in a squeeze between national dependence and external dependence. The titles of several reports concerning Norwegian gas sales reflect this.[9] Politically, Norway indentifies itself with Western countries but when it comes to the export economy we have a lot in common with countries that we don't identify with politically. The resulting loneliness for Norway has caused the Norwegian gas regime to be organised differently than other suppliers, because all issues concerning EU relations and the relationship with other supplying countries must be balanced between conflicting interests. This balancing act may help to explain the EU influence in Norway.

4.8 Chapter conclusion

The EU liberalisation process has influenced the Norwegian gas regime through two channels; the political channel and the commercial channel, but they both represent a changing framework that was aimed at the internal European energy market. With the ambition to achieve an Internal Energy Market the Commission also changed the way Norway as a supplier organised gas sales, despite not being an EU-member. By providing an historical narrative of the phases of Norwegian gas sales I have showed how the Norwegian

[9] *Norwegian Gas: The struggle between government control and market developments* by Ulrich Bartsch (Bartsch, 1999) and the book *Naive Newcomer or shrewd salesman? Norway - a Major Oil and Gas Exporter* edited by Helge Ole Bergesen and Anne Kristin Sydnes. (Bergesen & Sydnes, 1990)

gas regime has changed and matured since its beginning in the 1970s. The foundation of the GFU was a reaction to the European market, and so was the dissolution. The difference was the forces responsible for the changes. The dissolution of the GFU and the creation of Gassco cannot be viewed as isolated events, but rather as consequences of a still ongoing process of liberalising the European gas market.

The main consequence of the EU liberalisation was the liberalisation of gas sales from the NCS and reorganisation of governmental involvement. Gas companies are now responsible for the sale of their own gas. However, Statoil remains the dominate party and 80-90 % of all gas is still sold by long-term contracts (Statoil, 2008c).

The State's control over the gas sector was altered as a consequence of EU liberalisation. The Norwegian tradition for strong governmental control is a contrast to the liberal ideology of the EU, but they are both rooted in economic motivation. And one can safely conclude that the Norwegian provisions taken as a response to the changing EU framework, did not have any negative consequences for the income of the Norwegian state. At least not yet.

The political consensus in Norway is that energy supplies are not a political commodity, as opposed to the position of the Russian authorities who operate with ulterior motives in addition to that of financial gain (The EEA-review Committee, 2012, p. 547). This causes Norwegian solitude in the European gas market. Because of differing commercial interests with the EU, due to the role as exporter versus the EU's role as importer, and diverging political interests with other suppliers like Russia, Norway's organisation of gas sales is unique.

5 Comparison

Norway and Russia are the largest suppliers of natural gas to the EU market. Each country is responsible for around a third of the total gas consumption within the EU and together they form a battery of natural gas energising Europe. Russia is the biggest supplier to the whole European market (including countries outside the EU) and the export of natural gas is essential to the Russian economy. As a result, the EU liberalisation process has had consequences for the Russian gas regime. This chapter will determine that the Russian and the Norwegian gas sector are both influenced by the EU liberalisation, but because of the difference in legal cooperation the results are not the same. The consequences are more similar when evaluating the consequences of economic integration.

The comparison with Russia is intended as a method of measuring the influence EU liberalisation in Norway. By comparing two states in a similar situation in their role opposite the EU, but with different forms of cooperation, I will be able to determine the reason for the reorganisation of the Norwegian gas regime. Through the analysis of the political channel and the commercial channel for EU influence, I can also clarify which of the consequences in Norway are caused by the EEA agreement and which ones are results of market influence by observing the lack of a similar consequence in Russia.

The first part of this chapter includes a presentation of the Russian regime for gas export and answers the question of the consequences for Russia, the largest supplier of natural gas to Europe, from the liberalisation of the European gas market. The second part is a comparison of the consequences for the Russian and Norwegian gas regime based on the following question: What are the similarities and differences between the Russian and Norwegian gas regime and why have they been affected differently by the gas market liberalisation? Russia and Norway share many similar interests as large suppliers to the EU gas market, but the lack of a Russian equivalent to the EEA agreement has kept the control of Russian gas exports in the firm hands of the Kremlin, unlike in Norway where gas sales were liberalised with the dissolution of the GFU. Nevertheless, Russia has not remained unaffected by the implementation of the Gas directive and has been forced to make adjustments to its gas regime as a consequence of changing market conditions inside its primary market.

5.1 The Russian gas giant

Russia is a key player in the global energy economy. It has enormous reserves of oil and natural gas and in 2010 Russia was the largest producer of oil and natural gas in the world. Additionally it was the fourth largest consumer of energy (International Energy Agency, 2011b, p. 246). Russia was the main exporter of crude oil, natural gas and hard coal to the EU in 2010, making up around 30 percent in each category (European Commission, 2012, p. 15). Norway is nearly dwarfed in the global comparison, but when one compares the two as exporters of natural gas to the European market, the levels are more equal. Russia and Norway each supplied the EU with around a third of the total natural gas consumption in 2012, see figure 3 in subchapter 3.2 (Eurostat, 2012).

The Russian gas regime is made up of Gazprom. Gazprom controls all exports of natural gas from Russia and the majority shareholder in Gazprom is the Russian state. The company holds a monopoly on exports of Russian gas, according to Russian Federal Law on Gas Export adopted in 2006. The company bases its exports on a long-term contract system under the take-or-pay principle, securing a predictable basis when planning future production (Gazprom, 2013c).[10] Gazprom is in reality the Gazprom Group with multiple subsidiaries and partners spread out over a wide spectrum of responsibilities concerning gas; banking, production, exploration, and pipeline construction, to mention a few. Gazexport is the responsible subsidiary concerning export to Europe (Gazprom, 2013a). For the sake of simplicity the company will only be referred to as Gazprom. Through this extensive system Gazprom holds a firm grip on all exports of natural gas with the Russian authorities governing all aspects of its export strategy.

A process of reforming and restructuring the Russian gas regime began in 2005. The relationship of the Russian state and Gazprom has not been conflict free through the years. In 2003 the Russian government's share in the company was 38,375, but by 2011 the state had taken control over the share majority (50, 002%), effectively reducing the conflict level by putting its foot down (Gazprom, 2011). In the late 1990s the government passed legislation

[10] Take-or-pay contract is a Buyer-seller agreement where the buyer's obligation to pay is unconditional whether or not the purchased goods or services are delivered or taken. Such arrangements are often used as indirect guaranties for project financing, and protect the buyers from price increases and the sellers from price decreases. (Business Disctionary, 2013b)

limiting foreign ownership and president Putin's influence over the company was increased when he placed known sympathisers in the Gazprom management committee. (Houlleberghs & Zaslavsky, 2004, p. 78) In total, this means that the Kremlin controls all Russian gas exports.

Third party access for Gazprom's gas network was established in 1998, around the same time as the first Gas directive in the EU. This liberalising step was not followed by price transparency and accusations on overcharging on tariffs soon emerged from other gas companies. The small degree of liberalisation only applied to the market within Russia and did not have any effect on Russian exports. Statements made by president Putin in 2003 also contributed in reducing the Commissions hopes for future access to the Russian pipelines when he declared that the State intended to maintain its control over the gas pipeline system and Gazprom (Stern, 2005, pp. 170-172, 181-185). What is certain, is that as a major shareholder the Russian government has large influence over the company and the Kremlin's grip on Gazprom remains tight, despite EU encouragement towards liberalising exports.

The Russian-Ukrainian gas dispute in the winter of 2009 was the most serious of a long series of conflicts between the Ukraine and Russia mainly concerning lack of payment. Russian exports to Ukraine were cut off January 1st 2009. This led to a humanitarian emergency in some of the Balkan countries and several other EU members were seriously affected because Ukraine serves as an important entry into the European market for Russian gas. The reputations of Russia as a stable supplier and Ukraine as a transit country were severely damaged. For the EU it actualised the issue of security of supply and intensified the work on building additional entry points to the EU (Pirani, et al., 2009, p. 4). Among them was the South Stream, a part of a larger project named South Corridor. The project involves major pipeline developments in both Europe and Russia and will be completed by the end 2019. The construction of the South Stream pipeline will ensure supply to South-Eastern Europe and will follow this route: Russia – Bulgaria – Serbia – Hungary – Slovenia – Italy. By laying the pipeline in the Black Sea, it effectively avoids transit countries, like the Ukraine (Gazprom, 2013d). See figure 4 for details.

Figure 4 Major Russian pipelines to Europe (Bailey, 2009)

5.2 Russian gas reserves

Russian gas production has some differences to the Norwegian. Most of the Russian gas fields are found onshore, unlike Norwegian gas reserves found offshore. The majority of Russian gas fields are found in remote areas like Western Siberia (78 %) and most of them were discovered in the 1960s. This was followed by the discovery of large fields on the Yamal peninsula in the 1970s. When the Soviet Union disintegrated in 1991 many gas fields were

lost to the Russians, but it remained in control of enormous reserves (Stern, 1999, p. 143). The production and transmission requires enormous investments and explains the Russian preference for long time contracts and take-or-pay clauses.

Gazprom owns 70 percent of proven Russian reserves as of 2013 and by the end of 2010 the reserves were estimated to 35 143,5 billion Sm^3 of gas (Gazprom, 2013b). Compared to this, the 3324,6 billion Sm3 of proven gas reserves on the NCS become almost small (Norwegian Petroelum Directorate, 2010). Nevertheless, the amount of gas exports to Europe from Norway and Russia is almost equal, despite the difference in reserves. The reason for this is the very low gas consumption in Norway and the correspondingly high domestic consumption in Russia, along with high production costs in all Russian gas fields.

During the Soviet period there was a significant difference in export strategy between the states in Western Europe and the Soviet Union's allies (Comecon). Gas sales to Comecon countries could be compared to internal trade while trade with Western Europe was characterised by traditional exports involving hard currencies. In the 1970s Soviet gas was exported to Austria, West Germany, Finland and Italy and the export expanded through the 1980s with construction of additional supply pipelines. The contracts with the Western European countries differed from other contracts of that era, because it did not specify a source of the gas (Stern, 1999, pp. 149-152). As we know, Norwegian gas contracts from the same era were depletion contracts based on the sale of specific fields rather than volume contracts, introduced after the Troll-arrangement.

5.3 Basis for EU influence

To be able to compare the consequences of EU liberalisation in Norway and Russia I must consider the possible channels of cooperation and influence between the EU and Russia. In the case of Norway, this is the EEA agreement and the economic ties between the exporters from the NCS and the importers in Europe. Russia does not have an arrangement comparable to the EEA agreement and I will assess the possibilities the EU holds for impact on the Russian gas regime, in other words; Gazprom. The EU's possibility for impact over the Russian gas regime goes mainly through three channels; the legal cooperation called the PCA-agreement, the strategic alliances between Gazprom and several EU based gas companies and the contracts between Gazprom and the buyers.

The backdrop of politics concerning other areas than energy exports also influence the EU-Russian relationship. The Russian military intervention in Georgia in 2008 "cast a shadow over the EU-Russia relationship", spoken by the Commissioner for External Relations and European Neighbourhood Policy (Ferrero-Waldner, 2008). A few years earlier it was Russia's negotiations for WTO membership that created the setting for discussions between EU and Russia (Stern, 2005, p. 185). As a major exporter of other energy commodities, the total negotiation power of Russia is extensive. The reason for including this is to illustrate that the gas trade does not operate within a vacuum; there are more often than not, other things at stake as well. In my assessment herein lies one of the major differences between Russia and Norway. While Russia does not seem to shy away from using gas exports as political leverage when needed, Norway chooses to view gas exports purely as a source of income for the state. Considering that Norway has lost its "battles" with the EU time and again, like the EU demand for termination of the GFU, it may also be a realisation of its own limits. The geographical extent and large population of Russia makes it a more equal opponent for the EU in terms of size and may be a part of the explanation for the differences in EU compliance in Norway and Russia.

The current basis for legal cooperation is the 1994 Partnership and Co-operation Agreement (PCA) (EU, 2013b). The agreement has been renewed annually until a new one will be finalised. The negotiations for a new EU-Russia agreement were launched in 2008, but have not yet reached an agreement (EU, 2013a). The EU's ambitions concerning the cooperation with Russia are to build a partnership based on transparency, reciprocity and non-discrimination. In other words, it wants Russia to accept the gas directives (Ferrero-Waldner, 2008). The possibility of a similar arrangement as the EEA agreement was also discussed at one point, but among other issues, the upstream article in the Gas directive could not be accepted by Russia (Austvik & Claes, 2011, p. 27). EU officials have also tended to stress the interdependence of Russia and Europe when the issue of liberalisation has been discussed, as if to remind the Russians that they are not the only ones laying down the terms of cooperation (Ferrero-Waldner, 2008).

The EU and Russia have also developed a so called strategic partnership, but because of frequent disagreements the concept is said to have little content. The main cooperation between EU states and Russia happens by trade and neither the PCA nor the strategic partnership seems to have yielded substantial results (Moshes, 2012). This does not mean that

the PCA has been meaningless, in other areas it may have been an efficient basis for cooperation. In the gas sector however, it failed to provide the EU with much influence in Russia.

Considering the debatable results of the PCA, the main reason for EU influence in Russia is probably Gazprom's gas-related investments in Europe. Gazprom is heavily involved in the European gas sector in other roles than as a supplier. Through joint ventures with several European gas companies, like Wintershall, Gazprom has established partnerships across several European countries (16 countries in 1999), mainly revolving around pipeline construction and marketing (Stern, 1999, p. 167). These partnerships are the main channel for EU influence in the Russian gas sector. When the partners are forced to adapt to EU liberalisation, Gazprom will be affected by the changes as well. Among some of these deals, is the cooperation with the Dutch company Gasunie, involving storage and other "hub services" of Russian gas in the Netherlands (Stern, 1999, p. 179).

The interdependence of Russia and the EU becomes clearer when considering the economic ties rather than the political cooperation. The many joint ventures of Gazprom are not only conducted on European soil, many involve heavy investments by European companies in the construction of pipelines or direct participation in production operations (European Commission, 2011b, p. 3).

Russia benefits from the EU liberalisation, but refuses liberalisation of its own gas regime. Simultaneously it uses gas as leverage (Bilgin, 2011, p. 126). Gazprom's export monopoly involves the negotiation of contracts with individual companies and countries, and the sales process is similar to that of Norwegian gas. Except, all Russian gas sales are controlled by the state through long term contracts with take-or-pay clauses and state-regulated prices. The sale of gas from the NCS is conducted by several companies, but Gazprom is the sole provider of gas from Russia. This involves little or no negotiations concerning gas sales with the EU as an institution.

5.4 The consequences of EU liberalisation for Russia

The state is the most important factor in Russian gas policies. In opposition to the EU which wants a liberalised energy market dominated by private companies (Austvik & Claes, 2011, p. 16 & 27). What are the consequences for Russia, the largest supplier of natural gas to Europe, of the liberalisation of the European gas market?

The latest meeting between EU and Russia provided little progress to the legal framework of cooperation and was attributed to Russia's unwillingness to commit to EU liberalisation of the gas market and other EU "values" (Canay, 2008, p. 30). Subsequently, the channel for legal cooperation has not yet proven to be a source of EU influence in Russia. I will therefore revolve my focus around the economic ties between Russia and the EU when analysing the consequences of the liberalisation of the European gas market in Russia.

Gazprom favours long term contracts, while the EU wants more short term, flexible solutions according to the liberal ideology. Russia is the EU's biggest neighbour and third biggest trading partner, with Russian supplies of oil and gas making up a large percentage of its exports to Europe. The European Commission's purpose of liberalising the gas market was to achieve lower prices for consumers by opening up the market. The situation where monopolies disappeared in favour of unbundling and TPA, also meant new conditions for Russian gas exports. The EU did not possess the same legal instruments concerning Russia as in Norway, but Russia and Gazprom were affected by the changing market conditions, both as an exporter and through strategic alliances.

The liberalisation of the gas market made it easier for the consumers to change supplier. The liberalisation process also encouraged developments of the gas infrastructure, like the building of the NETRA pipeline. NETRA connected the supply point in Dornum to Berlin, consequently opening up for Norwegian gas in Eastern Germany in 1995 (Open Grid Europe, 2013a). The potential of supply diversification occurred in several countries as a result of the liberalisation process and caused multiple countries to bargain more favourable terms from Gazprom, exemplified by NETRA (Stern, 1999, p. 186). Stern also claims that Gazprom officials accepted the liberalisation as *inevitable,* a wording that indicate the Russians were not pleased with this development, but realised they needed to adapt to the changing system. The increasing competition in the European market forced Gazprom to amplify its emphasis on the East Asian markets and in Turkey.

Several articles concerning Russian gas exports to the European gas market bear titles referring to the interdependence of the two actors.[11] By underlining the point of interdependence they also comment on a vital issue for the Russian gas regime: the pipelines. As noted, the development of production and export of natural gas is extremely capital intensive, largely due to the construction of thousands of kilometers of pipelines needed to reach the gas costumer. It is this system of a fixed connection between seller and buyer that makes the suppliers so sensitive to changes made by the buyer. This is true for all the major suppliers to the EU market; Russia, Norway and Algeria, who have an extensive pipeline system connecting them with Europe.

As noted in subchapter 3.2, the fourth largest supplier to the EU is Qatar. This is not delivered by pipelines, but as liquid natural gas (LNG) transported by ships. The supply chain is designed for exporting over great distances and does not have a fixed delivery point like supplies through pipelines. This clarifies two issues; firstly, how the proposed interdependence between the Russian and Norwegian suppliers and the EU market works. Secondly, it shows why the EU as an importer can change the conditions for Norway and Russia as exporters. When considering this issue it becomes clear that the EU directives designed to address internal issues of cartel-like structures and buying monopolies also affected the suppliers of natural gas. Thus, the importer changed the conditions for the exporter and forced change also outside its apparent jurisdiction.

Gas-to-gas competition in Europe is rising as a consequence of EU liberalisation. A report published in 2002 predicted that Russian competitiveness would be reduced in the European markets due to rising cost levels in production compared with those of other gas exporters. It was suspected that costs would rise because of less favourable conditions in the coming years on account of depreciation of current fields and more difficult technical conditions in new fields (Finon & Locatelli, 2002, p. 9). The development of the Yamal "megaproject", a not yet completed project connecting the Yamal peninsula in northwest Siberia with Germany, the Nord Stream and the South Stream are only some of the obviously large expenditures for Gazprom. However, statistics from the Commission show that the gas price for households in

[11] E.g.: *Russian and European gas interdependence. Can market forces balance out geopolitics?* by Dominique Finon and Catherine Locatelli (2008) and *Rethinking Russia: Russia and Europe's Mutual Energy Dependence* by Christophe-Alexandre Paillard (2010)

Germany in 2011 was among the highest in the EU (€ 10,49), despite it being a market of gas-to-gas competition. At the same time, in Bulgaria all gas imports come from Russia and are mostly based on long-term contracts, and has a much lower price for natural gas. (€ 4,61) But, the prices alone do not tell us much unless one considers the development. In Germany the prices fell from 2005 to 2011, while in Bulgaria they rose quite sharply in the same period (European Commission, 2012, pp. 34, 59-60, 72). My reasoning is therefore the following; the development of new pipelines has kept Russian gas competitive and the need for constructing new transportation channels in to Europe was partly a consequence of EU liberalisation. In Bulgaria, Russia is the sole supplier and can probably steer terms in their own favour, as seen in the negotiations concerning the South Stream pipelines (see chapter 5.4). In Germany however, there is more competition and Russia has to operate in a different market. Considering the prices went down and the large expenditures concerning pipeline development, the income from the German markets were probably reduced. The International Energy Agency (IEA) claims that all Russian energy sectors are highly ineffective and needs to improve its efficiency (International Energy Agency, 2011b, p. 245). Therefore, Russian gas reforms aimed at the internal market may be a necessary measure to secure Russian competitiveness on the EU gas market and an indirect consequence of EU liberalisation.

To summarize, the most influential channel in Russia has been the market. As mentioned, Russia and the EU are in a state of interdependence. The liberalisation of the European gas market made Gazprom adjust their increasing downstream activities in Europe and the Russians saw the need to coordinate the upstream sector accordingly. The Energy 2020 strategy intends to create a more cohesive energy policy and increased coordination between EU member states (Energy 2020). If this is successful, the import countries in Europe will gain leverage when negotiating gas deliveries and Gazprom may have to adjust as a result of a changing legal framework as well.

5.5 A comparison

In this comparison I ask the following question: What are the similarities and differences between the Russian and Norwegian gas regime and why have they been affected differently by the gas market liberalisation? By comparing three factors of each gas regime it becomes clear how the differences in the framework for legal cooperation have caused different effects of EU liberalisation. In Norway, the EEA agreement gave the EU a stronger basis for applying pressure on the Norwegian export management and modifying it in a preferred

direction. While the lack of a Russian equivalent has allowed the Kremlin and Gazprom to decide the organisation of gas exports without considering future legal retributions from the Commission. The three areas of comparison are the following; the pipelines, governmental control and market influence. Finally I will address the differences in the political relationship of Norway and the EU and the one between Russia and the EU.

The system of gas delivery by high pressure pipelines is costly to construct, but a cost efficient method for delivery. In contrast with the ships required for LNG transport, which is a lot more expensive form of transport. On the other hand, the pipelines create an increased degree of interdependence, as the geographical position of a potential client is less flexible. To keep their competitiveness in an increasingly liberalised and competitive European market, both Russia and Norway were forced to adapt their respective gas infrastructure. Norway allowed TPA and unbundled the pipelines by establishing Gassco, thus increasing efficiency and delivery capacity. Russia's response to the changing market was to increase the number of entry points for Russian gas in to the European market by constructing and developing more pipelines; Nord Stream, South Stream and Yamal. This increased delivery capacity was also a move to increase the reputation of Russian gas after the Russian-Ukrainian gas conflict in 2009, by avoiding Ukraine as a transit country.

By viewing TPA and unbundling as a central tool for increased competition it becomes clear that the consequences for Russia and Norway differ greatly when it comes to upstream activity. In Russia Gazprom is the only exporter of Russian gas. The situation is quite different concerning gas from the NCS. Statoil is still the largest exporter of Norwegian gas, but it does not hold a monopoly, after the termination of the GFU and foundation of Gassco.

Russia still uses long-term contracts, while Norway had to reduce this practice. When Norway dissolved the GFU and liberalised gas sales, Russian gas exports remained in the firm hand of the government through Gazprom. However, the global rise in use of shale gas and LNG has shifted the market towards more short term contracts for Russia as well. Shale gas and LNG do not rely on pipelines for transportation and is a more flexible commodity. As a consequence, both Norway and Russia has developed a growing LNG industry. Among them is the development of the Shtokman field in the Barents Sea, a joint venture between Gazprom (51 %), the French gas company Total (25 %) and Statoil (24 %) (Gazprom, 2013e).

The most obvious difference is the organisation of transmission and sales from Norway and Russia, the monopoly of Gazprom is contrasted by the more liberalised NCS. But when we consider the historical development, the organisation of gas sales was more similar. Before the termination of the GFU all gas sales from the NCS were under strong supervision by the authorities, similarly with Gazprom's current role. As an effect of the liberalisation process the GFU caught the eye of the Commission as a cartel-like organization and the arrangement could not continue while the monopolies and buyer consortiums on the Continent were dissolved. By using the legal tools placed by the EEA-agreement the EU altered the management of Norwegian gas sales and the GFU was terminated. Unlike in Russia, where Gazprom remains the only exporter from Russia and the government has even tightened its grip on the company by ceasing the majority shareholding. The Kremlin is consistently refusing the upstream article of the Gas Directive and other factors concerning the liberalisation process. And because of the apparent ineffectiveness of the PCA agreement and the unsuccessful attempts to negotiate a new one, the EU seems to be getting nowhere concerning liberalising it largest gas supplier. This shows the major influence of the EEA agreement in Norway and demonstrates how the Norwegian gas regime has adapted because of it, as opposed to Russian gas exports, which has remained under the control of the Russian government.

When comparing the two largest suppliers of natural gas to the European market, two issues become clear; the two countries are in gas-to-gas competition with each other in certain areas of Europe and they faced similar challenges concerning market development caused by EU liberalisation. The EU liberalisation had little effect on the Russian export management, due to lack of adequate legal cooperation. Nonetheless, Russia has not remained unaffected by the process and the reason for this is the general market development in the EU. As noted in chapter 4.6, the consequences of having to adapt to the License Directive and the Gas directive in Norway was increased involvement from foreign gas companies on the NCS. To ensure optimal production on the NCS by allowing investments based on non-discriminatory allocations from the MPE would increase competitiveness in the EU markets. Similarly in Russia, Gazprom was dependent on enormous investments in both the production and the transmission sectors and joined in partnerships with many European gas companies to secure its position in Europe. Therefore, the effects brought on by changes in the market due to EU liberalisation were fairly similar in Norway and in Russia.

The liberalisation of the EU market has highlighted Norway's awkward political and economic position as an export country and as a political partner, as discussed in chapter 4.7. Norway shares the interest of maximizing profits from gas production with Russia. This does not easily line up with the EU liberalisation's intentions of benefitting the consumers by lowering prices. In the long term both the suppliers and the buyers will benefit from operating within a predictable framework and the tight legal and political bonds between Norway and the EU were reflected on to the liberalisation process. Russia however, does not identify politically and culturally with the EU, resulting in a more difficult political cooperation and more conflicts concerning gas supplies.

Additionally, there is a difference concernig other issues impacting bilateral relations. Russia uses their gas supply as leverage towards other states and the EU. One of Russia's largest projects is the development of South Stream, a pipeline through the Black Sea to Bulgaria. The intention of this pipeline is to tie the European gas market closer to the Russian supply and avoid transit countries such as Ukraine. In association with this project Russia has clearly stated that as long as the Bulgarian government does not commit fully to the costs of the project, they will pay the highest gas prices in Europe (Sherr, 2012, p. 20). This example illustrates very clearly how Russia uses their gas supply politically, unlike the Norwegian government who has no intention of using Norwegian gas as leverage towards import countries (The EEA-review Committee, 2012, p. 547). The Russian inclination to use natural gas as an element in power politics has been a part of a strategy to establish a position of power in the world and gain an equal position to the EU and the US (Van Der Meulen, 2009, p. 846). This may help to explain the reason for the different degree of EU liberalisation in the Norwegian and Russian gas regimes. According to the ten oil commandments, the Norwegian objective of petroleum exports is to maximize profits. One can safely assume that the Russian economic objective is identical. But by adding another layer to Russian gas strategy, namely gaining political power by using energy as a key element in global power politics, the resistance towards EU liberalisation within the Russian sphere of interest is explained. Whereas Norway does not have the similar desire for power and therefore, EU liberalisation is more easily absorbed in to the Norwegian gas regime.

5.6 Chapter conclusion

The shared interests of Norway and Russia are securing the future demand for natural gas and reaching a high price for gas exports without pricing themselves out of the market. Both gas regimes are influenced by the EU liberalisation, but Norway more so than Russia. This can be attributed to the EEA agreement and Russia's more ambitious goals for itself on the global scene. The role of the state remains significant in Norway after the implementation of the Gas directive, but it has been reduced. In Russia the Kremlin has increased its grip over Gazprom and controls every aspect of its export strategy. The increased competition in the European gas market has had similar effects in both countries. Therefore the EEA agreement emerges as the most important reason for EU influence in Norway as a result of the comparison with Russia.

6 Conclusion

The former Norwegian foreign minister, Jonas Gahr Støre, noted in his book from 2008 that during his ten years as prime minister, Tony Blair never visited Norway. Despite the fact that gas from the NCS accounted for one third of British consumption (Støre, 2008, p. 140). One would think that Norway's importance as a supplier would lead to a visit from the British leader, but it seems he did not have any reasons for visiting during his elected period. This highlights the fact that the importers interests differ from that of the exporter. For the importer, security of supply is the most crucial, but for the exporter it is maximizing profits (Matlary, 1997, p. 25). The explanation for Blair's lack of visits may therefore be the lack of problems concerning the Norwegian gas supply. Gassco's numbers from 2012 show a regularity of 99,69 %, a number which has remained stable throughout the years (Gassco, 2013b). Still, this issue raises the question if there is a significant difference in the way the Norwegian gas regime and the way the EU regards Norway's role a gas exporter.

The topic of the thesis is energy policy, more specifically gas policies, in Norway and the EU. Natural gas is the fastest growing source of energy in the world today. (International Energy Agency, 2011a) The revenue from oil- and gas production and export has become a vital part of the Norwegian economy and the future income from natural gas is proposed to grow (Norwegian Petroleum Directorate, 2013c). As mentioned in chapter 2.7, future growth in gas sales is debated, but Norway's income will probably remain high in many years to come regardless of the debate.

The main conclusion of this thesis is that the framework of Norwegian gas exports has been altered by the process towards an IEM. However, the income from gas exports has continued to rise and Norwegian gas policy of maximizing the profit from petroleum exports does not seem to have been affected.

6.1 Conclusion of main research question

The structure of the Norwegian gas regime is the result of more than fifty years of evolution of the European market. The Norwegian gas regime has coexisted with the EU market since day one, and has been dependent on the European market since the beginning. Therefore, the Norwegian gas regime of 2013 is a result of both national and European influence.

The Norwegian gas regime has undergone many changes since its' meagre beginnings in the 1960s. The aim of Norwegian authorities has been to maximise the outcome of the petroleum

sector which has been the argument for a heavy hand in governmental control. However, the development of the Internal Energy Market in Europe has had extensive consequences for the Norwegian gas regime and the framework of governmental management has changed. When facing a changing framework, several parts of the regime had to changed, prominently the discontinuation of GFU and the establishment of Gassco. In chapter four the commercial channel is given the same responsibility for the reorganisation of the Norwegian gas regime. But in chapter five, when comparing Norway and Russia, the EEA agreement seems to be the only reason for heavy EU influence in Norway. By adding the Russian pursuit of increased global power, and the obvious absence of a Norwegian equivalent, the situation becomes more nuanced. It becomes apparent that the reason for less political EU involvement in Russia may not be caused by the lack of an EEA-type agreement alone. I therefore conclude that the consequence of EU liberalisation for the Norwegian gas regime has been a reorganisation of export management, caused by a combination of EU influence through political and commercial channels. The liberalisation has not had any negative consequences for the income from gas sales and not affected Norwegian political goals of maximising profits for the good of the society.

6.2 Conclusion on the relationship between Norway and EU

How does the research question illustrate the general relationship? In 2012 the EEA Review Committee concluded in its final report "Outside and inside" that the Norwegian model for relations with the EU is "association without codetermination" (The EEA-review Committee, 2012, p. 838). As stated in the introduction: the purpose of this thesis is to determine that the EU as an importer of natural gas changes the conditions for Norway as an exporter. By showing what the consequences for the Norwegian gas regime have been, I can establish that the EU definitively changed the conditions in Norway, and this happened without giving the Norwegian authorities a chance to influence the people making the decisions in Brussels, because of the Norwegian opt-out of codetermination.

The liberalisation of the European gas market has led to a more liberalised Norwegian gas regime. By the partial privatisation of Statoil, the foundation of Gassco and the dissolution of GFU the Norwegian gas regime has clearly adapted to a more liberalised market. The exporter has adapted to the importer and makes the case of how dependent the Norwegian gas regime is the European gas market. In the case of the Norwegian adaptation of the Gas directives, it clearly shows how the Norwegian gas sector was forced to modify the export management

and therefore serves as a prime example of the potential consequences of the EEA-agreement. In the comparison with the consequence in Russia the effects become even more obvious. In total it shows the amount of EU influence present in Norway, for both the industry and the government, and that the development of the EU deserves and requires great attention from Norwegian authorities.

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8 Appendices

Appendix A Exports of natural gas from the NCS in 2012

Country and recieving terminal	**Total %**
France - Dunkerque Terminal	14,5 %
United Kingdom - Easington Terminal	15,7 %
United Kingdom - Other Terminals	9,2 %
Germany - Europipe 1 Terminal	18,3 %
Germany - Europipe 2 Terminal	18,9 %
Germany - Norsea Gas Terminal	6,7 %
Denmark - Nybro	0,5 %
Belgium - Zeebrügge Terminal	12,0 %
LNG	4,1 %

Source: (Norwegian Petroleum Directorate, 2013c)

Appendix B Gasseld's Owners

Gassled's owners (as of November 2012)	Share (%)
Petoro AS*	45.793%
Solveig Gas Norway AS	24.756%
Njord Gas Infrastructure AS	8.036%
Silex Gas Norway AS	6.102%
Infragas Norway AS	5.006%
Statoil Petroleum AS	5.000%
Norsea Gas AS	2.261%
ConocoPhillips Scandinavia AS	1.678%
DONG E&P Norway AS	0.983%
GDF SUEZ E&P Norway AS	0.304%
RWE Dea Norway AS	0.081%

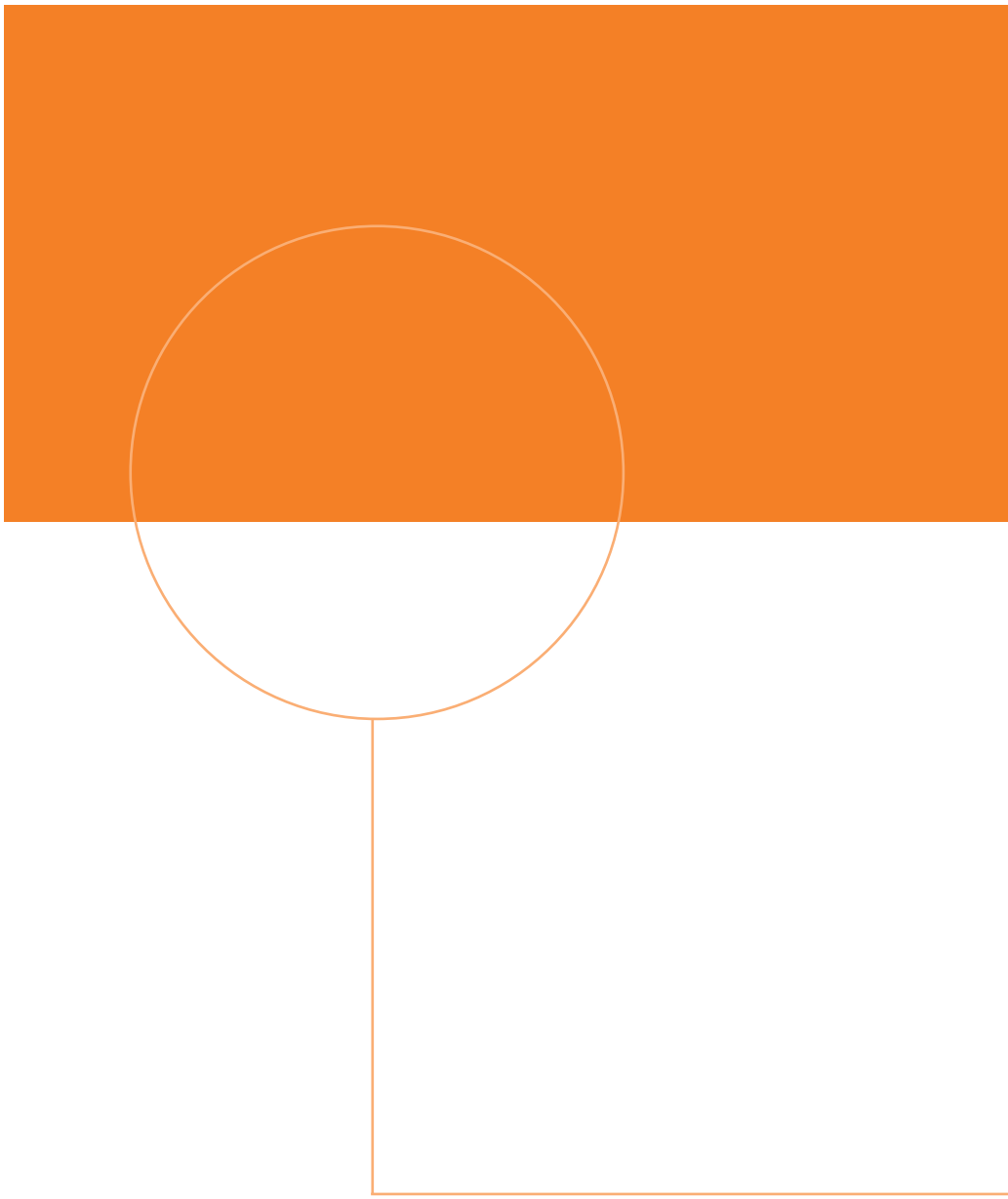
Source: (Gassco, 2012)

*Petoro serves as the licensee for the Norwegian state's direct financial interest (SDFI) in petroleum activities.

Appendix C Historical income from the petroleum sector (in mill. NOK)

Year	Ordinary tax	Special tax	Production fee	Area fee	Enviromental taxes	Net cash flow SDFI	Dividend Statoil
1971			14				
1972			42				
1973			69				
1974			121				
1975			208				
1976	1 143	4	712	99			
1977	1 694	725	646	57			
1978	1 828	727	1 213	51			
1979	3 399	1 492	1 608	53			
1980	9 912	4 955	3 639	63			
1981	13 804	8 062	5 308	96			0
1982	15 036	9 014	5 757	76			368
1983	14 232	8 870	7 663	75			353
1984	18 333	11 078	9 718	84			798
1985	21 809	13 013	11 626	219		-8 343	709
1986	17 308	9 996	8 172	198		-11 960	1 245
1987	7 137	3 184	7 517	243		-10 711	871
1988	5 128	1 072	5 481	184		-9 133	0
1989	4 832	1 547	7 288	223		755	0
1990	12 366	4 963	8 471	258		7 344	800
1991	15 021	6 739	8 940	582	810	5 879	1 500
1992	7 558	7 265	8 129	614	1 916	3 623	1 400
1993	6 411	9 528	7 852	553	2 271	159	1 250
1994	6 238	8 967	6 595	139	2 557	5	1 075
1995	7 854	10 789	5 884	552	2 559	9 259	1 614
1996	9 940	12 890	6 301	1 159	2 787	34 959	1 850
1997	15 489	19 582	6 220	617	3 043	40 404	1 600
1998	9 089	11 001	3 755	527	3 229	14 572	2 940
1999	5 540	6 151	3 222	561	3 261	25 769	135
2000	21 921	32 901	3 463	122	3 047	98 219	1 702
2001	41 465	64 316	2 481	983	2 862	125 439	5 746
2002	32 512	52 410	1 320	447	3 012	74 785	5 045
2003	36 819	60 280	766	460	3 056	67 482	5 133
2004	43 177	70 443	717	496	3 309	80 166	5 222
2005	61 589	103 294	360	224	3 351	98 602	8 139
2006	78 015	133 492	42	2 308	3 405	125 523	12 593
2007	70 281	116 233	0	764	3 876	111 235	14 006
2008	88 802	150 839	0	1 842	3 684	153 759	16 940
2009	61 501	103 733	0	1 470	2 262	95 339	15 489
2010	58 830	96 779	0	1 373	2 186	104 053	12 818
2011	78 243	127 693	0	1 517	2 225	127 775	13 350

Source: (Norwegian Petroelum Directorate, 2013b)



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