LL.M. in Natural Resources Law
and International Environmental Law

Promotion of the use of energy from renewable sources in the EU
The application of national support schemes as provided for by the Directive 2009/28/EC

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Abstract

An increased use of energy from renewable sources is viewed by the EU as one important part of the measures needed to reduce greenhouse gas emissions in complying with its international commitments. The current legal framework within the EU is governed by Directive 2009/28/EC. The directive set a target of at least a 20% share of energy from renewable sources in the EU’s gross final consumption of energy in 2020. The EU Member States shall ensure that they fulfil mandatory national overall targets set out in individual indicative trajectories consistent with the 20% target. Furthermore, there is a sector specific target set in transport for each Member State to ensure that the share of energy from renewable sources is at least 10% in 2020 in that sector.

In order to reach the renewable energy targets, the Member States may for example apply national support schemes. The directive mentions a non-exhaustive list of schemes, but does not go into any details about choice, design or implementation by the Member States which have been left discretion in these matters. The overall objective of this thesis is to examine the promotion of the use of energy from renewable sources within the EU through the employment of support schemes, and how they have been implemented, functioned and succeeded. This is done by examining strengths and weaknesses, compatibility with internal market rules, deficits in the implementation and whether the support schemes fulfil their aim, and if ecological sustainability is achieved in this respect.

The Member States have implemented a wide range of support schemes including investment aid, feed-in tariffs, feed-in premiums, renewable energy obligations, tenders and tax exemptions/reductions. There have been reforms since they have been employed, and there are more reforms on the way sought by the EU to move towards more market-based mechanisms and cost-efficiency. The projected deployment of energy from renewable sources indicates that the EU as a whole will reach its 20% renewable energy target by 2020, but there are implementation deficits in some Member States. Furthermore, it is projected that the 10% target within transport will not be met. Different reasons for implementation deficits are given, and the Member State’s freedom in employment of support schemes is also constrained by the internal market rules. Still, with the progress made, ecological sustainability is at least not counteracted.
Acknowledgments

I would like to thank Professor Aðalheiður Jóhannsdóttir for her dedicated work as my supervisor throughout the research and writing of this thesis. She has provided me with motivation, constructive criticism and well-founded recommendations.

It has been both very interesting and enlightening to participate in the different LL.M. courses, and I would like to thank all involved at the Faculty of Law in its organisation and teaching that has given me such a great experience.

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## Abbreviations

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<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>CJEU</td>
<td>Court of Justice of the European Union</td>
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<td>COR</td>
<td>Committee of the Regions</td>
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<tr>
<td>EC</td>
<td>European Community</td>
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<tr>
<td>ECCP</td>
<td>European Climate Change Programme</td>
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<tr>
<td>ECJ</td>
<td>European Court of Justice</td>
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<tr>
<td>ECSC</td>
<td>European Coal and Steel Community</td>
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<td>EEA</td>
<td>European Economic Area</td>
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<td>EEC</td>
<td>European Economic Community</td>
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<tr>
<td>ELM</td>
<td>Environmental Law Methodology</td>
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<tr>
<td>ESC</td>
<td>Economic and Social Committee</td>
</tr>
<tr>
<td>ETS</td>
<td>Emissions Trading Scheme</td>
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<td>EU</td>
<td>European Union</td>
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<tr>
<td>GHG</td>
<td>Greenhouse Gas</td>
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<tr>
<td>MEQR</td>
<td>Measures having an equivalent Effect as Quantitative Restrictions</td>
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<tr>
<td>Mtoe</td>
<td>Million tonnes of oil equivalent</td>
</tr>
<tr>
<td>MWh</td>
<td>Mega Watt hour</td>
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<tr>
<td>OJ</td>
<td>Official Journal</td>
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<tr>
<td>OLP</td>
<td>Ordinary Legislative Procedure</td>
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<tr>
<td>SEA</td>
<td>Single European Act</td>
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<tr>
<td>SLP</td>
<td>Special Legislative Procedure</td>
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<tr>
<td>TEU</td>
<td>Treaty on the European Union</td>
</tr>
<tr>
<td>TFEU</td>
<td>Treaty on the Functioning of the European Union</td>
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<tr>
<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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1. Introduction

1.1 General introduction

“Promotion of renewable sources is at the very forefront of the EU’s political agenda…”1

Renewable energy sources are practically inexhaustible natural resources, and encompass all non-fossil sources that replenish at the same rate as they are used. Primary renewable sources include wind, solar and geothermal energy, hydropower and biomass. They are used for production in the electricity sector, in the heating and cooling sector and as fuel in the transport sector.2

Renewable energy sources are viewed by the European Union (EU) as essential alternatives to fossil fuels for several reasons. Since their use reduces greenhouse gas (GHG) emissions, renewable energy sources can contribute in coping with the challenge of climate change mitigation. They can also contribute to energy security, since they provide a mix in the energy supply, and reduces the EU’s dependence on external oil and gas in uncertain markets. Furthermore, their increased use creates jobs in the EU, new renewable energy technologies and give the possibilities of more export.3

The current legal framework for increasing the consumption of energy from renewable sources in the EU is established by Directive 2009/28/EC on the promotion of the use of energy from renewable sources (RE Directive).4 The directive sets a target of a 20% share of energy from renewable sources in the EU’s overall energy consumption by 2020, and target of a 10% share in all Member States’ overall energy consumption in the transport sector by the same year.5

The Member States may apply support schemes, to stimulate investment in the development of production capacity for energy from renewable sources, in order to reach these renewable energy targets. However, legal questions arise over these support schemes compatibility with provisions of EU’s primary legislation regarding the internal market, free movement of goods, competition and State aid.6

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5 ibid art 3(1) and (4).
6 E Woerdman, M M Roggenkamp and M Holwerda (eds), Essential EU Climate Law (Edward Elgar Publishing 2015) 125.
1.2 Objectives
The overall objective of this thesis is to examine the promotion of the use of energy from renewable sources within the EU through the employment of support schemes. The RE Directive does not prescribe support schemes as obligatory, but only provides the possibility for Member States to apply measures, such as support schemes, in order to reach the renewable energy targets. Neither is there any harmonisation of details concerning support schemes at EU-level, which means that the design, implementation and management is at the discretion of the Member States. This makes the legal area regarding employment of support schemes complex, but also interesting to investigate into.

1.3 Research questions
The overarching research question of this thesis is: How have the national support schemes, with application provided for by the RE Directive, been implemented, functioned and succeeded in promoting the use of energy from renewable sources within the EU? This broad question has been broken down into four more narrow research questions:
- What strengths and weaknesses can be found within the different support schemes employed?
- Under which circumstances are the support schemes considered compatible with EU’s primary legislation on the internal market?
- What deficits can be found in the implementation of the RE Directive and the support schemes?
- Do the support schemes fulfil their aim in relation to the renewable energy targets set by 2020, and is ecological sustainability achieved in this respect?

1.4 Delimitations
The main focus of this thesis is on the support schemes, the RE Directive and EU’s primary legislation. The thesis provides an overview of the main features of these support schemes without going into the design, implementation and management in individual Member States. Most attention is also given to the electricity sector, since much development has taken place there.

In relation to the RE Directive, this thesis focuses on the initial main provisions relevant for the employment of support schemes without going into calculations, measures of
cooperation, guarantees of origin, grid access, sustainability criteria for biofuels or other more peripheral provisions. Furthermore, issues related to the RE Directive, but regulated in other separate directives, such as the emission trading scheme, energy efficiency, and those related to the internal energy market and energy taxation, are only mentioned or briefly presented.

As regard EU’s primary legislation, this thesis focuses on the provisions related to the internal market, first and foremost free movement of goods and State aid. This focus is also reflected in the case law chosen, with presentation of the main cases concerning these primary rules, and where possible the most recent case law. Rules on free movement of persons, services and capital, other competition issues and taxation are presented, but more as an overview.

1.5 Methodology and method

The research in this thesis relies upon some of the principles of environmental law methodology (ELM) as a conceptual framework. ELM’s fundamentals were developed by the late Dr. Staffan Westerlund, Professor of environmental law at Uppsala University. ELM’s main objective is to tackle problems that relate to reaching and maintenance of ecological sustainability, by focusing on law and legal system, analyse their weaknesses and counteracting factors, and how to develop and successfully implement and enforce law that can serve as an effective tool to operationalise ecological sustainability, but at the same time respect the rule of law.

ELM provides the definition of ecological sustainability as “the situations and conditions in the biosphere that are sufficient for sustaining mankind for innumerable generations to come with reliable and safe resilience, including full biodiversity”. One of ELM’s emphases is environmental control. This includes an emphasis on environmental management where natural resources are viewed as a real fundament and necessitate the protection of certain ecological qualities. Furthermore, ELM focus on how legal systems influence the object that benefits from the legislation, providing assistance in answering questions whether a specific


\[8\] ibid 2 and 8-9.

\[9\] ibid 635.

\[10\] ibid 7.
law is benefitting the environment, or if the objective of ecological sustainability is achieved.11

In contrary to traditional reactive legal approach, ELM is usually seen as a proactive methodology. In Scandinavian Studies in Law Volume 59, Dr. Aðalheiður Jóhannsdóttir, Professor of environmental law at University of Iceland, offers comments on the proactive methodological approach arguing that:12 “Against the growing complexity of modern environmental law, the subject’s vast scope, its multigenerational orientation, and multi-jurisdictional character, ELM’s basic thesis, reasoning and tools can be of considerable value for understanding how environmental law affects the environment and its components presently and in the future”.13

The proactive approximation of ELM derives from the fact that focus is directed towards theorising law from a particular perspective. Law and legal reasoning is placed within a context where the nature of the objective of the legislation, for example, a specific part of the environment, and how it reacts to different human actions, is taken into account. This differentiates ELM, as an effect-oriented approach, from traditional right- and duty-oriented legal approaches.14 With the main emphasis not placed on past legal practice, there is a benefit of minimising the risk of relying upon outdated perspectives in legal theorisation.15

In addition to an action-reaction model that aims to further the understanding of how the environment reacts to actions taken by the laws addressee’s, humans, one of ELM’s many theories concerns implementation deficits. This latter theory focuses on the implementation of environmental objectives and law, and their environmental consequences. According to this theory, if there is a deficit between the environmental objectives and the results accomplished in the environment, then that deficit lies with implementation.16

The theory of the implementation deficits is beneficial for the understanding of how environmental law functions and interacts with other parts and dimensions of the legal system.17 The theory presumes that “environmental objectives necessitate enforceable law for their legal operationalisation”.18 By way of example of reasons for implementation deficits

13 ibid 258.
14 ibid 251.
15 ibid 252.
16 ibid 250.
17 ibid.
18 ibid.
can be mentioned that the environmental objectives are set unrealistically, the law contains flaws and/or there are failures in ensuring compliance with the law through enforcement.\textsuperscript{19}

ELM does not rule out any established legal theory or method nor does it promote any specific view on the concept of law or alter the value or hierarchy of conventional doctrines on the legal sources in a legal system. This means that the application of ELM is not dependent upon some particular ideological foundation of law.\textsuperscript{20} Taking into account some of the fundamentals of ELM as a conceptual framework, the research method that will be utilised is a legal dogmatic method. This method provides a useful tool to utilise when conducting research within EU law, and for its identification, description and interpretation.

1.6 Material

This thesis focus on EU’s renewable energy law, covering environmental, energy and climate law. Consequently, information is gathered from literature written by law scholars working within these legal areas. Since the RE Directive was adopted in 2009, there is a well-established doctrine available. In providing a comprehensive overview of the relevant matters, Energy Law in Europe by M. M. Roggenkamp, C. Redgwell, A. Rönne and I. del Guayo, is a valuable source.

With more specific focus on support schemes, Essential EU Climate Law by E. Woerdman, M. M. Roggenkamp and M. Holwerda (eds), EU Energy Law by A. Johnston and G. Block, and further, EU Energy Law – Renewable Energy Law and Policy in the European Union by P. Hodson, C. Jones and H. van Steen (eds), are useful sources. An early work by C. Fräss-Ehrfeld, Renewable Energy Sources – A Chance to Combat Climate Change, also provided a good systematic overview of support schemes.

Furthermore, EU legislation, both primary and secondary is used in the thesis, and together with this several different EU documents, such as, Communications, Staff working documents and different reports. Some results from research carried out for the European Commission (Commission) are also taken into consideration. Finally, case law from the Court of Justice (European Court of Justice (ECJ), later the Court of Justice of the European Union (CJEU)) concerning support schemes, is used in the thesis.

\textsuperscript{19} ibid 251.

\textsuperscript{20} A Jóhansdóttir, \textit{The significance of the default: A study in environmental law methodology with emphasis on ecological sustainability and international biodiversity law} (Uppsala University 2009) 57 and 68.
1.7 Structure

The structure of this thesis is as follows: The first chapter, Chapter 2, contains a background concerning the development of policies and legislation within the EU relating to the RE Directive. The environmental, energy and climate change policies are presented, and an overview of internal market rules is given, followed by legal basis considerations and legal development regarding renewable energy. The next chapter, Chapter 3, contains analysis of the RE Directive. Specific policies underpinning the directive are presented, followed by the main provisions containing the scope, definitions, targets and core obligations for the EU Member States.

Chapter 4 covers issues relating to implementation and function of the different national support schemes. Thereafter, guidelines from the Commission concerning the design of support schemes as well as State aid for environmental protection and energy are analysed. After that, the main case law from the Court of Justice regarding support schemes and their compatibility with internal market rules are outlined, as well as two different progress reports from the Commission on the renewable energy deployment in the EU are presented.

Chapter 5 details the conclusions drawn from the analyses provided in the previous chapters, with the main focus on Chapter 4 and the support schemes, and a discussion in relation to the research questions. Finally, some de lege ferenda views are presented, and a proposal for a recast of the RE Directive, which in a form finally adopted will constitute the new common legal framework leading the way concerning the promotion of energy from renewable sources for the period 2021 to 2030.
2. Background

For context, this chapter contains information on the development of policies and legislation within the EU in the field of renewable energy law. Section 2.1 outlines the development and current status within EU’s environmental, energy and climate change policies. After that, in section 2.2, an overview of the most relevant EU internal market provisions regarding freedom of movement, competition and the internal energy market is presented. Section 2.3 deals with the choice of legal basis for legislation related to the different policies. Finally, in section 2.4, is provided an insight into the legal development concerning renewable energy sources in the EU.

2.1 EU policies

2.1.1 The EU’s environmental policy

2.1.1.1 The development from 1950s and onwards

In the original Treaty establishing the European Economic Community (EEC), the Treaty of Rome,\(^{21}\) that entered into force in 1958, there was no mention of any environmental policy. It was not until in 1972, during a European Council summit,\(^{22}\) that an European environmental policy was first promoted. It became the task of the Commission to draw up the first EEC environmental action programme, which was finished in 1973.\(^{23}\) The development at the time was still based on the EEC Treaty without any specific content on an environmental policy.\(^{24}\)

In a judgement from 1985, the Court of Justice, for the first time, considered environmental protection as one of the essential objectives of the EEC.\(^{25}\)

In 1987, the EEC Treaty was amended by the Single European Act (SEA),\(^ {26}\) and the objectives of an environmental policy were presented by specific provisions focusing on the environment and principles.\(^{27}\) Further amendments were made to the EEC Treaty in 1993, when the Treaty on European Union (TEU), or the Maastricht Treaty,\(^ {28}\) entered into force.\(^{29}\)


\(^{22}\) European Council, meeting in Paris in October 1972. See Cmnd 5109.


\(^{27}\) Jans & Vedder (n 24) 6.

The term environment was referred to in the initial key provisions of the amended EEC Treaty (Articles 2 and 3 of what became the EC Treaty), setting out the objectives of the European Community (EC).\textsuperscript{30} With the Treaty of Amsterdam,\textsuperscript{31} that entered into force in 1999, the term sustainable development was introduced by the EC Treaty (Article 2). Moreover, the task of promoting a high level of protection and improvement of the quality of the environment, became explicit parts of the environmental policy area.\textsuperscript{32}

\textbf{2.1.1.2 The development from 2000s and onwards}

Neither the Treaty of Nice,\textsuperscript{33} in force from 2003, nor the Treaty of Lisbon, into effect from 2009 (1 December),\textsuperscript{34} brought any pervasive changes in regard of the specific environmental objectives.\textsuperscript{35} However, the Treaty of Lisbon brought both overall structural changes and an extension of the EU’s objectives, incorporating the objectives of the former EC Treaty.\textsuperscript{36} This most recent Treaty contains the following provision: “The Union shall replace and succeed the European Community.”\textsuperscript{37} This affected the whole structure as EC law became EU law, and while the EC Treaty was replaced by the Treaty on the Functioning of the European Union (TFEU), the now two existing treaties (TEU and TFEU) have the same legal status.\textsuperscript{38} The general environmental objectives of the EU as they stand at present by virtue of these latest Treaties are: sustainable development and a high level of protection and promotion of the quality of the environment, by virtue of Article 3(3) TEU.

\textbf{2.1.1.3 Policy objectives and principles}

The specific environmental objectives, currently in Article 191(1) TFEU, are the following: first, preservation, protection and improvement of the quality of the environment, second, protection of human health, third, prudent and rational utilisation of natural resources, and lastly, promotion of measures at international level to deal with regional or worldwide

\begin{footnotes}
\footnote{ibid Title VII, Final provisions, art R(2).}
\footnote{Jans & Vedder (n 24) 7.}
\footnote{Treaty of Amsterdam [1999] OJ C340.}
\footnote{Jans & Vedder (n 24) 9.}
\footnote{Jans & Vedder (n 24) 7.}
\footnote{Treaty of Nice [2003] OJ C80.}
\footnote{Treaty of Lisbon [2009] OJ C306.}
\footnote{Krämer (n 23) 5.}
\footnote{Jans & Vedder (n 24) 10.}
\footnote{Treaty of Lisbon, art 1(2).}
\footnote{Jans & Vedder (n 24) 9-10.}
\end{footnotes}
environmental problems, and in particular combating climate change (see further section 2.1.3).39

An important and now a general principle of EU law, and of a particular relevance for environmental protection, is in Article 11 TFEU. This is the so-called integration principle, which was first introduced by the Treaty of Amsterdam in 1999. In its essence, it stipulates that environmental protection must be integrated into the definition and implementation of EU’s policies, in particular concerning the promotion of sustainable development.40

The integration principle is supplemented by some specific environmental principles that can be seen as general guidelines for EU’s environmental policy.41 These are found in Article 191(2) TFEU and consist of: the precautionary principle, the principle that preventive action should be taken, the principle that environmental damage should as a priority be rectified at source, and lastly, the polluter pays principle.

2.1.1.4 Environmental action programmes

Environmental action programmes have also played an important role concerning the development of environmental policy. The first such programme was adopted in 1973 without any particular legal foundation (see subsection 2.1.1.1). However, currently Article 192(3) TFEU contains the legal basis for the programmes.42 These programmes are subject to legislative debate, adopted in legislative procedure and therefore have more legitimacy as policy documents than, for example, Communications from the Commission.43 The most recent is the seventh incarnation and was adopted in 2013.44

2.1.2 The EU’s energy policy

2.1.2.1 The development from 1950s and onwards

The EU’s energy policy as well developed in a legal vacuum. During the 1950s, Europe’s dominating energy sources were coal and nuclear energy,45 and in 1952, the Treaty

40 Krämer (n 23) 9 and 14.
41 ibid 14.
42 ibid 7.
43 N de Sadeleer, EU Environmental Law and the Internal Market (OUP 2014) 156.
45 Roggenkamp and others (n 1) 189.
establishing the European Coal and Steel Community (ECSC) entered into force. By the
decade’s end, in 1958, the Treaty establishing the European Atomic Energy Community
(Euratom Treaty) entered into force. Of these two old Treaties, the ECSC Treaty is no
longer active since it expired after 50 years in 2002.

As a direct response to several nuclear incidents, high production costs in coal mining and
embargos and fluctuation in oil prices in the 1970’s, the EEC saw a need to adopt a common
energy policy. What was envisaged required a guarantee that energy supplies were safe, under
acceptable economic conditions and that lasted. Consequently, to facilitate proposals for
legislation within this field, the Council of the EEC (Council) adopted a Resolution regarding
an energy policy strategy in 1974.

The focus continued into the 1980’s with the aim of full European integration, but the
common market had still not been accomplished. This aim consisted in creating a single
market within the frontiers of the EEC Member States (see further section 2.2) through a
progressive harmonisation of economic policies, and free movement of goods, services,
capital and persons. The SEA, which amended the EEC Treaty in 1987 (see subsection
2.1.1.1), was a strong driving force for the internal market, and set an ambitious goal to see its
creation before 1992. A working document from 1988 addressed internal market issues in
the energy sector, and led to the first legislation specifically related to this sector in the early
1990’s.

In 1995, recognising that the internal energy market was still not fully accomplished, the
Commission presented a White Paper addressing the issue. The paper set out a framework
for dialogue on energy policy issues, and proposals of actions needed for a transformation of
the organisation of the electricity and gas sectors, and to reach the ultimate aim of the internal
energy market (see further section 2.2.3). This resulted in the adoption of a set of specific

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48 Krämer (n 23) 381.
49 Roggenkamp and others (n 1) 189.
51 Roggenkamp and others (n 1) 189.
52 S Bell, D McGillivray and O W Pedersen, Environmental Law (8th edn, OUP 2013) 189.
53 de Sadeleer (n 43) 10-11.
55 Roggenkamp and others (n 1) 190.
56 A non-binding EU act used by the Commission to give proposals on EU action in a specific area. See C Fräss-Ehrfeld, Renewable Energy Sources: A Chance to Combat Climate Change (Kluwer 2009) Glossary.
energy legislation during 1996-1998 (and later a second set in 2003).\textsuperscript{58} In 1996, there were also the first activities concerning renewable energy sources, when the Commission produced a Green Paper\textsuperscript{59} on the issue. The year after, another White Paper\textsuperscript{60} was adopted with focus only on this sector, with the objective of reaching a market share of 12% for energy from renewable sources in the EU by 2010 (see further section 2.4.2).\textsuperscript{61}

2.1.2.2 The development from 2000s and onwards

The Commission delivered a Green Paper on a new EU energy policy in 2006.\textsuperscript{62} The paper suggested mechanisms to better achieve some main objectives within this sector. The objectives recognised were competitiveness concerning the internal energy market, sustainability concerning the combat of climate change, and lastly, security of supply concerning supply and demand of energy in an international context.\textsuperscript{63}

Subsequently, in 2007, a new Communication from the Commission arrived.\textsuperscript{64} It proposed a complete set of policy measures in order to reach the recognised main objectives, and to formulate an integrated energy and climate policy. This was a milestone, since it was a joint effort resulting from the first cooperation in this manner between the Commissioner for the Environment and the Commissioner for Energy.\textsuperscript{65}

Later that same year in a decision,\textsuperscript{66} the European Council made a commitment to binding overall targets for the EU for the year 2020 with a 20% reduction in GHG emissions as compared to 1990, a 20% share of renewable energy consumption, and lastly, a non-binding target of a 20% increase in energy efficiency. This was a landmark decision which, together with the Commission’s proposals, paved the way for new legislative packages.\textsuperscript{67}

Consequently, a number of such packages emerged from this development with new commitments. Both the so-called Climate and Energy package, along with the Third Energy package, included proposals for legislation that later arrived in 2009. The former consisted of proposals on the promotion of renewable energy sources, emissions trading, and carbon

\textsuperscript{58} Roggenkamp and others (n 1) 190.
\textsuperscript{59} A non-binding EU act used by the Commission to stimulate discussion and consultation on given topics. See Fräss-Ehrfeld (n 56) Glossary.
\textsuperscript{60} COM(1997) 599 final, Energy for the future: renewable sources of energy.
\textsuperscript{61} Krämer (n 23) 384.
\textsuperscript{63} Roggenkamp and others (n 1) 190.
\textsuperscript{64} COM(2007) 1, An Energy Policy for Europe.
\textsuperscript{66} Presidency Conclusions, European Council, Brussels, 8-9 March 2007, Doc 7224/1/07 REV 1; CONCL 1.
\textsuperscript{67} Roggenkamp and others (n 1) 191.
capture and storage. The latter included proposals that aimed for the internal energy market to be improved and more liberalised.\(^{68}\)

2.1.2.3 **Policy objectives**

Before the Treaty of Lisbon came into effect (see subsection 2.1.1.2), EC energy policy functioned without any explicit legal basis in the EC Treaty. Energy policy and measures in that area were implemented based on the provisions concerning the internal market, competition and environmental protection. The new Article 194 TFEU is considered by some commentators a codification of status quo, and the relation to the internal market and the consideration of environmental protection is reiterated.\(^{69}\)

The EU energy policy objectives stated in Article 194 TFEU are: first, to ensure the functioning of the energy market, second, to ensure the security of energy supply, third, to promote energy efficiency and energy saving, fourth, to promote the development of new and renewable forms of energy, and finally, to promote the interconnection of energy networks.

The Treaty of Lisbon did not encompass the provisions of the Euratom Treaty, and this treaty continues to function on its own separately, but with closely interconnecting policies. The effect of the ECSC Treaty, on the other hand, was terminated in 2002, and its functions were brought over to the EU.\(^{70}\)

In 2010, an updated strategy for the period up to 2020 was issued by the Commission.\(^{71}\) The five-folded priorities were to limit energy consumption in Europe, build a pan-European energy market, empower consumers and achieve the highest level of safety and security, extend the leading role of Europe in innovation and development of energy technology, and finally, strengthen the external dimension of the EU’s energy market.\(^{72}\)

2.1.2.4 **Long-term policies**

From 2011 and onwards, several different policy documents have been created for specific areas within the energy sector, mostly with longer term views.\(^{73}\) The Commission has, for example, presented a roadmap for a competitive low carbon economy in 2050,\(^{74}\) and a framework for future climate change and energy policy targets for 2030 (see also subsection

\(^{68}\) ibid.

\(^{69}\) Jans & Vedder (n 24) 12.

\(^{70}\) Krämer (n 23) 381.


\(^{72}\) Roggenkamp and others (n 1) 191.

\(^{73}\) ibid 191-192.

2.1.3.4.75 Furthermore, frameworks on energy security strategy as well as a strategy for an Energy Union have also been adopted.76

2.1.3 The EU’s climate change policy

2.1.3.1 The development from 1980s and onwards
In the area of climate change policy, decisive EEC action began in 1986. The different resolutions that were passed at this stage by the European Parliament and the Council were not, however, viewed as part of a consistent climate change policy.77 Such a document instead emerged in 1991,78 when the Commission issued its first coherent strategy having the objective to limit carbon dioxide emissions and improving energy efficiency. In 1992, a proposal was made by the Commission to introduce a carbon tax for the whole EEC,79 but owing to strong opposition by Member States, it was abandoned.80

Climate change was also on the agenda internationally. In 1992 the United Nations Framework Convention on Climate Change (UNFCCC) was adopted.81 In UNFCCC’s Kyoto Protocol of 1997,82 the EC made commitments towards GHG mitigation with the highest reduction target compared to other major developed States.83

2.1.3.2 The development from 2000s and onwards
Following these international commitments, the Commission formed a European Climate Change Programme (ECCP) in 2000.84 At the heart of the ECCP was the identification and development of a strategy necessary for the effective implementation of the Kyoto Protocol.85 In 2000, the Commission adopted a Green Paper on GHG trading,86 which led to legislative

75 COM(2014) 15, A policy framework for climate and energy in the period from 2020 to 2030.
77 Mehling and others (n 65) 510.
78 SEC(1991) 1744, A Community Strategy to limit Carbon Dioxide emissions and to improve energy efficiency.
80 Roggenkamp and others (n 1) 337.
83 Mehling and others (n 65) 511.
85 Mehling and others (n 65) 512.
measures in 2003, establishing an emissions trading scheme (ETS) that has operated since 2005. The ETS has since developed and is now covering about 45% of the GHG emissions within the EU, with the members of the European Economic Area (EEA), that is Iceland, Liechtenstein and Norway also participating.

In 2005, the ECCP moved into its second phase. The Commission saw the need for an integration between environmental, energy and transport policy, in order for a climate change framework to be successful. The response was the landmark documents mentioned from 2007 (also related to the energy policy), that led to the Climate and Energy package (see subsection 2.1.2.2).

2.1.3.3 Policy objectives

The key elements of the EU’s climate change policy until 2020 is reflected in the measures contained in a Communication from the Commission in 2008. The symmetrical obligations which were set (to be achieved by 2020) are a 20% reduction in carbon emissions compared to 1990 levels, 20% renewable energy sources in final energy consumption, and lastly, an increase of 20% energy efficiency compared to projections based on a business as usual approach up to 2020.

Furthermore, a commitment was made to even increase the overall reduction of carbon emissions to 30% by 2020. This was conditioned on that other developed States bound themselves to undertake comparable reductions, and also the fact that economically more advanced developing States made adequate contributions in relation to their responsibilities and national circumstances.

As noted earlier, when the Treaty of Lisbon entered into force (see subsection 2.1.1.2), it did not result in any pervasive changes concerning the specific environmental policy objectives. However, since then Article 191(1) TFEU now also includes an explicit reference to climate change as a recognised regional or worldwide environmental problem. At this time, in 2009, there was already a comprehensive climate change policy with the 2008 Communication (see foregoing paragraphs), and the EU played an important role at the

88 The emission trading scheme is based on the principle of cap and trade. See for example Roggenkamp and others (n 1) 337.
89 Roggenkamp and others (n 1) 337.
90 Mehling and others (n 65) 512.
93 ibid.
international level. The inclusion of climate change into the TFEU could therefore be seen more as a political signal about EU’s standpoint on this issue.\(^\text{94}\)

### 2.1.3.4 Long-term policies

As mentioned in subsection 2.1.2.4, some long-term policy documents have been adopted for the energy sector. These documents are also related to the climate change field. In a Communication from 2011,\(^\text{95}\) the Commission has proposed a cut in GHG emissions amounting to 80% below 1990 levels by 2050. This reduction should be accomplished by mitigation efforts taking place solely within the EU.\(^\text{96}\)

Furthermore, a policy framework for the period 2020 to 2030 has been prepared by the Commission.\(^\text{97}\) The central target of the policy is to reduce GHG emissions within the EU to 40% below the 1990 level. This target is in line with the intended contribution of the EU under the most recent international climate agreement under the UNFCCC,\(^\text{98}\) the Paris Agreement, adopted in December 2015.\(^\text{99}\)

### 2.2 The internal market

#### 2.2.1 General remarks

According to Article 26 TFEU, measures shall be adopted by the EU with the aim of establishing or ensuring the functioning of the internal market. To be fully integrated and function well, EU’s internal market builds on the fundamental principles of free movement of goods, services, capital and persons.\(^\text{100}\) When the Member States use their domestic regulatory powers, they must ensure that this is done in accordance with the rules on free movement.\(^\text{101}\) This applies also to the political institutions of the EU when they adopt new legislation, which cannot contain any manifest errors contrary to these central principles.\(^\text{102}\)

The rules on competition and taxation have the objective of establishing the internal market, and the functioning thereof by preventing re-establishment of hurdles. This as a result

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\(^\text{94}\) Jans & Vedder (n 24) 12.
\(^\text{95}\) COM(2011) 112, A Roadmap for moving to a competitive low carbon economy in 2050.
\(^\text{96}\) Roggenkamp and others (n 1) 337.
\(^\text{98}\) Roggenkamp and others (n 1) 336.
\(^\text{100}\) Roggenkamp and others (n 1) 203.
\(^\text{101}\) ibid.
\(^\text{102}\) ibid 204.
complement the rules on free movement. Both the rules on the four freedoms of movement and the rules on competition are in turn of particular importance for the establishment of an internal energy market organising the EU’s energy sector with its electricity and gas markets.

2.2.1 Freedom of movement

2.2.1.1 Free movement of goods

Article 30 TFEU contains a prohibition on the use of custom duties and all charges that have the equivalent effect on inter-State trade within the EU. There are no possible derogations from this provision, no matter what underlying purposes can be otherwise shown.

The principles of free movement of goods and prohibition of restrictions on imports are governed by Article 34 TFEU, much like Article 35 regarding exports. The prohibition applies to quantitative restrictions, and all measures having an equivalent effect as quantitative restrictions (MEQR). In relation to imports, MEQR has been given a wide application including all national measures which are capable of being barriers, whether direct or indirect, actual or potential, to trade between the Member States. This interpretation has its origin from the early judgment of the Court of Justice in the Dassonville case. In contrast, in relation to exports, the term MEQR has been given a narrower interpretation. Only discriminatory measures specifically designed to give an advantage to domestic goods or market are caught by that prohibition.

2.2.1.2 Free movement of services

When it comes to services, Article 56 TFEU prohibits any restrictions on the freedom to provide services, and requires an elimination of all discrimination against those from other Member States who provide services. This provision has been given a broad interpretation by the Court of Justice, similar as for restrictions on imports. As for definitions and distinctions between services and goods, the Court of Justice had to deal with this issue

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103 de Sadeleer (n 43) 387.
104 Roggenkamp and others (n 1) 253.
105 Jans & Vedder (n 24) 254.
106 Roggenkamp and others (n 1) 204-205.
108 ibid.
109 ibid.
already in the 1960s in the Costa v. ENEL case.\textsuperscript{110} Goods has been considered as products which can be valued in monetary terms, and products which can be the object of commercial transactions. Electricity has consequently been considered as a good.\textsuperscript{111} Wholesale energy trading, on the other hand, has been considered by the Commission in its practice as constituting a service. This is in accordance with the internal energy market development and concepts with a distinction between the goods in question and the transport services of the goods.\textsuperscript{112}

\subsection*{2.2.1.3 Free movement of capital and freedom of establishment}
Compared to goods and services per se that cross a Member State frontier, the free movement of capital and the freedom of establishment relate to the business enterprises that produce these goods and services. One point of separation between these two freedoms is when a domestic measure in one Member State prevents an investor from another Member State from obtaining actual control over a business, and thereby from becoming established in the former State.\textsuperscript{113} The prohibition of all restrictions on movement of capital are found in Article 63 TFEU, which explicitly also extends to movement of capital in relation to third countries, i.e. non-EU Member States. The prohibition of restrictions on the freedom of establishment is found in Article 49 TFEU.

\subsection*{2.2.1.4 Justification grounds}
Restrictions to one or several of the four freedoms can however be justified on the basis of other provisions in the TFEU. Accordingly, Article 36, concerning goods, provides justification for reasons including but not limited to public morality, public policy or public security, and further, the protection of health and life of humans, animals or plants. Articles 51-52, regarding establishment, provides justification for the connection with exercise of official authority, and further, public policy, public security or public health. Article 62, concerning services, refers back to the justification grounds in Articles 51-52, as applicable also in these matters. Article 65, concerning capital, provides justification due to, for example, certain tax provisions, and further, public policy or public security.

\textsuperscript{110} Case 6/64 Flaminio Costa v. ENEL [1964] ECR 585.
\textsuperscript{111} Roggenkamp and others (n 1) 206.
\textsuperscript{112} ibid.
\textsuperscript{113} ibid 206-207.
In addition, some mandatory requirements, in this regard, have been acknowledged in the case law of the Court of Justice. An early acknowledgement is found in Cassis de Dijon.\textsuperscript{114} In order for restrictions by Member States’ measures to be justified in accordance with the case law, the measures must be suitable to attain the objectives they pursue. Furthermore, they must not go beyond what is necessary to secure the objectives, because then less restrictive measures may be possible. Finally, the measures must be proportionate in a strict sense, balancing the objectives pursued and the harm done to trade between the Member States. All of this to comply with the proportionality principle.\textsuperscript{115}

2.2.2 Competition and taxation

There are two actors involved under the rules on competition in the TFEU: Member States and undertakings. The concept undertaking can be translated into business enterprise. If undertakings conclude agreements that limits competition or if they abuse a dominant position in the market, this is regulated by the provisions in 101 and 102 TFEU. If Member States distorts competition by the grant of exclusive rights or if they grant State aid, this instead falls within the provisions 106 and 107 TFEU.\textsuperscript{116}

2.2.2.1 Competition limiting agreements and abuse of dominant position

The application of Article 101(1) TFEU, is subject to four conditions: first, there must be an agreement or concerted practice, second, concluded between undertakings, third, resulting in a restriction of competition, and finally, affecting inter-State trade in the EU. The concepts agreement or concerted practice are interpreted broadly to include all forms of coordination of market conduct between economic operators.\textsuperscript{117} Under some cumulative and exhaustive conditions, Article 101(3) recognises that not all restrictive agreements are contrary to the prohibition. This is the case if they have certain positive economic effects that outweigh the restriction of competition.\textsuperscript{118}

The application of Article 102 TFEU, is also subject to four conditions: first, there must be an abuse, second, of a dominant position, third, by one or more undertakings, and lastly, affecting inter-State trade in the EU. In relation to Article 101 and 102 TFEU, the

\textsuperscript{114} Case 120/78 Rewe-Zentral AG [1979] ECR 649.

\textsuperscript{115} Krüger (n 2) 49-50.

\textsuperscript{116} Jans & Vedder (n 2) 298.


\textsuperscript{118} ibid 158.
Commission has taken an effects-based approach when assessing if there is a restriction of competition.¹¹⁹

2.2.2.2 State aid

State aid is defined by Article 107(1) TFEU, and the provision makes no difference compared to Articles 101 and 102 concerning the number of conditions set for its application. Accordingly, any aid granted by a Member State or through State resources, which distorts competition, favours certain undertakings, and further, affects inter-State trade, is incompatible with the rules on the internal market. Under certain given conditions provided for in Article 107(2) and (3), State aid will, or may be, considered compatible with the rules on the internal market. Article 107(1) has been interpreted widely by the Court of Justice.¹²⁰

The term State aid is not limited only to direct aid, it includes also other interventions through State resources that, even if provided indirectly, might result in the same economic benefit for a certain undertaking. This is an effect-oriented functional interpretation, and the objectives that a Member State seeks to achieve through the aid are only one part of the compatibility evaluation done in relation to paragraphs (2) and (3).¹²¹

If a Member State measure is considered State aid and falling within the scope of the definition of Article 107(1), the aid must be notified to the Commission in advance according to Article 108(3) TFEU. A decision is then taken by the Commission whether the planned aid is compatible with these internal market rules regarding State aid.¹²²

Measures amounting to State aid are known in the energy sector. State aids in this sector generally take the form of those designed to ensure security of energy supply, those connected to construction of energy infrastructure and those granted for the purpose of combating climate change. Supporting renewable energy sources falls within the scope of this last example (see further section 4.4).¹²³

2.2.2.3 Internal taxation

Article 110(1) TFEU prohibits the imposition of any internal taxation on the products of other Member States, in excess of that imposed on similar domestic products. Moreover, Article 110(2) prohibits the imposition of any internal taxation on products of other Member States,¹²⁴

¹¹⁹ ibid 161.
¹²⁰ Jans & Vedder (n 24) 319.
¹²¹ Roggenkamp and others (n 1) 244.
¹²² Jans & Vedder (n 24) 319.
¹²³ Roggenkamp and others (n 1) 244.
of such a kind that means indirect protection of domestic products. The aim is to ensure neutral fiscal treatment for products crossing a frontier within the EU. Environmental considerations can constitute a basis for differential fiscal treatment, if the differentiation is also applicable to imported products, and there is no other sort of protectionism or discrimination involved.

2.2.3 The internal energy market

The European energy sector was specifically addressed concerning the establishment of an internal energy market in a working document from the Commission in 1988 (see subsection 2.1.2.1). It identified the need for a transformation in the whole organisation of the sector, including more cross-border connections, harmonisation of tariffs and third party access to the energy networks. In addition to the common rules on free movement, competition and State aid, this led to the first specific legislation on these issues related to the energy sector in the early 1990’s. The change was made directly, through specific legislation concerning the electricity and gas sectors, and also indirectly, through legislation on public procurement and harmonisation of technical norms.

2.2.3.1 General legislation

Public procurement means the process by which public authorities, and public undertakings operating on the basis of exclusive or special rights, purchase goods and services from undertakings which are specifically chosen. The aim of rules on public procurement is to eliminate barriers based on the Member States’ legislations and the favouring of domestic undertakings. Directive 2004/18/EC on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts (Public Procurement Directive), and Directive 2004/17/EC coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors (Utilities Directive) were adopted in 2004.

124 Jans & Vedder (n 24) 256.
125 ibid 260.
127 Roggenkamp and others (n 1) 253.
128 ibid 254.
A reform was made ten years later regarding these two directives, and a new Directive 2014/23/EU on the award of concession contracts (Concessions Directive) was also issued.\textsuperscript{131} Concessions are contracts made up for partnerships between the public sector and mainly private undertakings which provide services of general economic interest, for example, supplying different forms of energy.\textsuperscript{132}

\subsection*{2.2.3.2 Specific legislation}

In regard to the specific legislation regulating the electricity and gas sectors, there were two directives introduced in 1996 and 1998. First, the Directive 96/92/EC concerning common rules for the internal market in electricity (E-Directive),\textsuperscript{133} and then the Directive 98/30/EC concerning common rules for the internal market in natural gas (G-Directive).\textsuperscript{134} This legislation came into being in a cautious manner in order to give the Member States time to adapt to the changes.\textsuperscript{135} The aim was that business enterprises should be able to conduct business in a competitive market, subject to compliance with public service obligations. There should also be a minimum level of as well as a successive market opening. Since the energy networks in these two sectors are natural monopolies, third party access needed to be guaranteed on a proper basis.\textsuperscript{136}

In 2003, separate E- and G-Directives for the completion of the internal market for electricity and gas were adopted,\textsuperscript{137} that aimed for a progressive achievement of full freedom for all consumers to choose their electricity and gas supplier. Furthermore, they obligated Member States to adopt rules on third party access, a legal unbundling of the transmission and distribution systems and a certain minimum level of consumer protection.\textsuperscript{138}

As a result of the Third Energy Package (see subsection 2.1.2.2), new legislation was adopted in 2009, replacing the directives from 2003. The core of the regulatory framework now consists of an E-Directive\textsuperscript{139} and a G-Directive\textsuperscript{140} with the aim to attain more liberalisation of the domestic energy markets in the Member States, with the hope of further

market integration on an EU-wide level. The directives therefore stipulate a continued unbundling of the transmission system operator function from generation, supply and trading interests.¹⁴¹

2.3 Legal basis

2.3.1 General remarks

Every specific part of EU legislation must be founded upon one or more of the legal basis that are provided for in the TFEU and/or TEU. Given the broad objectives in the policies and the cross-cutting nature of environmental and energy issues, the choice of legal basis is not always obvious. It may not be so easy to find out the centre of gravity concerning which policy area a measure relates to.¹⁴² This can be seen from case law with requirements of objective factors as a basis, and with efforts made to identify a main purpose or component of a measure.¹⁴³

The choice of legal basis is of importance in respect of both the relationship between the EU institutions, and that between the EU and its Member States. The legal basis identifies the competence under which the EU acts, and is therefore defining the scope of the possible intervention to be made in the Member States’ legal systems. Furthermore, it determines which institution that has competence, which legislative procedure to follow and the different types of measures that can be used.¹⁴⁴

2.3.2 The legal basis depending on the policy objectives

2.3.2.1 Article 192 TFEU – Environmental policy objectives

According to Article 192(1) TFEU, the normal method for adopting measures in order to achieve the environmental objectives in Article 191 (see subsection 2.1.1.3) is the ordinary legislative procedure (OLP). This means that the Parliament and the Council decide on measures after the Economic and Social Committee (ESC)¹⁴⁵ and the Committee of the

¹⁴¹ Roggenkamp and others (n 1) 258.
¹⁴² de Sadeleer (n 43) 148.
¹⁴³ Jans & Vedder (n 24) 77.
¹⁴⁴ de Sadeleer (n 43) 149.
¹⁴⁵ The Economic and Social Committee consists of representatives of different sectional or functional interests of civil society. See P Craig and G de Burca, EU Law: Text, cases, and materials (6th ed, OUP 2015) 67.
Regions (COR)\textsuperscript{146} have been consulted. The concept OLP is stipulated in Article 289(1) TFEU, which in turn refers to Article 294 TFEU. This latter provision defines the procedure and requires qualified majority vote within the Council as a general rule, unless otherwise provided for by the TFEU. Under this procedure, the Parliament is consulted twice (if a measure is not adopted at the first reading), and has the power to prevent the adoption of a measure.\textsuperscript{147}

In Article 192(2) TFEU it is stated that, by derogation from the OLP, the Council acts unanimously in accordance with the special legislative procedure (SLP), as regulated in Article 289(2) TFEU. This concerns the adoption of measures within certain sectors enlisted, for example, item (c) measures significantly affecting the Member States' own choice between the use of different energy sources, and how the general structure of their energy supply should be. In these cases, the Parliament merely need to be consulted in the same way as with the ESC and COR. The second paragraph of Article 192 TFEU is hardly applied in practice.\textsuperscript{148}

2.3.2.2 Article 114 TFEU – Internal market policy objectives

Article 114(1) TFEU provides that the Parliament and the Council, acting in accordance with the OLP, decides on measures which have internal market objectives. The ESC shall be consulted before a decision. Certain environmental measures also fall within the scope of the provision, which is indicated by the provision in the third paragraph, under which it is stated that the Commission will take a high level of protection as a basis in its proposals on environmental protection measures.\textsuperscript{149}

Whenever the conditions to use Article 114 TFEU as a legal basis are fulfilled, the fact that environmental protection may be a decisive factor affecting choices to be made does not prevent the internal market provision from being used in the legislative work. By way of example, the harmonisation of the criteria for placing environmentally harmful goods on the internal market could be mentioned.\textsuperscript{150} On the other hand, if an environmental measure has only a more diffuse or incidental effect on the attainment of market integration, it falls outside the scope of Article 114 TFEU.\textsuperscript{151}

\textsuperscript{146} The Committee of the Regions consists of representatives of regional or local bodies with authority electoral mandate, or who are accountable to an elected assembly. See ibid 68.
\textsuperscript{147} ibid 127 and 135.
\textsuperscript{148} Jans & Vedder (n 24) 59.
\textsuperscript{149} TFEU, art 114(3).
\textsuperscript{150} ibid 74.
\textsuperscript{151} ibid 75.
2.3.2.3 Article 194 TFEU – Energy policy objectives

Article 194(2) TFEU provides the legal basis for adoption of measures related to the energy policy objectives stated in the first paragraph of the provision (see subsection 2.1.2.3). Without prejudice to the application of other provisions in the treaties, the Parliament and the Council shall take action through the OLP. The ESC and the COR shall be consulted before the adoption. Furthermore, the provision contains that the Member States’ sovereignty over their energy resources, the choice of energy mix and energy supply structure shall not be affected, without prejudice to Article 192(2)(c) TFEU.

An interesting feature of Article 194 TFEU is that it actually stretches over the content of other rules of the TFEU, such as Articles 114 and 192. The energy policy provided for in the first paragraph is placed within a certain context. This consists of the establishment and proper functioning of the internal market, and considerations concerning preservation and improvement of the environment. The question has been raised whether an energy measure should meet both these objectives of the framework.\textsuperscript{152} It has also been pointed out that the energy policy provision seems limited in scope and may allow for measures only if it relates to the internal energy market.\textsuperscript{153}

2.3.3 The legal basis for the RE Directive

When the Treaty of Amsterdam entered into force (see subsection 2.1.1.1), the co-decision legislative procedure was introduced in Article 175(1) of the EC Treaty. This was to conform with what was already part of the provisions constituting the legal basis for the establishment and functioning of the internal market in Article 95 of the EC Treaty. When the Treaty of Lisbon entered into force (see subsection 2.1.1.2), the co-decision procedure was replaced by the OLP in both Article 114(1) and Article 192(1) TFEU.\textsuperscript{154}

The RE Directive was adopted on 23 April 2009. According to its preamble it is based on Article 175(1) of the EC Treaty (now Article 192(1) TFEU), with the exceptions of Articles 17-19 concerning biofuels and bioliquids, which are based on Article 95 of the EC Treaty (now Article 114 TFEU). Such a combined legal basis is possible as long as the legislative procedures for the measure are compatible. When the new Articles 114 and 192 TFEU are

\textsuperscript{152} Roggenkamp and others (n 1) 196.
\textsuperscript{153} Jans & Vedder (n 24) 86.
\textsuperscript{154} de Sadeleer (n 43) 11 and 152-153.
used together in this manner, it is obligatory for the COR to be consulted, even if there is a formal difference between the provisions concerning this part.\(^{155}\)

Furthermore, the use of a combined legal basis has another implication to take into account. If certain provisions in a directive are based on Article 192 TFEU, then Article 193 allows for the Member States to have stricter environmental protection standards concerning these issues. If Article 114 TFEU is used, then this is in principle not allowed, even if there are procedures and conditions for derogation set in paragraphs (4)-(6) of that article.\(^{156}\)

The question has been raised if the RE Directive in fact is a measure significantly affecting the Member States choice between different energy sources and the general structure of their energy supply. If this is true, and the directive is adopted under Article 175(1) of the EC Treaty by a majority vote instead of unanimity according to paragraph (2)(c), it is argued that it was adopted on the wrong legal basis and is therefore in conflict with the TFEU.\(^{157}\)

With the new legal basis for energy policy in Article 194(2) TFEU, the EU has increasingly applied this provision for adopting other legislation implementing the Climate and Energy package (see section 2.1.2), even if combating climate change is explicitly included as an environmental policy objective in Article 191(1) TFEU.\(^{158}\) The view has also been presented that energy measures for the purpose of combating climate change should be adopted on the basis of both Article 192(1) and Article 194(2) TFEU, which provide for the same legislative procedure.\(^{159}\)

### 2.4 Legal development

#### 2.4.1 General remarks

The first specific policy activities concerning renewable energy in the EU was through the adoption of a White Paper on the matter in 1997 (see subsection 2.1.2.1). Even so, the E-Directive from 1996 (see subsection 2.2.3.2) already contained rules that Member States could, when dispatching electricity producing installations, require a system operator to give priority to those installations that used renewable energy sources.\(^{160}\) The new E-Directive from 2009 (see subsection 2.2.3.2) also allows Member States to use a tendering procedure for new capacity which may take into consideration the promotion of emerging renewable

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\(^{155}\) Jans & Vedder (n 24) 78.

\(^{156}\) de Sadeleer (n 43) 153.

\(^{157}\) Talus (n 135) 180.

\(^{158}\) Roggenkamp and others (n 1) 196.

\(^{159}\) de Sadeleer (n 43) 136.

\(^{160}\) Talus (n 135) 192.
energy technologies. The aim is to ensure that due account is given to renewable energy sources in a liberalised internal electricity market.\footnote{Roggenkamp and others (n 1) 319.}

\subsection*{2.4.2 The legal development in the EU concerning renewable energy}

The first directive specifically dealing with renewable energy sources was adopted in 2001.\footnote{Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market [2001] OJ L283/33.} It set an indicative target of the share of energy from renewable sources in EU energy consumption to 12\% in 2010. For the electricity production per se, this meant a requirement to achieve an overall share of 22\% from renewable sources by the same year. These targets were translated into varying indicative national targets for the Member States, and were both related to the commitments made by the EU in the Kyoto Protocol (see subsection 2.1.3.1).\footnote{Talus (n 135) 192.} A separate directive concerning biofuels was adopted in 2003.\footnote{Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport [2003] OJ L123/42.} In a similar way, it set an indicative target for the share of biofuels in transport of 5.75\% by 2010. The overall objective for electricity was later adjusted to 21\% because of the enlargement of the EU.\footnote{H van Steen, “The determination and enforceability of national renewable energy targets” in P Hodson, C Jones and H van Steen (eds), \textit{EU Energy Law: Renewable Energy Law and Policy in the European Union} vol III (book one, Claeys & Casteels 2010) 44-45.}

When evaluating the progress made in order to achieve the different targets set, it was found to be too slow. The share of renewable energy sources in overall consumption would reach around 10\%, and the share in electricity production was expected to reach around 18-19\% by 2010. The Commission concluded that the allocation of the national targets needed to be more harmonised, and that they should become binding for the Member States. Consequently, the new RE Directive was adopted in 2009, and it replaced both the previous directives from 2001 and 2003 (see further section 3.2).\footnote{Roggenkamp and others (n 1) 319.}
3. The RE Directive

This chapter introduces the RE Directive, to begin with in section 3.1, through a presentation of the more specific underlying policy considerations that have emanated in the current common legislative framework. This section is followed by section 3.2 which deals with the main provisions of the RE Directive setting the foundation for the core obligations that lie on the Member States.

3.1 Specific policies underpinning the RE Directive

3.1.1 The Renewable Energy Road Map

At the same time as the Commissions Communication from the beginning of 2007 on an energy policy in general (see subsection 2.1.2.2), and as an integral part of the strategic energy review done, a specific Renewable Energy Road Map was also presented.

3.1.1.1 Main principles and binding targets

In the Renewable Energy Road Map, energy from renewable sources was presented as a key element of a sustainable future in a situation with problems, such as, climate change, increased dependence on fossil fuels, more import and higher energy costs. Large investments have been made historically in conventional energy sources, and it was argued by the Commission that, it was time to make the same investments in renewable energy sources.

A number of main principles were proposed to establish a future renewable energy framework consisting of long-term mandatory targets and stability, increased flexibility in target setting across sectors, comprehensiveness, removal of barriers for deployment, consideration of environmental and social aspects, cost-effectiveness, and lastly, compatibility with internal energy market rules.

The Commission recognised that the earlier renewable energy target had proven insufficient to develop this sector. It therefore proposed overall legally binding targets of 20%
renewable energy sources in total EU consumption, and of minimum 10% biofuels of total fuel consumption in transport, to be reached by 2020.172

3.1.1.2 Steps towards the targets
The Commission saw a need to re-assess the Member States support systems for production of energy from renewable sources. To evaluate their function and effectiveness, and the need to propose harmonised support schemes. Even if support schemes for the promotion of energy from renewable sources was still needed for a transitional period until the internal market became completely operational, the long-term aim should still be harmonised schemes.173

Various examples of policy instruments at the Member States’ disposal were given, such as, feed-in tariffs, feed-in premiums, green certificates, tax exemptions, fuel supplier obligations, public procurement and research development. It was the Commissions opinion that the Member States would have to make further use of these different tools in order to reach the proposed targets.174

The aim of the policy was described as an internal market in which renewable energy technologies could flourish, and where the business community were given stability for investments needed, in order to reduce uncertainties concerning oil and gas prices. However, due to their national differences the Member States also needed enough flexibility to be able to support the policy. It was concluded by the Commission that the 20% target of renewable energy sources in the EU energy mix was both technically and economically possible to reach. The policy was considered as a major step towards sustainability.175

3.1.2 The Action Plan for the period 2007-2009
At the European Council in the spring 2007, not only the general energy policy was debated, but also the Renewable Energy Road Map was on the agenda. The Presidency Conclusions contained the so-called 20-20-20 commitment (see subsection 2.1.2.2), but also as an annex a detailed Action Plan for the period 2007-2009.176

172 ibid 10.
173 ibid 12.
174 ibid 13.
175 ibid 18.
176 Presidency Conclusions, European Council, Brussels, 8-9 March 2007, Doc 7224/1/07 REV 1; CONCL 1.
3.1.2.1 Main themes

In the Action Plan, the European Council declared that it was aware of the increasing demand of energy, rising energy prices and the benefits of common international efforts on climate change. It expressed confidence in that a marked development of renewable energy sources would improve energy security, temper the risk of higher energy prices and reduce GHG emissions in line with EU’s ambitions.\(^\text{177}\)

The long-term commitment to the EU-wide development of renewable energy sources beyond 2010 was confirmed in the Action Plan. The European Council recognised that, when used in a cost-efficient manner, all sorts of renewable energy sources contribute to security of supply, competitiveness and sustainability. Furthermore, it highlighted the importance of sending a straightforward message to, for example, the industry and investors within the renewable energy sector.\(^\text{178}\)

3.1.2.2 Binding EU and national targets

As a consequence, the binding targets for 2020 the Commission had set out as proposals in the Renewable Energy Road Map were endorsed. It was pointed out that, both the 20% target for the share of renewable energy sources in overall EU consumption and the 10% minimum target in all Member States for the share of biofuels in transport fuel consumption, needed to be introduced in a cost-efficient manner. The binding target concerning biofuels were made subject to some criteria, such as, sustainability in production.\(^\text{179}\)

The European Council specified that the overall renewable energy target should be made into different individual targets for the Member States. This should be done with their full participation, and with due regard to a fair allocation. Furthermore, that their respective special circumstances, starting points and potential should be taken into consideration. Even if the sector target proposed for biofuels was found appropriate by the European Council, it stated that the Member States should otherwise decide on how to deal with national targets for each specific sector involving energy from renewable sources.\(^\text{180}\)

\(^{177}\) ibid 20.  
\(^{178}\) ibid 21  
\(^{179}\) ibid.  
\(^{180}\) ibid.
3.1.3 The Report on the Roadmap for Renewable Energy in Europe

In the autumn of 2007, the European Parliament adopted a report on the Renewable Energy Road Map that also included a proposal for a Resolution on the matter.¹⁸¹

3.1.3.1 Main statements

The main message in the report was the importance of establishing the most suitable framework in a situation for the EU with uncertainty in supply of energy from conventional sources, increased dependency on imports and negative consequences of climate change. It was stated that targets for renewable energy sources must be viewed as interlinked with other objectives aiming at implementation of the internal electricity market, energy efficiency and the functioning of the ETS (see subsection 2.1.3.2). Furthermore, that a long-term perspective was needed to stimulate investments.¹⁸²

These initial comments in the explanatory statement in the report were seen by the rapporteur as prerequisites in order to achieve the policy objectives in the EU of enhanced security of supply, reduction of GHG emissions and stimulation of employment. It was considered that the energy sector could not anymore be seen solely as a supplier of energy, but had to be regarded as a common contributor in coping with all these challenges.¹⁸³

In relation to support schemes, it was stated that harmonisation of such instruments at EU level should be the final aim, but that the internal electricity market at the time was not ready for that development. Even if it was found important with a level market for all energy sources, it was also found important to establish a system that ensured a technological mix. Technologies which were at an early stage of development, but which had long-term potential, should get their chance on the market.¹⁸⁴

3.1.3.2 Proposal for a Resolution

In the proposal for a Resolution in the report, the Commission and the Member States were urged to reach consensus on the 20% renewable energy sources target. To ensure fulfilment of commitments from all Member States to increase their share of renewable energy sources, such agreement should take into consideration cost-effectiveness, different national potential

¹⁸² ibid 14.
¹⁸³ ibid.
¹⁸⁴ ibid 16.
and contributions that had already been made.\textsuperscript{185} It was also proposed that the Member States should be free to choose which renewable energy sources they found most appropriate, since the specific development conditions may for natural reasons differ between States.\textsuperscript{186}

The proposal called on the Commission and the Member States to make efforts towards a market environment that should be favourable to renewable energy sources.\textsuperscript{187} It was recalled that renewable energy sources is a most useful way to protect consumers and industry from the negative impacts of growing energy imports and increasing fuel costs. Furthermore, it was insisted on that an EU energy policy should not result in any social barriers, and that energy prices should be transparent and competitive.\textsuperscript{188}

The binding target of 10\% for biofuels in the transport sector was welcomed in the proposal, given that such fuels were produced in a sustainable manner. It was stressed that the sustainable use of biofuels would reduce oil dependency and GHG emissions in this sector.\textsuperscript{189} The proposal was, with some slight changes, adopted by the Parliament as a final Resolution on the same day it was presented.\textsuperscript{190} A proposal from the Commission for a new directive on the promotion of the use of energy from renewable sources followed in early 2008.\textsuperscript{191}

### 3.2 The main provisions of the RE Directive

After the proposal for a new directive had passed through the legislative process, the RE Directive was adopted in April 2009, and it entered into force in June the same year,\textsuperscript{192} 20 days after its publication in the OJ.\textsuperscript{193} The deadline for Member States to transpose it into their national legislations was set at 5 December 2010.\textsuperscript{194} On 1 April 2010, the new RE Directive repealed certain provisions of the former directive concerning renewable energy from 2001 (see section 2.4.2), and with effect from 1 January 2012, both this directive and that of 2003 (concerning biofuels) were replaced in their entirety by the RE Directive.\textsuperscript{195}

\begin{itemize}
\item[185] ibid 7.
\item[186] ibid.
\item[187] ibid.
\item[188] ibid.
\item[189] ibid 11.
\item[192] Woerdman and others (n 6) 131.
\item[193] RE Directive, art 28.
\item[194] ibid art 27(1).
\item[195] Woerdman and others (n 6) 131.
\end{itemize}
3.2.1 Preamble

As stated in the preamble, the control of energy consumption in Europe and the increased use of renewable energy sources, along with energy savings and increased energy efficiency, are important parts of the measures needed to reduce GHG emissions and to comply with EU’s international climate change commitments. These important parts are also needed for the promotion of the security of energy supply, technological innovation and development, and providing opportunities for jobs and regional development.196

In order to reduce EU’s dependence on imported oil in the transport sector, this issue needs to be addressed with effective instruments, such as, the increase in technological improvements, the use of energy efficiency technologies and the use of energy from renewable sources in transport.197 It is further stated that the opportunities to create economic growth through innovation and a sustainable competitive energy policy are recognised. Investments in regional and local production of energy from renewable sources are important and need to be encouraged.198 A legal framework with binding targets should provide the business community with long-term certainty to make rational, sustainable investments in this sector.199

Another issue, also covered by the preamble, is the necessity for public support to achieve the EU’s objectives concerning the expansion of electricity produced from renewable sources. This is especially necessary as long as the electricity prices in the internal market do not fully reflect the environmental and social costs and benefits of renewable energy sources used.200

3.2.2 Subject matter and scope

As is indicated by its title, the RE Directive establishes a new EU framework for the promotion of energy from renewable sources. It imposes legally binding targets on the Member States “for the overall share of energy from renewable sources in gross final consumption of energy and for the share of energy from renewable sources in transport.”201 Furthermore, the directive contains rules on the division of the mandatory overall target between all the Member States by separate renewable energy targets (see for example the

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197 ibid preamble, recital 2.
198 ibid preamble, recital 3.
199 ibid preamble, recital 8.
200 ibid preamble, recital 27.
201 ibid art 1.
preamble recital 15, Article 3 and Annex I). These targets are set on an individual basis in relation to the achievement of the overall target for the EU as a whole.²⁰²

The RE Directive lays down rules concerning the calculation of the share of renewable energy for all different purposes therein (see for example Articles 3 and 5). The directive also establishes an EU-level sustainability criteria for biofuels and bioliquids. It contains a mechanism that allows the Member States to invest in the production of energy from renewable sources in other Member States, or even in third countries, with the benefit that the positive result concerning an increased consumption of renewable energy would count towards the investing Member States’ own renewable energy target (as set out in Annex I).²⁰³

Furthermore, the RE Directive lays down rules to address and remove hurdles in administrative procedures that might harm the development of renewable energy, and to ensure access to the electricity grid.²⁰⁴ It also contains rules on statistical transfer and joint projects between Member States and third countries, on guarantees of origin for energy from renewable sources, and on information and training.²⁰⁵

A change compared to the now replaced directives from 2001 and 2003 concerning renewable energy sources (see section 3.2) is related to the extension of the scope in the RE Directive to cover not only energy consumption in the electricity and transport sectors, but to include also energy consumption from renewable sources in the heating and cooling sector.²⁰⁶

### 3.2.3 Definitions

According to the RE Directive, the definitions in Directive 2003/54/EC concerning common rules for the internal market in electricity²⁰⁷ (see subsection 2.2.3.2) apply.²⁰⁸ In addition, a list of other definitions is given in Article 2 of the RE Directive. The term energy from renewable sources is defined as “energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.”²⁰⁹

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²⁰² Johnston & Block (n 3) 308.
²⁰³ ibid.
²⁰⁴ ibid.
²⁰⁶ Johnston & Block (n 3) 309.
²⁰⁸ RE Directive, art 2(1).
²⁰⁹ ibid art 2(a).
The list of examples of specific energy forms is not open-ended, and the definition should be interpreted in a restrictive manner.\textsuperscript{210} Even so, multi-fuel plants that use both conventional and renewable energy sources, so-called hybrid plants, can be added to the list.\textsuperscript{211} According to the rules concerning calculation of the share of energy from renewable sources, only the part of electricity produced from renewable energy sources in multi-fuel plants should be taken into account.\textsuperscript{212} The inclusion of a wider range of renewable energy sources with the term ocean energy, which replaced wave and tidal energy, is considered no substantial change in practice. The development of the technologies for exploitation is at a relatively immature stage, and the potential within the EU is limited.\textsuperscript{213}

According to the RE Directive, the term support scheme is defined as:

any instrument, scheme or mechanism applied by a Member State or a group of Member States, that promotes the use of energy from renewable sources by reducing the cost of that energy, increasing the price at which it can be sold, or increasing, by means of a renewable energy obligation or otherwise, the volume of such energy purchased. This includes, but is not restricted to, investment aid, tax exemptions or reductions, tax refunds, renewable energy obligation support schemes including those using green certificates, and direct price support schemes including feed-in tariffs and premium payments.\textsuperscript{214}

The term renewable energy obligation, in the definition given above, is defined as:

a national support scheme requiring energy producers to include a given proportion of energy from renewable sources in their production, requiring energy suppliers to include a given proportion of energy from renewable sources in their supply, or requiring energy consumers to include a given proportion of energy from renewable sources in their consumption. This includes schemes under which such requirements may be fulfilled by using green certificates.\textsuperscript{215}

Both these terms will be elaborated further in chapter 4. Beside the definition of renewable energy obligation (or quota obligation; see subsection 4.2.1.1), there are no other definitions concerning any other support schemes provided for by the RE Directive.

\textbf{3.2.4 Mandatory national overall targets}

With a 20\% target set in Article 3(1) of the RE Directive for the share of energy from renewable sources for the EU as a whole by 2020, the main obligation for the Member States is to achieve national targets for the proportion of energy from renewable sources in gross final energy consumption by that year. These binding national targets summed up equals the

\textsuperscript{210} Johnston & Block (n 3) 308.
\textsuperscript{211} ibid.
\textsuperscript{212} RE Directive, art 5(3).
\textsuperscript{213} Johnston & Block (n 3) 309.
\textsuperscript{214} RE Directive, art 2(k).
\textsuperscript{215} ibid art 2(l).
target set at EU-level, and they are set out in Part A of Annex I to the RE Directive. The targets for the Member States differ significantly amongst them. They take into consideration special national circumstances, development achieved under the former renewable energy directive (see section 2.4.2) and the economic possibility for each Member State to exploit its resources for renewable energy purposes.

Steady steps taken forward by the Member States to increase the share of energy from renewable sources in consumption are required throughout the whole period until 2020. Otherwise there is a larger risk that the final targets will not be met. To provide support for the effectiveness of the main obligation with the national targets, an indicative trajectory is set out by Article 3(2) of the RE Directive, with increasing consumption levels that are expected to be followed. If the Member States should not be on track during the specified periods, these interim targets are not in themselves legally binding, and there are no consequences solely because of a failure to meet them. The indicative trajectory is to be found in Part B of Annex I to the RE Directive.

The Member States are expected to contribute to the promotion of energy from renewable sources in the transport sector, i.e. biofuels, by all achieving a target of a 10% share of energy from renewable sources in final energy consumption in that sector in 2020. In order to make it easier to achieve all the targets laid down, the RE Directive also stipulates that, each Member State shall promote and encourage energy efficiency and energy saving.

3.2.5 Measures for the use of energy from renewable sources

According to Article 3(2) of the RE Directive, the Member States are obliged to introduce measures that are effectively designed to ensure that the increase in consumption of energy from renewable sources equals or exceeds what is set by the indicative trajectories. This means that, even if the indicative trajectories in themselves are not legally binding, in combination with the obligation here contained, they are not ineffective. They rather become an important part of the enforcement mechanisms, since the Member States still have the

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216 ibid art 3(1).
217 Woerdman and others (n 6) 132.
218 ibid.
219 ibid.
220 RE Directive, art 3(2).
221 Johnston & Block (n 3) 309.
222 RE Directive, art 3(1).
obligation to provide relevant and proper measures directly related to the level of their individual interim targets.223

The kind of effectively designed measures that will be required are not defined. Obviously, they include appropriate support schemes. Logically, they also include measures regulated in Articles 13-16 of the RE Directive.224 Infringement proceedings can be brought against a Member State that fails to make sufficient efforts concerning measures to progress towards its binding national target. Still, there is much room for discussion in practice regarding the cause of failure to follow an indicative trajectory. If it is because of insufficient or ineffective measures on behalf of a Member State, or if it is because of other factors involved that matters.225

In order to achieve their national overall targets, final or to keep track with the indicative trajectory, Member States may apply two possible measures explicitly mentioned: support schemes, and/or measures of cooperation with other Member States and with third countries.226 The cooperation mechanisms are found in Articles 6, 7, 9 and 11 of the RE Directive, and consists of statistical transfers between Member States, joint projects between Member States, joint projects between Member States and third countries, and lastly, joint support schemes.

3.2.6 National renewable energy action plans

According to Article 4(1) of the RE Directive, each Member State shall establish a national renewable energy action plan. These plans shall set out the national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020. In line with Article 4(2) of the RE Directive, the Member States were required to deliver their plans by 30 June 2010. The plans have been produced and the documents are available electronically on the Commission’s website.227

The renewable energy action plans were to be prepared in compliance with a template adopted by the Commission, and to provide detailed roadmaps of how the Member States expects to reach their legally binding targets. There was an obligation to publish a renewable energy forecast document before the adoption of these plans, and the Member States must

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223 van Steen (n 165) 63.
224 ibid 64-65.
225 Woerdman and others (n 6) 132.
226 RE Directive, art 3(3).
biennially submit progress reports.\textsuperscript{228} In the renewable energy action plans, the different sectoral targets were set, which allowed for full subsidiarity and flexibility for the Member States. At the same time this had the effect of providing a straightforward message to the market as to the expected development in different renewable energy sectors.\textsuperscript{229}

When the renewable energy action plans were made, consideration had to be taken to the effects of other measures relating to energy efficiency on final energy consumption. If there is a high reduction in energy consumption, then a less of an increase in energy from renewable energy sources will be needed to meet the targets set as a share of the total consumption.\textsuperscript{230} These plans also established procedures aimed at promoting energy from renewable sources, such as, for reform of planning and pricing schemes and access to electricity grids.\textsuperscript{231}

The renewable energy action plans contribute to ensure that the Member States comply with their main obligations, and that the increase in energy from renewable sources take place at an appropriate pace. If they fall behind their indicative trajectories, the Member States are required to submit an amended renewable energy action plan. The amendment will state what measures that will be taken to re-join the pathway from which they have departed and again move towards achievement of their final national target.\textsuperscript{232}

The Member States have until 30 June the following year, after the immediately preceding two-year period set out in the indicative trajectory, to submit the amended renewable energy action plan. In response to an amended plan, the Commission may issue a recommendation. It may also under certain circumstances release the Member States from the obligation to submit an amended plan, if their failure to meet the interim targets is by a limited margin.\textsuperscript{233}

\begin{flushright}
228 Roggenkamp and others (n 1) 321.
229 van Steen (n 165) 65.
231 Johnston & Block (n 3) 309.
232 Woerdman and others (n 6) 133.
233 RE Directive, art 4(4) and (5).
\end{flushright}
4. The national support schemes

This chapter is the main part of the thesis and considers the range of different market-based instruments that the EU Member States can use to support energy production from renewable sources. Support schemes are defined in Article 2(k) of the RE Directive (see section 3.2.3), and they can be divided into two main groups: investment support, dealt with in section 4.1, used to enhance access to funding for development of renewable energy, and operating support, dealt with in section 4.2, used to enable recovery of development costs once renewable energy production is in operation.

The Commission’s guidelines for the design of support schemes are presented in section 4.3, followed by the guidelines regarding State aid in section 4.4. The most important cases from the Court of Justice concerning support schemes are presented in section 4.5, and finally, the main results from the Commission’s progress reports regarding the employment of support schemes and the results thereof are presented in section 4.6. This chapter does not cover indirect financial instruments, such as increased taxation of fossil fuels or reduced support for fossil fuels.

4.1 Investment support

Investment support can be divided into investment-based schemes (section 4.1.1) and tax-based schemes (section 4.1.2). Both investment aid and tax measures are referred to as examples of support schemes in the definition provision in the RE Directive, and can according to Article 3(3) be used by the Member States in order to reach the renewable energy targets. The purpose of this section is to give an overview of the different support schemes and how they function.

4.1.1 Investment-based schemes

Because of the high investment risk involved in new renewable energy projects, especially for research and development of technologies at an early stage or testing of technologies before the commercial stage, it is often difficult to get financing for these kinds of projects. If investors are interested, another problem be that they demand high rates of return. This makes it difficult to recover development costs through energy sales without further support once the projects are in operation. Therefore, investment support comes in the form of public financial
support measures that the EU Member States can use to facilitate innovators to develop renewable energy technologies, and to encourage consumers to use them.\textsuperscript{234}

Capital grant schemes can be used to provide financing for the development and testing of renewable energy technologies with the appropriate potential. The access to long-term public loans enable investment for developers at lower rates of return compared with the private financing of projects. Another possibility for the Member States is to provide guarantees of repayment, secured from public bodies in case a debtor fails to fulfil its obligation. This may enable better terms and conditions for developers in their negotiations with actors in the private finance sector.\textsuperscript{235}

Investment support is usually viewed as being supplemental to operating support (see section 4.2). Its most integral function has been to help renewable energy technologies over the threshold to capability at the commercial stage, and to create investor confidence because of the lower risk at that stage. An advantage with investment support is that it does not distort the functioning of energy markets in their operation, as it does in a direct way with operating support (see further sections 4.2.1 and 4.2.2).\textsuperscript{236} Member States often use a combination of instruments to attract investments in the renewable energy sector. One scheme within investment support, as described above, is then used in addition to a main scheme chosen within operating support.\textsuperscript{237}

\textbf{4.1.2 Tax-based schemes}

In addition to providing public funds for a more direct investment support, the EU Member States can also provide investment support by reducing the financial burden on developers through exemptions from or reductions of taxes.\textsuperscript{238} This type of reduction of investment costs is permitted according to Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity (Energy Taxation Directive).\textsuperscript{239} Article 15(1)(a) of the directive gives Member States the option of regulating the level of taxation in respect of products used in pilot projects for the development of more environmentally-friendly products. The investment support here referred to is through tax exemptions or reductions on

\textsuperscript{234} Woerdman and others (n 6) 146.
\textsuperscript{235} ibid 147.
\textsuperscript{236} ibid.
\textsuperscript{237} Fräss-Ehrfeld (n 56) 264.
\textsuperscript{238} Woerdman and others (n 6) 147.
the purchase of goods, compared to the operating support with tax exemptions or reductions on electricity at the production stage (see section 4.2.3).²⁴⁰

4.1.3 Concluding remarks

When examining the strengths and weaknesses of the individual support schemes the Member States may apply in order to reach the targets that are set in Article 3(1) and (2) of the RE Directive (see section 3.2.4), there is a general starting point. All the support schemes have the same basic aim; to promote the use of energy from renewable sources, and thereby all support schemes should work more or less in the same direction, in the end for the benefit of, among other objectives, the environment.

According to the definition of support schemes in Article 2(k) of the RE Directive (see section 3.2.3), they can promote the use of energy from renewable sources in three ways: first, by reducing the cost for that energy, second, by increasing the price at which it can be sold, or lastly, by increasing the volume of such energy purchased. Investment aid and tax exemptions or reductions are explicitly mentioned as examples of support schemes, in the non-exhaustive list given with the definition. To be kept in mind is also that the Member States are under an obligation to use support schemes that are effectively designed to ensure that they meet their interim targets, according to Article 3(2) of the RE Directive (see section 3.2.5).

Another factor to keep in mind when it comes to the Member States choice and design of support schemes is that they have to take into account and find a reasonable balance with regard to public acceptance. The additional costs for the promotion of the use of energy from renewable sources are often in the end borne by the tax payers, or included in the market price and paid by the industry or consumers (especially concerning quantity and price-based support schemes; see sections 4.2.1 and 4.2.2). If the balance is well and the costs accepted, the more renewable energy sources will be utilised.

Investment-based schemes and tax-based schemes for investment support are promoting the use of energy from renewable sources by way of reducing the cost of developing and facilitating the production of that energy. Even if investment support is viewed as supplemental, and often used in combination with operating support, it has a strength when it comes to promote the development of new and innovative renewable energy technologies to a

market stage where they receive investor confidence. Another strength is that investment support does not cause an intervention in the operation of internal energy markets.

4.2 Operating support

Operating support can be divided into quantity-based schemes (section 4.2.1) and price-based schemes (section 4.2.2), and, as with the investment support, there are also in this group tax-based schemes (section 4.2.3). According to established economic theory, quantity-based and price-based schemes have the same economic efficiency, given that there are sufficiently perfect competition conditions.\textsuperscript{241}

4.2.1 Quantity-based schemes

4.2.1.1 Renewable energy obligations

Renewable energy obligations are defined in Article 2(l) of the RE Directive (see section 3.2.3), and are also known as quota obligations. Under a quota obligation the Member States impose an obligation on suppliers (or producers or consumers) to include a specified proportion of electricity from renewable energy sources in their supply.\textsuperscript{242} The quota obligation usually operates in combination with tradable green certificates, which evidences that a certain amount of electricity has been produced from renewable energy sources. The green certificates are issued by the relevant national authority when a producer registers the production of electricity that qualifies under the conditions.\textsuperscript{243}

The system with green certificates offer two advantages. They are bankable (tradable, assignable and can be used for a mortgage or warranty) and they do not transfer Member State budget resources. The supply of electricity is usually traded on the electricity market, and the producer receives the market price, and in addition the separate green certificate price, per MWh of production. Suppliers prove that they have met their quota obligation by purchasing the certificates. If they fail to fulfil the obligation they must pay a penalty fee to the Member State authority. The certificates are later withdrawn from circulation when suppliers have presented them to the national authority, or when their period of validity expires.\textsuperscript{244}

\textsuperscript{241} Fräss-Ehrfeld (n 56) 263.
\textsuperscript{242} Howes (n 240) 75.
\textsuperscript{243} Johnston & Block (n 3) 333.
\textsuperscript{244} ibid.
Quota obligation schemes can either give the same support to all renewable energy technologies or give different levels of support to different technologies. The latter practice is known as banding. Banding is generally done by issuing fewer green certificates to established renewable energy technologies for each MWh of electricity produced, compared to the number issued to newer renewable energy technologies, that require more initial support to make progress and become established on the market.\textsuperscript{245}

The model with quota obligations as support schemes are used by some EU Member States in the electricity sector, but they are widely used in the EU transport sector with quota obligations on fuel suppliers to include a proportion from renewable energy sources in their supplies. A quota obligation set to increase the share of biofuel in order to reach the 10% target of energy from renewable sources in final energy consumption in the transport sector by 2020 (see section 3.2.4).\textsuperscript{246}

4.2.1.2 Tenders

Tendering is another model of quantity-based support schemes. It has had a slow start and was not used on any broad scale in the EU in the beginning after the adoption of the RE Directive.\textsuperscript{247} This system involves competitive bidding for contracts to build and operate a certain renewable energy project, or concerning a fixed quantity of renewable energy capacity in a Member State.\textsuperscript{248} A tender can, for example, be announced for the provision of a certain quantity of electricity from a certain renewable energy technology, and the bidding process should ensure that the lowest offer is the one approved and funded.\textsuperscript{249} A problem can be that investors bid an uneconomically low price only in order to secure the contract, but with the risk that the project is not later finalised.\textsuperscript{250}

\begin{footnotes}
\item[245] Woerdman and others (n 6) 149.
\item[246] Krüger (n 2) 160.
\item[247] Howes (n 240) 76.
\item[248] Fräss-Ehrfeld (n 56) 265.
\item[249] Howes (n 240) 76.
\item[250] Fräss-Ehrfeld (n 56) 265.
\end{footnotes}
4.2.2 Price-based schemes

4.2.2.1 Feed-in tariffs
The most commonly employed support scheme is currently that EU Member States provide operating support for electricity from renewable energy sources through feed-in tariffs. Feed-in tariffs establishes a fixed price that is higher than the market price for electricity. The tariffs are granted to producers that operate plants for electricity production from renewable energy sources, and in relation to the amount produced they feed into the electricity grid. The specific feed-in tariffs for different technologies paid to renewable energy producers are regulated by the relevant authority in the Member States. They take the shape of a total price paid to the producers per MWh of electricity that is fed into the system.

Feed-in tariffs are paid by the operators of transmission or distribution systems, the grid operators, and the cost is usually covered by the tariff structure and included in the electricity price for consumers. In order to cover costs for investments made by operators of renewable energy plants, the feed-in tariffs are generally guaranteed for a period of 10 to 20 years. This long-lasting time guarantee lowers the market risk and provides stability and certainty for investors. Feed-in tariffs can be designed to support specific renewable energy technologies, and can also be used to encourage cost reductions through gradual reductions of the feed-in tariffs.

The main benefits of feed-in tariffs are that they are quite easy to implement, administrate and operate. The actors on the market have no problem in understanding the functioning of this type of support schemes, and can make their planning based on them. The main disadvantage with these price-based schemes with fixed tariffs is that they need to be modified regularly, to correspond to changes in production costs of different renewable energy technologies over time. This risk of adjustments, known as the regulatory risk, following decisions from the Member State’s authorities, results in reduced long-term certainty. The feed-in tariffs are granted on individual basis and cannot be traded, and it makes them difficult to bank.

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251 Woerdman and others (n 6) 147.
252 Howes (n 240) 74-75.
253 ibid 75.
254 Johnston & Block (n 3) 337.
255 Fräss-Ehrfeld (n 56) 264.
256 Johnston & Block (n 3) 337.
4.2.2.2 Feed-in premiums

Feed-in premium support schemes are increasingly being viewed by EU Member States as a potential alternative to use for promoting renewable energy technologies that can develop and reach commercial stage operation, but which are not yet cost competitive with conventional fossil fuel energy technologies.\footnote{257} Premium schemes establish mark ups in addition to the market price for electricity. Consequently, they are paid to producers that operate plants for electricity production from renewable energy sources in addition to the market price, and in relation to the amount generated that they feed into the electricity grid. The specific feed-in premiums for different renewable energy technologies are regulated by the relevant authority in the Member States.\footnote{258}

The feed-in premiums are intended to curb the risk associated with the exposure to price volatility in the electricity market. They are normally paid by the operators of transmission or distribution systems, the grid operators, under a legal obligation in relation to each MWh of electricity delivered. The premiums may be fixed at a specified level, or may be variable and fall as the electricity price rise.\footnote{259} The cost of the premium for the grid operator is usually covered by inclusion of the cost in the electricity price. The premiums are generally guaranteed for a period of 10 to 20 years. This long-term guarantee provides stability and certainty for investors. As with feed-in tariffs, feed-in premiums can be designed to promote specific renewable energy technologies, and can also be used to encourage cost reductions through gradual reductions of the premiums.\footnote{260}

The feed-in premium system is relatively easy to implement, administrate and operate, and those involved can easily understand the functioning of this support scheme. A noteworthy difference compared to the feed-in tariffs, is that premiums introduce competition between the electricity producers in the market.\footnote{261} The support scheme with premiums is therefore a more market-based scheme than tariffs, and it is easier to integrate because the actors will be reacting to market price signals. Even so, it makes the total price less predictable since it depends on a changing electricity price.\footnote{262} As with the feed-in tariffs, the regulatory risk (see section 4.2.2.1) following decisions from the Member State’s authorities,

\footnote{257}{\footnotesize Woerdman and others (n 6) 150.\footnote{258}{\footnotesize Howes (n 240) 74-75.\footnote{259}{\footnotesize Woerdman and others (n 6) 150.\footnote{260}{\footnotesize Howes (n 240) 75.\footnote{261}{\footnotesize Johnston & Block (n 3) 336-337.\footnote{262}{\footnotesize Fräss-Ehrfeld (n 56) 264.}}}}}}
results in reduced long-term certainty. The premiums are granted on individual basis and cannot be traded, and therefore it is difficult to bank them.  

4.2.3 Tax-based schemes
Fiscal incentives, such as tax exemptions or reductions, can be used as support schemes under operating support. Producers of energy from renewable sources are then exempted from certain taxes, such as carbon taxes, in order to compensate for the unjust competition from producers of energy from conventional sources, such as fossil fuels and nuclear energy. The conventional energy sector fails to internalise the external costs, such as environmental damage, caused in electricity production. The effectiveness of fiscal incentives varies depending on the applicable energy tax rate in the EU Member States. If the tax rate is high, then a support scheme with exemptions can be sufficient to encourage the use of electricity production from renewable sources, but if the tax rate is low, the tax exemption need to be combined with other support schemes.  

Reduced tax rates can be used to promote the consumption of fuels from renewable sources instead of fossil fuels. An intended increase in the use of biofuels is generally sought by applying lower fuel tax rates to biofuels compared to petrol, or by allowing tax offsets for the consumption of biofuels. This type of reduction of operating costs is allowed according to the Energy Taxation Directive (see section 4.1.2). Article 15(1)(a) of the directive gives the Member States the possibility to regulate the level of taxation concerning taxable products under fiscal control in relation to fuels from renewable resources. In the same provision, in item (b) onwards, is a list of electricity and energy products applicable for total or partial exemptions or reductions in the level of taxation.

4.2.4 Concluding remarks
Within operating support, there is a wide range of support schemes put in place to compensate for the various market failures. Production of renewable energy is normally more expensive than the competing environmentally less friendly conventional alternatives. Economic preconditions in markets favour low prices and not environmental considerations in

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263 Johnston & Block (n 3) 337.
264 ibid.
265 Fräss-Ehrfeld (n 56) 266.
266 Woerdman and others (n 6) 147.
production. The operating support schemes functions by balancing this unfair competition that producers of energy from renewable sources face from producers of energy from conventional sources. All the different economic incentive methods presented use mainly an economic carrot approach, and the only situation an economic stick approach is involved, is concerning a penalty fee for failure to fulfil a quota obligation.

Quantity-based schemes promotes the use of energy from renewable sources by the way of increasing the volume of such energy purchased. The use of green certificates has two main strengths. They are bankable, and they do not transfer State resources. With the risk that the cheapest certificates will be produced by the established renewable energy technologies, these quota obligation schemes offer flexibility to make use of banding. Tenders, have a strength in that competitive bidding should ensure that the lowest offer is accepted and funded. This should make the support system less expensive, since there is an incentive to keep costs down. However, the process needs to be properly regulated and monitored.

Price-based schemes promotes the use of energy from renewable sources by the way of increasing the price at which it can be sold. Feed-in tariffs and feed-in premiums have many of the same strengths. The generally long period they are guaranteed provides investor confidence, and flexibility to promote specific renewable energy technologies contribute to innovation and a mix of technologies. Furthermore, the possibility with gradual reductions in the support level encourage cost reductions in production, and these schemes are also easy to implement, administrate and operate. Feed-in premiums introduce competition between producers, which can stimulate cost reductions, and there is flexibility to have either a fixed or a floating level of the premium. However, a weakness is that the total price become less predictable. As with the feed-in tariffs, there are weaknesses due to the regulatory risk, which leads to less long-term certainty for investors, and the difficulty to bank.

Tax-based schemes promote the use of energy from renewable sources by way of reducing cost of that energy. The strength of these support schemes is the ability to compensate for the unfair competition situation that renewable energy producers are in, and contribute to a mix of energy technologies. However, a weakness is that the effectiveness is dependent on individual circumstances in the Member States, concerning the level of energy tax rate.
4.3 Guidelines for the design of support schemes

In a Staff working document titled European Commission guidance for the design of renewables support schemes (Support scheme guidelines), the Commission provides guidelines with best practice concerning different aspects related to national support schemes. The paper is accompanied with a Communication from the Commission titled Delivering the internal market in electricity and making the most of public intervention. This section presents the main issues from these Support scheme guidelines. Most attention is given to the electricity sector, but the principles may also be applied in both the transport and the heating and cooling sector. Sections 4.3.3-4.3.6 attempt to fit the information given by the Commission into almost the same manner as in sections 4.1-4.2.

4.3.1 The reform process

The Commission briefly refers to the promotion of energy from renewable sources only as part of the EU energy policy in accordance with Article 194(1)(c) TFEU (see subsection 2.1.2.3). It acknowledges that the market does not provide a sufficient level of energy from renewable sources without there being intervention by the Member States through different forms of support schemes. The reasons for the failures are both market and regulatory based. There is currently not enough competition, and unfair competition with other fuels. Support is still given to fossil fuels and nuclear energy, and there is failure in the internalisation of external costs for air pollution and energy security in energy production from these sources.

While acknowledging the necessity of support schemes, the Commission points out the need for them to be proportionate and designed to avoid unneeded extra market distortions concerning renewable energy investments, production and trade. Otherwise it will lead to raised costs and risk hindering both the intended result of the promotion of renewable energy sources and the full functioning of the internal electricity market. The support schemes need to be reformed and designed in a way that ensures full integration with the market in order to increase the effectiveness of the schemes. The support should decrease in line with the falling costs within the renewable energy sector. This is necessary both for the compatibility

268 SWD(2013) 439 final, European Commission guidance for the design of renewables support schemes (Support scheme guidelines).
269 COM(2013) 7243 final, Delivering the internal market in electricity and making the most of public intervention.
270 Support scheme guidelines (n 268) 3.
271 ibid 3.
with the treaty rules on State aid, and in order to keep the costs down for the industry and consumers.\textsuperscript{272}

\subsection*{4.3.2 Market integration}

According to the Commission, much focus is on the possible reduction of costs of energy from renewable sources. To find the most economically efficient ways and tools to achieve this aim is in line with the underlying thoughts of the creation of the internal electricity market (see section 2.2.3).\textsuperscript{273}

The restrictions that Member States establish by support schemes concerning a certain origin of energy distorts full competition. Territorial requirements for a particular energy technology or feedstock are contrary to EU legislation, and have a considerable effect on trade between the Member States. Measures that interfere with competition and undermine the cost-effectiveness of support schemes, such as, caps, limitation of participants in quota obligation schemes and price restrictions, should, in the Commission’s opinion, not be used.\textsuperscript{274}

Beside the constraints put in support schemes by the Member States, the Commission considers that using GHG emissions as isolated criteria in these measures should be avoided. It should be used as part of overall EU sustainability schemes. Furthermore, the Commission considers that supports schemes should be designed to reflect long-term views concerning innovation of renewable energy technology, economies of scale, maximising of competition and minimising of costs that facilitate reaching also the 2050 decarbonisation goals sustainably.\textsuperscript{275}

\subsection*{4.3.3 Investment-based schemes}

Compared to operating support, upfront investment support that usually covers capital costs, detaches production from the market price. In the view of the Commission, investment support can be appropriate when production incentives are not necessary. There is no need to maximise production if the demand is low. Investment support can also be appropriate where the market provides efficient production signals, as for more developed and established renewable energy technologies, but where there are high investment costs.\textsuperscript{276}

\textsuperscript{272} ibid 4.
\textsuperscript{273} ibid 7.
\textsuperscript{274} ibid.
\textsuperscript{275} ibid 8.
\textsuperscript{276} ibid 11.
Investment support has the benefit that there is no impact on production-based costs. This support scheme is a one-off event, which means that there is no need for continuous adjustments because of developments in renewable energy technology or markets, and consequently not the same risk of overcompensation given to producers. Furthermore, the Commission points out the need for the national support schemes to be considered when the limit for aid volume levels through different EU funds are evaluated, to ensure that there is no overcompensation following accumulative investment support.277

4.3.4 Quantity-based schemes

4.3.4.1 Renewable energy obligations

The Commission acknowledge that renewable energy obligations (or quota obligations) with green certificates expose the renewable energy producers to the efficiency of market prices. The energy from renewable sources is sold on the relevant market, and if a green certificate is issued it is also sold at a market price. An adequate penalty fee set by the Member States for non-fulfilment of the obligation effectively constitutes a ceiling price for the certificate. On the other hand, such support schemes offer less revenue certainty for investors. This generally raises the cost of capital for developing renewable energy technologies. A solution to the problem can be to reduce the risk for investors by setting a floor price for the green certificates.278

The Commission recognises that quota obligation schemes can be created mainly in two different ways. Either as technology neutral, or with technology banding (see subsection 4.2.1.1). The former practice maximise competition, keeps technology costs low and achieves an increase in energy from renewable sources cost efficiently in the short term. The latter practice can be used where there is a need for diversification of renewable energy technologies, which are not all on the same cost level.279

4.3.4.2 Tenders

It is the Commission’s standpoint that many instruments can be designed on the basis of genuinely competitive allocation mechanisms, such as, tendering or auctions. In this way, the market will decide the most competitive bid for the energy from renewable sources specified

277 ibid 11-12.
278 ibid 10.
279 ibid 10-11.
in the process. An auction with sufficient competition between the bids reveals the actual costs for the renewable energy technologies and projects. It puts the support schemes at cost-efficient levels, and not more support is given than is necessary. Auctions often include ceiling or floor prices, and may require some calculation in advance of energy costs by the national authority to handle the risk of strategic bidding.\textsuperscript{280}

Tendering processes need to be inclusive, transparent, comparable and applicable to the renewable energy technologies and producers in sectors capable of carrying through the administrative load. They also need to contain penalties to ensure delivery, so that the requested capacity is in the end actually completed.\textsuperscript{281} The use of auctions by the Member States can provide regulatory certainty about the intended increase of already installed renewable energy technologies’ capacity.\textsuperscript{282}

The Commission states that, in regard to electricity from renewable sources “if used with feed in premium schemes and in a power system with adequate infrastructure, well-designed auction systems should provide the most cost-efficient conditions for delivering renewables”.\textsuperscript{283} However, it admits that auctions are not appropriate for small scale renewable energy technologies or producers with difficulty to handle market risk and participate in markets with immediate delivery.\textsuperscript{284}

\subsection*{4.3.5 Price-based schemes}

\subsubsection*{4.3.5.1 Feed-in tariffs}

As described by the Commission, feed-in tariffs safeguard new producers of energy from renewable sources who want to enter the market from the price risks therein. The tariffs reduce their financial costs and create opportunities for private investment. These support schemes are also easy to implement. This makes them appropriate for markets signified by a large number of smaller and less commercial actors, such as, households or local communities.\textsuperscript{285}

Even if feed-in tariffs have these benefits, they exclude producers of energy from renewable sources from active participation in the market, since they are not exposed to market price signals. This is viewed as a barrier in the development of large electricity
markets in a situation where energy from renewable sources is increasing. The Commission therefore recommends that feed-in tariffs are phased out in favour of, for example, feed-in premiums. Feed-in tariffs may only be appropriate for the support of small scale projects with minimal effect on the market.\textsuperscript{286}

Problematic features of feed-in tariffs include negative effect on the flexibility of markets, and they limit the increase to certain renewable energy technologies and certain project sizes. It is also difficult to set the correct tariff levels, and to adjust support levels to reflect changes in costs.\textsuperscript{287} The Commission considers that adjustment can be planned in advance to allow for adaption. Existing feed-in tariffs may be fixed or floating depending on if capital costs are constant or not over the period. Feed-in tariffs for coming projects should be made flexible to be able to adjust to changes with eventually lower energy production costs.\textsuperscript{288}

\textit{4.3.5.2 Feed-in premiums}

The Commission considers that feed-in premium support schemes have a number of benefits. Renewable energy producers are required to find a supplier on the market, and the scheme ensure that market signals reach the producers through market exposure. A premium support scheme will also keep costs low and push forward innovation if it is allocated by a tendering or auction process or it includes planned adjustments on cost calculations. This gives investor confidence through predictability and adequate market signals, which is positive for more steady investments in new renewable energy technologies which lack market readiness.\textsuperscript{289}

Feed-in premium support schemes are flexible and allow energy from renewable sources to be sold on different market places depending on where the conditions are most favourable, which can increase its value. The renewable energy producers must then become more active in the markets, and in line with market signals find the optimal level of investments, installations and production. The Commission recognises that, the effectiveness of the scheme in relation to market exposure is dependent upon whether the feed-in premiums are fixed or floating.\textsuperscript{290}

A fixed support level disregards fluctuations in the electricity price on the market. This can result in overcompensation of producers if prices go up higher than predicted, or consequently, in losses for the producers if prices go down lower than expected. This

\textsuperscript{286} ibid 12-13.
\textsuperscript{287} ibid.
\textsuperscript{288} ibid 13.
\textsuperscript{289} ibid 8-9.
\textsuperscript{290} ibid 9.
uncertainty for investors may lead to higher costs concerning finance. On the other hand, it can lead to more optimal decisions taken in the production depending on the situation in the market and the signals given.\footnote{ibid.}

A floating support level will follow fluctuations in the electricity price on the market. The feed-in premium will go down when electricity price go up. The Commission considers two perspectives: from a market point of view, floating feed-in premiums may have the disadvantage of protecting producers from market signals regarding the price; from an investor point of view on the other hand, they may facilitate the investment to be made at reasonable terms regarding cost of capital.\footnote{ibid.}

\textbf{4.3.6 Tax-based schemes}

The Commission took notice that tax exemptions and reductions are frequently used in the EU energy sector, both as operating and investment support. In the renewable energy sector, these support schemes are used at industry level, for example, to promote biofuel production. At household level, they are used, for example, to promote small scale solar energy investments. Compared to some other support schemes, tax exemptions and reductions are not financed by energy consumers, but rather indirectly by all taxpayers, since the Members States’ tax revenues are reduced.\footnote{ibid 12.}

It is acknowledged by the Commission that tax exemptions and reductions are allowed under the Energy Taxation Directive (see sections 4.1.2 and 4.2.3).\footnote{Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity [2003] OJ L283/51.} This is concerning, for example, biofuels, under certain criteria and subject to internal market rules on State aid (see subsection 2.2.2.2 and section 4.4), and also concerning electricity produced from different types of renewable energy sources. Some Member States use tax reductions on the purchase price on electric and hybrid motor vehicles, as a promotion of electricity from renewable sources in the transport sector.\footnote{Support scheme guidelines (n 268) 12.}

It is the Commissions opinion that such support schemes as tax exemptions and reductions should be used with caution. As one important reason mentioned, the budgetary consolidation efforts of the Member States needs to be maintained.\footnote{ibid.}
4.3.7 Concluding remarks

It is initially interesting to note that the Commission refers to promotion of energy from renewable sources as part of EU energy policy in accordance with Article 194 TFEU. This is done concisely and without fanfare, but there is at least no explicit mentioning of either environmental or climate change policy. The comment given on the avoidance of the use of GHG emissions as isolated criteria, but used as part of overall EU sustainability schemes, indicate the Commission’s view that the environment or ecological sustainability should not be given isolated importance, but rather together with other sustainability aspects, such as, economic or social.

The Commission highlights that the support schemes should be well designed and proportionate with one major aim; to avoid unnecessary market distortions that will raise costs. The schemes should be made flexible enough to be able to follow falling costs in renewable energy production. This is considered necessary in order to minimise the amount of support, comply with State aid rules and minimise costs for the industry and consumers. The Commission further highlights the importance of full integration with the internal market. Restrictions established by support schemes are considered to affect trade contrary to EU legislation. They distort full competition and at the same time undermine the cost-effectiveness of the support schemes.

While acknowledging that the market does not provide the optimal level of energy from renewable sources without there being public intervention through support schemes, the Commission’s overall emphasis after that seem to be from a strict economic internal market point of view. To make the most of public intervention in the name of environmentally friendly energy technologies without crossing the limits set by the absolutely fundamental economic framework. The Commission arrives at the conclusion that well-designed auction systems used together with feed-in premiums should provide the most cost-efficient conditions for promotion of energy from renewable sources.

The Commission acknowledges regulatory and market failures with unfair competition for energy from renewable sources when other fuels, such as, fossil fuels and nuclear energy are still given support. There are also failures in the internalisation of external costs for air pollution and energy security within production from these sources. It seems difficult to see any change in these circumstances, or a solution to these problems, with focus on the most cost-efficient support scheme for the promotion of the use of energy from renewable sources, that only incentives to keep costs down in production in that sector.
4.4 Guidelines on State aid for environmental protection and energy

In a Communication from the Commission titled Guidelines on State aid for environmental protection and energy 2014-2020 (State aid guidelines), the Commission provides specific guidelines concerning the conditions under which State aid for energy and environment may be considered compatible with the internal market under Article 107(3)(c) TFEU (see subsection 2.2.2.2). State aid may be accepted to help the development of certain economic activities within the EU, where such State aid does not negatively affect trading conditions contrary to the common interest.

In addition to the State aid guidelines there are general block exemptions made in a Regulation from the Commission. Under certain conditions State aid in the energy sector may be covered and exempted from the obligation to notify the Commission. This section however presents the main findings from the environmental and energy specific State aid guidelines. These are not legally binding, but nevertheless have a considerable influence on the Member States’ decisions regarding their national support schemes.

4.4.1 Common assessment principles

4.4.1.1 Notifiable individual State aid measures

The Commission has set out some environmental and energy measures for which State aid under certain given conditions may be considered compatible with the internal market according to Article 107(3)(c) TFEU. Two of the measures covered by the State aid guidelines are State aid for energy from renewable sources, and State aid in the form of reductions in or exemptions from environmental taxes.

Individual State aid that is granted by a support scheme is subject to an obligation to notify the Commission according to Article 108(3) TFEU (see subsection 2.2.2.2), if the aid that is given exceeds certain thresholds regarding the sum of aid or the resulting production, and is not granted by a tendering or auction process.
Tax exemptions and reductions from environmental taxes falling within the scope of the State aid guidelines (see further section 4.4.3) are not subject to the individual notification obligation. Fiscal State aid falling outside the scope are subject to an individual assessment and subject to notification if certain thresholds are exceeded.\footnote{ibid.}

4.4.1.2 General compatibility conditions

If a Member State decides to introduce a State aid measure, the Commission makes use of a general assessment of the design of the support scheme, and whether the positive effects of the State aid towards a common policy objective of the EU exceeds its potential negative impacts on trade and competition.\footnote{ibid 11.}

The Commission considers support schemes involving State aid compatible with the internal market if it fulfils these criteria set out: first, contribution to an objective of common interest, second, a need for State intervention, third, appropriateness of the aid measure, fourth, an incentive effect, fifth, proportionality of the aid, sixth, avoidance of unjustified negative impacts on competition and trade between Member States, and finally seventh, transparency of the aid.\footnote{ibid 11-12.}

The first criteria require that the support scheme aims at a clear common policy objective in accordance with Article 107(3) TFEU. The second criteria require that the support scheme aims at a situation where State aid can lead to a material improvement that the market is not capable to deliver. The third criteria require that the support scheme is an appropriate policy instrument to address the common objective. The fourth criteria require that the support scheme changes the conduct of the undertaking leading to engagement in additional business activity which it would restrict or not carry out without the State aid.\footnote{ibid 11.}

Furthermore, the fifth criteria require that the total sum of the State aid in the support scheme is kept to the minimum needed to incentivise the additional business activity. The sixth criteria require that the negative impacts of the State aid on competition and trade are limited and when weighing different factors the overall outcome of the support scheme is positive, and lastly the seventh criteria require that the Member States, the Commission, market players and the public have access to all relevant acts and information about the State aid.\footnote{ibid 11-12.}
The Commission considers that if a support scheme or the conditions attached to it encompass a violation of EU law that is not capable of being treated separately, then the State aid as a whole cannot be considered compatible with the internal market. By way of example, a levy for financing a support scheme involving State aid cannot be used if it constitutes a breach of Article 30 or 110 TFEU concerning custom duties, charges and internal taxation (see subsections 2.2.1.1 and 2.2.2.3).³⁰⁸

4.4.2 State aid to energy from renewable sources

4.4.2.1 General conditions for investment and operating support

The general compatibility conditions (see subsection 4.4.1.2) are applicable to all State aid support schemes that fall within the scope of the guidelines, but they are complemented by more specific conditions concerning certain areas. The State aid guidelines, as the title reveals, apply to the period up to 2020. In the Commission’s opinion, the guidelines should nevertheless pave the way towards achieving long-term objectives.³⁰⁹ These are found in the policy framework for the years 2020-2030 (see subsections 2.1.2.4 and 2.1.3.4).³¹⁰

It is expected in the years up to 2030 that established renewable energy sources will become competitive with other energy sources connected to the electricity grid. Support and exemptions should then be phased out in a gradual manner. Through more use of market-based mechanisms, the Commission wants to ensure a transition to the deliverance of energy from renewable sources in a cost-effective manner.³¹¹

The Commission favours competitive allocation mechanisms, such as, tendering or auctions that are open to all renewable electricity producers, in order to ensure that support is kept at a minimum. However, the State aid guidelines allow the limiting of tenders to specific technologies, considering the different stage of development of renewable energy technologies, their long-term potential and the need for a mix of technologies. Furthermore, exceptions are made for small-scale projects where there is doubt whether a tendering process is the most suitable solution.³¹²

According to the Commission, other measures in use, such as, the EU ETS (see subsection 2.1.3.2) and carbon taxes, may not manage to completely internalise the external costs for

³⁰⁸ ibid 12.
³⁰⁹ ibid 23.
³¹¹ State aid guidelines (n 297) 23.
³¹² ibid 24.
GHG emissions. It is therefore acknowledged that State aid can contribute to the achievement of renewable energy policy objectives. Unless otherwise shown, there is a presumption given that a remaining market failure still exist, and State aid can be one mean to face the problem.\textsuperscript{313}

Furthermore, the Commission presumes the appropriateness of State aid (third compatibility criteria; see subsection 4.4.1.2), and the limited negative impacts of the State aid, (sixth compatibility criteria; see subsection 4.4.1.2), but only provided that all other criteria are fulfilled. The possibilities for the Member States to reach their mandatory national targets by 2020 (see section 3.2.4) are thereby given attention.\textsuperscript{314}

The Commission considers that operating support schemes should be open to other EEA States and contracting parties of the Energy Community. This limits the negative impacts of the support schemes, and minimises the costs for Member States to achieve their mandatory national targets set in the RE Directive. However, the Commission notes that, at the time of these State aid guidelines, cases are pending in the Court of Justice concerning this issue (see sections 4.5.3 and 4.5.4). From the Commissions point of view, it nevertheless considers positively support schemes that are open in this manner.\textsuperscript{315}

\textit{4.4.2.2 Special conditions for operating support concerning electricity}

The Commission emphasises the need for an increased market integration regarding electricity from renewable sources. In order to achieve this aim, it is important that producers in this sector sell their electricity in the market and that they are subject to market obligations. Therefore, the State aid guidelines sets out special conditions that applies to all new support schemes in the renewable electricity sector from 1 January 2016.\textsuperscript{316}

To be compatible with the Commission’s view, without going into any details about economics, the guidelines requires: that the producers sell their electricity in the market, and that the State aid is given as a feed-in premium (see subsection 4.2.2.2) in addition to the electricity price, that the producers are subject to standard balancing responsibilities (unless there is no liquid intra-day trade), and lastly, that limitations are used to ensure that producers have no incentive to continue production under negative market prices.\textsuperscript{317}

\textsuperscript{313} ibid.
\textsuperscript{314} ibid.
\textsuperscript{315} ibid 25.
\textsuperscript{316} ibid.
\textsuperscript{317} ibid.
From 1 January 2017, new conditions apply. Then, the State aid guidelines require that aid is granted in a competitive allocation process, such as, tendering or auctions with clear, transparent and non-discriminatory criteria, unless the Member States can demonstrate: that only one or a very limited number of projects could be eligible, or that a competitive allocation process would result in higher support levels because of, for example, strategic bidding, or that a competitive allocation process would lead to low project realisation rates because of, for example, underbidding. If the process is open to all producers, the Commission will presume that the State aid is proportionate (fifth compatibility criteria; see subsection 4.4.1.2), and avoids excessive negative effects on the internal market (sixth compatibility criteria; see subsection 4.4.1.2).318

These new requirements from 2017, for allocation of State aid through a competitive allocation process, do not apply to small installations that are below certain thresholds concerning electricity capacity. Still, in the absence of such a process, the conditions from 2016 apply, as well as, some less demanding conditions set for operating support to energy from renewable sources other than electricity.319

4.4.2.3 Operating support through green certificates
Specific criteria are available for State aid through green certificates (see subsection 4.2.1.1), concerning those support schemes’ compatibility with the internal market. The Member States need to prove that such support schemes are necessary to secure the lasting of the relevant renewable energy sources. They need to show that the support schemes do not lead to overcompensation across renewable energy technologies and over time, or for individual renewable energy technologies if different levels of support are introduced. It is also important to demonstrate that these type of support schemes do not discourage producers of energy from renewable sources from getting more competitive in the market.320

The Commission considers that different levels of support, banding (see subsection 4.2.1.1), with differentiation in the number of green certificates per unit of energy produced, may not be applied unless the Member States can demonstrate the need for this. Furthermore, the Commission states that previously received investment support must correspondingly reduce the operating support that is granted through green certificates.321

318 ibid 26.
319 ibid 26-27.
320 ibid 28.
321 ibid.
4.4.3 State aid in the form of tax exemptions or reductions

Tax exemptions or reductions from environmental taxes should in the Commission’s opinion be necessary, granted in accordance with transparent, objective and non-discriminatory criteria, and finally the undertakings involved should contribute to a higher level of environmental protection.322

Furthermore, it will consider that reductions from environmental taxes contribute to a higher level of environmental protection, and do not undermine the overall objective with the discouraging effect of the tax, under two main conditions: that the Member States proves that the tax reductions are granted to undertakings on which a higher tax has the most impact, and that the Member States shows that a higher tax rate is generally applicable than if the tax exemption was not granted.323

The Commission divides its assessment of State aid in the form of tax exemptions or reductions in two different ways, depending on whether the environmental taxes are harmonised within the EU or not. If the taxes are so harmonised, it can apply a simplified assessment of the necessity (second compatibility criteria; see subsection 4.4.1.2), and proportionality of the State aid (fifth compatibility criteria; see subsection 4.4.1.2).324 This approach can be used if the tax reductions follow the EU minimum tax level as provided for in the Energy Taxation Directive (see sections 4.1.2 and 4.2.3).325 If the taxes are not harmonised, the Commission will instead do a thorough assessment of whether the necessity and proportionality criteria of the State aid are fulfilled.326

4.4.4 Concluding remarks

State aid to facilitate the development of certain economic activities within the EU, where such State aid does not negatively affect trading conditions contrary to the common interest may, according to Article 107(3)(c) TFEU, be considered compatible with the rules on the internal market. In its compatibility evaluation, the Commission makes a general assessment of the design of the support scheme, and whether the positive effects of the State aid towards a EU policy objective exceeds its potential negative effects on trade and competition.

322 ibid 32
323 ibid.
324 ibid.
326 State aid guidelines (n 297) 32.
The Commission first sets out seven general compatibility criteria under which it considers support schemes involving State aid compatible with the internal market. These general criteria are complemented by conditions specifically for investment and operating support. It is clear that the Commission wants to ensure the transition to a cost-effective delivery of energy from renewable sources through market-based mechanisms. It therefore favours competitive allocation mechanisms that are open to all producers, in order to ensure that support is kept at a minimum.

This transition is also obvious when looking at the special conditions for operating support set out by the Commission concerning electricity from renewable sources with the start from 1 January 2016 and 2017 respectively, with the aim to incentivise market integration. The current conditions set prescribes a competitive allocation process as the main condition for granting State aid, and the Member States have to prove the need for an exception to this condition. Also for State aid through green certificates, the Member States now need to prove that such support schemes are necessary to secure the lasting of the relevant renewable energy sources.

The Commission has set out three conditions for State aid through tax exemptions and reductions with which to conform, concerning the necessity of the aid, the appropriate criteria for granting it and a contribution to environmental protection. Moreover, it sets out two further conditions for when tax exemptions and reductions are considered to contribute to a higher level of environmental protection, and does not undermine the overall objective with the discouraging effect of the tax.

4.5 Case law concerning support schemes

This section contains a presentation of the most important and recent Court of Justice cases concerning support schemes, and with a focus on the free movement of goods and the concept of State aid. Sections 4.5.1 and 4.5.2 relates to the current Article 107 TFEU, and sections 4.5.1, 4.5.3 and 4.5.4 relates to the current Article 34 TFEU. By way if example in case law concerning internal taxation and the current Article 110 TFEU, the Outokumpu case can be mentioned. That case concerned events that took place in 1996, but the EU legislation has

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changed since then with guarantees of origin introduced, \(^{328}\) therefore it is suggested that the judgement will probably not cause many practical difficulties anytime in the near future. \(^{329}\)

**4.5.1 PreussenElektra**

**4.5.1.1 Facts**

The case concerned proceedings between PreussenElektra AG (PreussenElektra), that operated conventional fossil fuel and nuclear power plants in Germany, and Schleswag AG (Schleswag), a regional electricity supplier that bought electricity almost exclusively from this producer. Furthermore, the former company owned a majority of the shares in the latter company, with the remaining shares owned by regional authorities. \(^{330}\)

The Member State’s legislation obliged Schleswag to purchase electricity from renewable energy sources produced within its supply area at a fixed minimum price. A compensation mechanism regulated the additional costs passed on the supplier by the purchase of electricity under the set conditions, and obliged PreussenElektra to compensate the supplier in respect of these costs. With the compensation transferred, PreussenElektra went to court and applied for repayment from the defendant Schleswag. They claimed the Member State’s legislation regarding the payment obligation to be contrary to the State aid provisions of the EC Treaty. \(^{331}\)

**4.5.1.2 Issues**

The Regional Court considered an interpretation of Articles 30 and 92 of the EC Treaty necessary, (now Articles 34 TFEU; see subsection 2.2.1.1 and 107 TFEU; see subsection 2.2.2.2), and referred the matter to the Court of Justice for a preliminary ruling. \(^{332}\)

First, to deal with whether the Member State legislation in question constituted State aid in breach of what is now Article 107 TFEU. A legislation which required private electricity undertakings to purchase electricity produced in their supply area from renewable energy sources at fixed minimum prices higher than the market price. Furthermore, that allocated the

329 Johnston & Block (n 3) 341.
331 ibid paras 20 and 22-23.
332 ibid para 27.
economic burden because of that obligation amongst those electricity undertakings and upstream private electricity grid operators.333

Second, concerning the question of whether the Member State legislation involved constituted a quantitative restriction on imports, or a MEQR (see subsection 2.2.1.1), in breach of the current Article 34 TFEU.334

4.5.1.3 Reasoning
Concerning the first question, the ECJ referred to its previous case-law, containing that only advantages granted directly or indirectly through a Member State’s resources amount to State aid within the meaning of what is now Article 107 TFEU. The distinction made in that provision between aid granted by a Member State and that through State resources, only intended to cover both advantages granted directly by the State and those granted by a private or public body established or designated by the State.335

    The obligation that had been imposed, and the allocation of the economic burden by the Member State’s legislation in this case, did not involve any direct or indirect transfer of State resources. Even if the legislation had given a clear advantage to certain undertakings, it did not match the character of State aid.336

Concerning the second question, the ECJ referred to the Dassonville formula in its previous case-law (see subsection 2.2.1.1). The Member State’s legislation explicitly stated that the obligation concerned electricity from renewable energy sources produced within the supply area of each undertaking. The ECJ found the national legislation, with the territorial restriction in the purchase obligation, capable of, at least potentially, hindering trade between the Member States, in line with the mentioned formula.337

However, the ECJ pointed out the possibilities of justification of the Member State’s restrictive measure, and taking into account the aim of the national provision in question and the particular features of the electricity market. The Member State’s legislation intended to promote the use of renewable energy sources for protection of the environment and contributed to the reduction of GHG emissions. This in turn helping to combat climate change. A priority objective pledged by both the EU (see subsection 2.1.3.3) and its Member

333 ibid para 56.
334 ibid paras 27 and 68.
335 ibid para 58.
336 ibid paras 59-61.
337 ibid paras 69 and 71.
States to carry out through an increased use of renewable energy sources, and to fulfil its commitments internationally (see subsection 2.1.3.1).338

Without any explicit reference to what is now contained in Article 36 TFEU (see subsection 2.2.1.4), the ECJ noted that the policy for environmental protection and climate change also pursued the objective of protecting the health and life of humans, animals and plants. Moreover, it mentions the integration principle in Article 6 of the EC Treaty (now Article 11 TFEU; see subsection 2.1.1.3).339 Concerning the special features of the electricity market, the ECJ noted that the current phase of liberalisation still left some barriers to trade in place, and considered that the nature of electricity made it difficult to determine its origin. In particular, it was difficult to establish the specific source of energy, once it had been allowed into the transmission and distribution system.340

4.5.1.4 Ruling

In answer to the questions referred to it, the Court of Justice found that the national legislation did not constitute State aid contrary to Article 92 of the EC Treaty or run counter to Article 30 of the EC Treaty (now Articles 107 and 34 TFEU).341

4.5.2 Vente De Colère

4.5.2.1 Facts

The case concerned proceedings brought by Association Vent De Colère! Fédération nationale (Vent De Colère) together with 11 claimants against two orders of the Minister for Ecology, Energy, Sustainable Development and Regional Planning and of the Minister for Economy, Industry and Employment in France. The contested orders laid down the conditions for the obligation to buy electricity produced by wind-power installations at a price higher than its market price. To offset the additional costs for electricity undertakings because of the obligation, national legislation established a mechanism with charges to be paid by the electricity consumers, at an amount determined by the Member State’s authorities.342

338 ibid paras 72-74.
339 ibid paras 75-76.
340 ibid paras 78-79.
341 ibid final part.
342 Case C-262/12 Association Vent De Colère! Fédération nationale and others v. Ministre de l’Ecologie [2013] paras 2, 6, 9 and 11.
In the action for annulment Vent De Colère and the other applicants claimed that the orders in question constituted State aid contrary to Article 87 of the EC Treaty (now Article 107 TFEU; see subsection 2.2.2.2).  

4.5.2.2 Issues

Aware of the somewhat different circumstances of the PreussenElektra case (see subsection 4.5.1.1), the French Council of State decided to stay the proceedings and refer a question to the Court of Justice for a preliminary ruling.  

The referring court asked whether a consumer financed mechanism, as the one in the Member State’s legislation, for offsetting the additional costs for electricity undertakings arising from an obligation to purchase electricity produced from renewable sources at a price higher than market price, constituted an intervention by the State or through State resources according to what is now Article 107 TFEU.

4.5.2.3 Reasoning

The CJEU referred to its previous case-law concerning the conditions for classification of advantages as State aid; the granting of which must be attributable to the Member State, and they must be granted directly or indirectly through State resources. In this case, the offset mechanism as established by law clearly constituted a measure attributable to the State.

Regarding the second condition, the CJEU recalled that, measures not involving a transfer of State resources may still fall within the concept of State aid. It stated that, as per PreussenElektra (see subsection 4.5.1.3), through State resources is intended to cover those advantages granted by a private or public body established or designated by the State for administration of the aid. Furthermore, that the sums corresponding to the Member State’s measure constantly remain under public control, is sufficient to categorise them as State resources, even if not permanently held by the treasury.

In the present case, an entrusted public body under a mandate from the Member State collected and centralised the sums intended to offset the additional costs in an account under its control before paying them out to the undertakings involved. The body acted in the role of

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343 ibid paras 7-8.
344 ibid para 13.
345 ibid para 14.
346 ibid paras 16 and 18.
347 ibid paras 19-21.
an intermediary in the management of those funds. The CJEU therefore regarded the sums as constantly remaining under public control.348

With this mechanism, established and regulated by the Member State, this case distinguished itself from PreussenElektra. In the latter case, no specific body had been appointed to manage a State resource, the undertakings had to use their own funds and they were not at any time under public control.349

4.5.2.4 Ruling
The Court of Justice found that the national legislation with the resulting offsetting mechanism under the given circumstances in the case constituted an intervention through State resources within the concept of State aid according to Article 87 of the EC Treaty (now Article 107 TFEU).350

4.5.3 Essent Belgium

4.5.3.1 Facts
The case concerned proceedings between Essent Belgium NV (Essent), a supplier of electricity, and the Flemish Regulatory Authority for the Electricity and Gas Market in Belgium. The Member State’s legislation put a quota obligation on Essent, to each year surrender a certain number of green certificates (see subsection 4.2.1.1), showing that the quantity of electricity listed therein had been produced from renewable energy sources.351 In order to fulfil the obligation, Essent instead surrendered guarantees of origin proving production of renewable electricity in some other Member States. The Member State’s legislation and authorities accepted only green certificates issued to producers of electricity from renewable sources in the specific region of the Member State. A decision imposed on Essent a penalty fee, owing to the failure to meet the quota obligation in a correct way.352

Essent brought proceedings before the national Court of First Instance claiming that the decision was unlawful, they alleged infringement of Article 28 of the EC Treaty (now Article 34 TFEU).353

348 ibid paras 22, 28, 30 and 33.
349 ibid paras 34-36.
350 ibid final part.
351 Cases C-204/12 to C-208/12 joined, Essent Belgium v Vlaamse Reguleringsinstantie voor de Elektriciteits- en Gasmarkt [2014] paras 2 and 30.
352 ibid paras 31-32.
353 ibid paras 33 and 37.
4.5.3.2 Issues

The Court of First Instance decided to stay the proceedings and refer questions to the Court of Justice for a preliminary ruling.\textsuperscript{354}

The referring court asked, whether Articles 28 and 30 of the EC Treaty (now Articles 34 and 36 TFEU), must be interpreted as precluding a national support scheme which provides for the issuance of tradable green certificates in respect of electricity produced from renewable sources in the region. Furthermore, which places electricity suppliers under a quota obligation, subject to a penalty fee, to surrender each year green certificates in relation to a proportion of the total volume of electricity they have supplied in the region, without being allowed to use guarantees of origin from other Member States.\textsuperscript{355}

4.5.3.3 Reasoning

The CJEU referred to its previous case-law in Dassonville (see subsection 2.2.1.1) and PreussenElektra (see subsection 4.5.1.3) concerning national measures causing restrictions on trade between the Member States.\textsuperscript{356} Only green certificates awarded under the Member State’s legislation could be used, and required electricity suppliers on the basis of the electricity they import, to purchase green certificates or otherwise to pay a penalty fee. The CJEU found such Member State legislation capable of hindering imports of electricity from renewable sources. It constituted a MEQR on imports (see subsection 2.2.1.1), incompatible with the current Article 34 TFEU, unless objectively justified.\textsuperscript{357}

It was concluded by the CJEU, that the objective of promoting use of renewable energy sources for the production of electricity, is capable of justifying restrictions on the free movement of goods.\textsuperscript{358} Member State legislation causing restrictions may be justified by overriding requirements related to the protection of the environment (see subsection 2.2.1.4). By contributing to reduction of GHG emissions, renewable energy sources are helpful in combating climate change. An increase in renewable energy sources is a high priority for the EU.\textsuperscript{359}

\textsuperscript{354} ibid para 42.
\textsuperscript{355} ibid para 71.
\textsuperscript{356} ibid para 77.
\textsuperscript{357} ibid paras 85 and 88.
\textsuperscript{358} ibid para 95.
\textsuperscript{359} ibid paras 90-92.
The CJEU pointed out that an increase in the use of renewable energy sources also falls within the public interest grounds in, what is now, Article 36 TFEU, namely to protect the health and life of humans, animals and plants (see subsection 2.2.1.4). Furthermore, that national support schemes are capable of contributing to the objectives in Article 6 and Article 174(1) of the EC Treaty (now Article 11 and Article 191(1) TFEU; see subsection 2.1.1.3). \textsuperscript{360}

The CJEU examined the Member State’s legislation in terms of the principle of proportionality (see subsection 2.2.1.4). Its appropriateness to ensure attainment of the legitimate objective pursued, and to not go beyond what is necessary in order to attain that objective. \textsuperscript{361} It acknowledged that, without harmonisation of support schemes in EU law, a territorial limitation may be regarded as necessary to attain the objective pursued. To ensure the proper functioning of the support schemes, and to let the Member States be able to control the effect and costs, and maintain investor confidence. \textsuperscript{362}

The CJEU then viewed the regional territorial reservation together with other features of the Member State’s legislation. It called into question neither the choice by the Member State to let the additional costs be borne by the market, nor the effectiveness of the support scheme towards attaining the objective. \textsuperscript{363} However, the CJEU saw a need for market mechanisms which ensure that supply and demand of green certificates match, so that it is possible for suppliers to obtain certificates under fair terms. It concluded that neither the method for determining the penalty fee nor the amount of that fee should go beyond what is necessary as an incentive for fulfilment of the quota obligation, in order for the Member State’s legislation to be proportionate. \textsuperscript{364}

\textit{4.5.3.4 Ruling}

The Court of Justice found in its ruling that Articles 28 and 30 of the EC Treaty (now Articles 34 and 36 TFEU) must be interpreted as not precluding national legislation with a support scheme as the one in question. This is provided that mechanisms are established which ensure a genuine market for green certificates, and that the method of determining the penalty fee is fixed to ensure that the fee does not exceed what is necessary as an incentive. \textsuperscript{365}

\textsuperscript{360} ibid paras 93-94.
\textsuperscript{361} ibid para 96.
\textsuperscript{362} ibid paras 97 and 101-102.
\textsuperscript{363} ibid paras 104, 107 and 110.
\textsuperscript{364} ibid paras 111 and 114.
\textsuperscript{365} ibid final part.
4.5.4 Ålands Vindkraft

4.5.4.1 Facts

Compared to the Essent Belgium case (see subsection 4.5.3.1), the Ålands Vindkraft case related to events that took place after the entry into force of the RE Directive. Even so, the Court of Justice actually delivered the judgement of the case the same year as, but before, the judgement in the Essent Belgium case, even with the request for a preliminary ruling having been received earlier in that case. The Court of Justice in the latter case at several occasions referred to the Ålands Vindkraft case.366

The Swedish company Ålands Vindkraft AB (Ålands Vindkraft) applied to the Swedish Energy Agency for approval of a wind energy farm operated in Finland, in order to get green certificates (see subsection 4.2.1.1) concerning the electricity produced there. The authority refused to award any certificates on the grounds that only electricity from renewable energy sources produced at installations within the Member State could be approved. Ålands Vindkraft then brought action before the förvaltningsrätten i Linköping (Sweden) to change the decision, and alleged an infringement of Article 34 TFEU.367

4.5.4.2 Issues

The förvaltningsrätten i Linköping decided to stay the proceedings and refer questions to the Court of Justice for a preliminary ruling.368

The referring court asked whether Article 34 TFEU must be interpreted as meaning that the Member State’s legislation constituted a MEQR on imports (see subsection 2.2.1.1). A legislation which provided for the issuance of tradable green certificates to producers of electricity from renewable sources only concerning such electricity produced in that Member State. Furthermore, which obligated suppliers and certain electricity users to surrender each year to the authority certificates in relation to a proportion of the total volume of electricity they supplied or used. If they failed to fulfil the obligation, they faced a penalty fee.369

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366 Case C-573/12 Ålands Vindkraft AB v. Energimyndigheten [2014], received on 6 December 2012 and delivered on 1 July 2014. Cf. cases C-204/12 to C-208/12 joined, Essent Belgium, received on 30 April 2012 and delivered 11 September 2014.
368 ibid para 32.
369 ibid para 55.
4.5.4.3 Reasoning

The CJEU first concluded that the support scheme fell within the scope of the definition in Article 2(k) of the RE Directive (see section 3.2.3), and consequently, according to Article 3(3) it constituted a measure allowed for application by the Member State in order to reach the mandatory national target (see section 3.2.5).\(^{370}\) Still, it considered that the kind and degree of harmonisation brought about by the RE Directive did not preclude an examination of the support scheme’s compatibility with Article 34 TFEU.\(^{371}\)

With reference to the case-law in Dassonville (see subsection 2.2.1.1) and PreussenElektra (see subsection 4.5.1.3), the CJEU reminded of the criteria for trade restrictive measures. Since the support scheme only allowed green certificates awarded for production in the Member State to meet the quota obligation, suppliers and consumers that imported electricity had to purchase certificates. Nothing in the Member State’s legislation prohibited producers from selling certificates together with the electricity as a package deal. Under these circumstances, the CJEU found the support scheme, at least potentially, capable of hindering import of electricity from other Member States.\(^{372}\)

The different grounds of justification of the trade restrictive measure was reiterated by the CJEU in the same way as has been described in the Essent case (see subsection 4.5.3.3).\(^{373}\) It also mentioned that development of energy from renewable sources is an objective that must guide EU’s energy policy, according to Article 194(1)(c) TFEU (see subsection 2.1.2.3). Consequently, the CJEU confirmed the objective of promoting use of renewable energy sources as capable of justifying barriers to the free movement of goods (see subsection 2.2.1.4).\(^{374}\)

The CJEU went on to do an examination of the national measure’s accordance with the principle of proportionality (see subsection 2.2.1.4). It was found that the nature of electricity still makes it difficult to determine its origin and source once allowed into the transmission or distribution system.\(^{375}\) The CJEU acknowledged that a territorial limitation in a support scheme may be necessary to attain the legitimate objective pursued.\(^{376}\)
The territorial limitation was then examined together with other features of the Member State’s legislation. The CJEU concluded that a Member State did not exceed its bounds of discretion by letting the additional cost of producing electricity from renewable sources be borne by the suppliers and users, and in the end consumers. Neither the effect nor the ability of the support scheme to attain the legitimate objective appeared open to doubt. Furthermore, the CJEU found in the Member State concerned a genuine market for green certificates.

The CJEU stated that an imposition of a penalty fee for failure to fulfil the quota obligation may be necessary as an incentive. However, neither the method for determining the fee nor the amount of the fee must go beyond what is necessary. No excessive penalties should be imposed on the traders involved.

4.5.4.4 Ruling
In answer to the questions referred to it, the Court of Justice found in its ruling that, under the circumstances in the case, Article 34 TFEU must be interpreted as not precluding the Member State’s legislation with the support scheme concerned.

4.5.5 Concluding remarks
In all three cases PreussenElektra, Essent and Ålands Vindkraft the objective to promote the use of renewable sources for the production of electricity has been capable of justifying trade barriers otherwise incompatible with Article 34 TFEU and the free movement of goods. In the two latter cases, the Court of Justice explicitly referred to overriding requirements in case-law relating to the protection of the environment, and that an increase in the use of renewable sources contribute to this purpose in reducing GHG emissions, and in the combatting of climate change. This, it was noted, was and in line with the EU’s international commitments.

However, the Court of Justice continued and referred also to the public interest grounds in Article 36 TFEU, and that promotion of the use of renewable energy contribute to attaining Treaty-based policy objectives, before wrapping it all up with the expression: in the light of the foregoing considerations. It seems as if the Court of Justice wanted to give extra weight to

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377 ibid paras 105, 109-110.
378 ibid paras 112 and 115.
379 ibid para 116.
380 ibid final part.
the environmental considerations and used both the justification grounds in case-law and in the Treaty at the same time as a basis for its acknowledgement.

Concerning the review of the proportionality of the Member States’ legislation, the Court of Justice found that EU legislation has not harmonised the support schemes, and that a territorial restriction in a support scheme may be necessary to attain its objective. The Member States need to have control of the effects and costs of such schemes to ensure the proper functioning. Furthermore, neither the effect nor the ability of the schemes were called into question. However, concerning green certificates, the Court of Justice saw a need for mechanisms in place to ensure a genuine market and no excessive penalty fees, for the support schemes to be deemed proportional.

To fall within the scope of State aid in Article 107(1) TFEU, aid need to be granted by a Member State or through State resources, which was not found to be the case in PreussenElektra since the national legislation only contained a support scheme obligating transfer of resources between companies. This is important to distinguish from the situation in the Vent De Colère case where an entrusted public body managed the resources, and they were therefore regarded as being under the Member State’s control. Noteworthy is that the question for a preliminary ruling in this latter case only concerned the first out of four conditions in Article 107(1) TFEU to classify State aid (see subsection 2.2.2.2).

4.6 The renewable energy progress reports

With the Communication Renewable energy progress report from 2015 (Progress report 2015), the Commission fulfilled its requirement according to the RE Directive, and provided a mid-term assessment of the progress of the EU and the Member States towards the 2020 renewable energy targets (see section 3.2.4). A new Communication arrived in early 2017, also entitled Renewable Energy Progress Report (Progress report 2017), with a comprehensive overview and update on the renewable energy deployment in the EU. This section presents the main findings from these two reports.

382 RE Directive, arts 17 and 23.
4.6.1 Progress towards the overall 20% renewable energy target

4.6.1.1 Progress made as presented in the Progress report 2015

With a projected share of energy from renewable sources of 15.3% in 2014 in the gross final energy consumption, the Commission considered that the EU and a vast majority of the Member States were progressing well towards the 20% by 2020 target. The percentage reached at this point was above the indicative trajectory (see section 3.2.4) for the EU as a whole. As presented in the Progress report 2015, at least 25 Member States were expected to meet their 2013/2014 targets. A decrease in the overall energy consumption in recent years had contributed to this progress.

The Commission noted that the steady progress so far was fairly expected, since the indicative trajectory targets were set less ambitious in the first couple of years after adoption of the RE Directive, as is evident from part B of Annex I to the directive. The indicative trajectory however becomes steeper for the later years towards 2020, and it was concluded that a number of Member States may need to increase their actions and measures in order to keep on track. The slow progress in some Member States was explained by barriers in administrative and permit procedures, technical hurdles and regulatory uncertainty, for example, from reforms of support schemes, that have had a negative impact on potential investments.

Research performed for the Commission, with analysis of the status of policies and measures, demonstrated that a number of Member States had made changes in their support schemes in the period up to their second progress reports. These reports were to be handed in to the Commission by 31 December 2013. There were two main reasons given for the corrections made: the support schemes were adjusted because of reductions of costs regarding certain renewable energy technologies that had come at a rate faster than expected, and the financial crisis had put pressure on the Member States’ budgets, which had affected both the

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384 Progress report 2015 (n 381) 3.
385 ibid 4.
386 ibid.
387 RE Directive, art 3(2).
388 Progress report 2015 (n 381) 4-5.
389 Renewable energy progress and biofuel sustainability (ECOFYS and others 2014).
390 ibid 2.
political acceptability to let consumers bear the costs of support for energy from renewable sources, and their actual ability to handle it.  

The research further showed that, regarding the progress of the Member States in actually adopting policies and measures they have committed to in their national renewable energy action plans (see section 3.2.6), seven of them had failed to fulfil their earlier policy commitments in the renewable energy electricity sector. Concerning the adequacy of support levels for each renewable energy technology, comparing the economic incentives paid with the cost of renewable electricity production, also seven Member States showed poor adequacy in their support schemes. Furthermore, almost half of the Member States showed poor progress towards the achievement of long-term security of support.

4.6.1.2 Progress made as presented in Progress report 2017
With a projected share of energy from renewable sources of 16.4% in 2015 in the gross final energy consumption, the Commission could again note that the percentage reached at this point was still above the indicative trajectory (see section 3.2.4) for the EU as a whole. As presented in the Progress report 2017, at least 25 Member States were expected to meet their 2015/2016 targets. The Commission reiterated the fact that the indicative trajectory becomes steeper for the later years up to 2020, and that efforts will need to be intensified in order to keep on track.

4.6.2 Progress towards the 10% renewable energy target in transport

4.6.2.1 Progress made as presented in the Progress report 2015
Compared to the progress towards the overall 20% target by 2020, the use of energy from renewable sources in the transport sector, with most focus on the use of biofuels, had been behind schedule up until 2013 in 23 Member States, according to the Progress report 2015. Only one Member State already reached the 10% target in transport in 2013. The general

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392 Renewable energy progress and biofuel sustainability (ECOFYS and others 2014) 2.
393 ibid 86-87.
394 Progress report 2017 (n 383) 4.
395 ibid 9.
396 ibid 4.
397 Progress report 2015 (n 381) 5.
398 Sweden, with a 16.7% share. Progress report 2015 (n 381) 8.
progress had been slow in the past five years assessed by the Commission, with a projected share of energy from renewable sources in the consumption in this sector of 5.7% in 2014.\textsuperscript{399}

The slow progress in this area was explained by the Commission as being owing to problems with certain biofuel production causing an increase in GHG emissions because of emissions from indirect land-use change, and political uncertainty caused by a delay in adoption of policy addressing this problem, and further, lack of commercial availability of alternative more advanced biofuel, and thereby insufficient progress in its deployment.\textsuperscript{400}

Research performed for the Commission demonstrated that, concerning the progress of the Member States in actually adopting policies and measures they have committed to in their national renewable energy action plans (see section 3.2.6), all of them had fulfilled their earlier policy commitments in the renewable energy transport sector, although some only partially. Regarding the adequacy of support levels, only two Member States showed poor adequacy in their support schemes. Furthermore, concerning the provision of long-term security of support, four of the Member States showed poor progress in this area.\textsuperscript{401}

4.6.2.2 Progress made as presented in Progress report 2017

The Commission confirmed that the use of energy from renewable sources in the transport sector was still behind schedule in 2015.\textsuperscript{402} Only two Member States, Finland and Sweden, had already reached the 10% target.\textsuperscript{403} As presented in the Progress report 2017, the slow general progress had been because of different difficulties, such as, regulatory uncertainty and high GHG mitigation costs. The projected share of energy from renewable sources in the consumption in this sector in 2015 was only 6%.\textsuperscript{404}

4.6.3 Regulatory fitness of the RE Directive

4.6.3.1 Regulatory fitness as presented in the Progress report 2015

An evaluation of the regulatory fitness and performance of the RE Directive was carried out for the Commission in 2014.\textsuperscript{405} As presented in the Progress report 2015, it was concluded that the directive is fit for purpose. The results indicated that the RE Directive and all its

\textsuperscript{399} Progress report 2015 (n 381) 14.
\textsuperscript{400} ibid 3 and 14.
\textsuperscript{401} Renewable energy progress and biofuel sustainability (ECOFYS and others 2014) 86-87.
\textsuperscript{402} Progress report 2017 (n 383) 8.
\textsuperscript{403} ibid 10.
\textsuperscript{404} ibid 8.
articles have contributed and been successful in meeting the directive’s objective (sustainably increasing the share of energy from renewable sources in the final energy consumption in the EU and the Member States). In particular, the mandatory national targets, the national renewable energy action plans and the required reporting by the Member States every two years, have been effective legal provisions of the RE Directive.\textsuperscript{406}

These important parts of the RE Directive have contributed to transparency for investors and quality of information on policies and renewable energy markets in the Member States. They have shown their relevance for the overall achievement of the EU’s energy policy goals (see subsection 2.1.2.3) and climate change policy goals (see subsection 2.1.3.3). The implementation of the provisions has led to a reduction in the demand of fossil fuels, a reduction of GHG emissions and an increased security of energy supply in the EU.\textsuperscript{407}

It was pointed out that the Member States have had discretion concerning the design and implementation of support schemes. In the evaluation of the level of effectiveness and efficiency of the wide-ranging of measures, the results indicated that the level varied. This was due to different implementation of measures in the Member States, and depending on the clarity of what was expected of them. It was also dependent on the uncertainty regarding costs, benefits or legal obstacles. Finally, lack of incentives was mentioned as another reason for varied levels of effectiveness and efficiency of the measures laid down by the RE Directive.\textsuperscript{408}

\textit{4.6.3.2 Regulatory fitness as presented in the Progress report 2017}

There was no specific evaluation of the regulatory fitness and performance of the RE Directive included in the Progress report 2017. However, a Staff working document from the Commission in 2016 addressed the issue,\textsuperscript{409} and was referred to in the Progress report 2017, but more concerning administrative barriers.\textsuperscript{410} As presented in the Staff working document, the Commission found that many Member States had employed support schemes which were not connected to market signals. This had resulted in distortions of the electricity market. In some Member States this had led to high costs for the support. The Commission also pointed out that some Member States had done adjustments of the support schemes too quickly or

\begin{footnotes}
\footnotetext[406]{Progress report 2015 (n 381) 12.}
\footnotetext[407]{ibid.}
\footnotetext[408]{ibid 13.}
\footnotetext[410]{Progress report 2017 (n 383) 11.}
\end{footnotes}
retroactively. This had led to more market uncertainty and consequently less investor confidence.411

4.6.4 Projected deployment of energy from renewable sources by 2020

4.6.4.1 Projected deployment as presented in the Progress report 2015

In an assessment based on the current and planned national policy measures, the current implementation rates and considering different obstacles to development of energy from renewable sources, a progressive and positive trend could be seen in the Progress report 2015. The assessment also made it apparent that improvements were needed concerning individual energy sectors and renewable energy technologies.412 A majority (19) of the Member States were expected to meet or exceed their renewable energy targets by 2020.413

Five Member States, France, Luxembourg, Malta, the Netherlands and the United Kingdom needed to make an own assessment of their respective national policies and measures, such as support schemes, and evaluate if they were sufficient and effective enough. Two Member States, Belgium and Spain were in the same situation, but to a lesser extent. Concerning the last two Member States, Hungary and Poland, the reach of their renewable energy targets by 2020 was considered essentially depending on optimistic assumptions related to the development of a lower energy demand and to financing risks in those States being removed.414

The Progress report 2015 gave a detailed comparison of the projected and planned deployment levels of renewable energy technologies at EU level. The statistics data demonstrated a maximum projected deployment of 221,5 Mtoe of energy from renewable sources in total in 2020, compared to the 2020 renewable energy target of 241,1 Mtoe. Consequently, this projected scenario still indicated a final deviation of -8.5%,415 under the conditions set for the assessment regarding consideration of current and planned policies, implementation rates and different obstacles to development of energy from renewable sources.416

412 ibid 9.
413 ibid 5.
414 ibid.
415 ibid 10.
416 ibid 9.
Nevertheless, the Commission concluded that, for the EU as a whole, the achievement of the 20% by 2020 renewable energy target remained fully possible. The Commission acknowledged that, for some Member States the national targets would be difficult to reach. Especially as the indicative trajectory becomes steeper over the later years, and because of lasting market obstacles. The Commission considered it necessary that measures of cooperation were being used.417 These cooperation mechanisms referred to functions between Member States, and also with third countries, in accordance with Articles 5-11 of the RE Directive.418

Regarding the 10% by 2020 renewable energy target in the transport sector, the Commission concluded that the achievement was challenging, but was still feasible if progress continued. It identified some key developments within transport needed to succeed, such as, a change in the use of advanced biofuels with higher GHG saving potential, and a comprehensive approach towards decarbonisation of this sector. Concerning the latter key development, firm efforts to increase the share of electricity from renewable sources was especially mentioned.419

4.6.4.2 Projected deployment as presented in the Progress report 2017
It was concluded by the Commission that the EU as a whole would reach its 20% renewable energy target by 2020, based on the projections made in the Progress report 2017.420 The projections were made under the assumption that the EU and a majority of the Member States would make sufficient efforts in the years up to 2020 in order to reach their targets.421 An overview showed that a projected deployment of energy from renewable sources as summarised at Member States level would be 21% in 2020, and thereby exceeding the overall renewable energy target with 1%.422

However, for some Member States, such as, Ireland, Luxembourg, the Netherlands and the United Kingdom (with only a 0,2% gap), which were projected not to meet their mandatory national renewable energy targets by 2020, the Commission concluded a possible need to make more use of the cooperation mechanisms available through the RE Directive (see section 3.2.5).423

417 ibid 16.
418 RE Directive, art 3(3)(b).
419 Progress report 2015 (n 381) 16.
420 Progress report 2017 (n 383) 17.
421 ibid 9.
422 ibid 10.
423 ibid 9 and 17.
There was no specific deployment projection made in the Progress report 2017 regarding energy from renewable sources in transport, and no explicit conclusion whether the 10% target by 2020 would be reached. The Commission only summarised that the progress has been slow in this sector with an average 0.5% increase per year up to 2014, but with only a 0.1% increase between 2014-2015, with the projected share reaching 6%. The slow progress was shortly explained by regulatory uncertainty and a delay in the use of more advanced biofuels.

4.6.5 Concluding remarks

Even if the general progress by the Member States towards the overall 20% renewable energy target was fine in the Progress report 2015, some Member States had problems with barriers in administrative and permit procedures, technical hurdles and regulatory uncertainty due to reforms of support schemes. The progress towards the 10% renewable energy target in transport had been slow because of the problem with certain biofuel production causing an increase in GHG emissions and political uncertainty concerning this matter, and also because of the lack of commercial availability of more advanced biofuels.

The regulatory fitness evaluation of the RE Directive in the Progress report 2015 showed that the directive is fit for purpose. The results indicated that the RE Directive and all its articles have contributed and been successful in meeting the directive’s objective. Furthermore, the evaluation showed the level of effectiveness and efficiency of the Member States’ support schemes varied due to different implementation and depending on the clarity of what was expected of the Member States, uncertainty regarding costs, benefits or legal barriers and lack of incentives.

The later regulatory fitness evaluation performed showed that many Member States had employed support schemes which were not connected to market signals which had resulted in market distortions. Some Member States had done adjustments of the support schemes too quickly or retroactively which had led to more market uncertainty.

It was concluded by the Commission in the Progress report 2017 that the EU as a whole would reach its 20% renewable energy target by 2020. The projected deployment of energy from renewable sources as summarised at Member States level would be 21% in 2020. However, four Member States were projected not to meet their mandatory renewable energy targets by 2020.

424 ibid.
425 ibid 18.
There was no specific deployment projection made regarding energy from renewable sources in transport, and no explicit conclusion whether the 10% target by 2020 would be reached. With a projected share of 6% in 2015, and with an average 0.5% increase per year up to 2014, but with only a 0.1% increase between 2014-2015, the implicit conclusion made seem to be that the target in transport will not be met.
5. Conclusions

The overarching research question of this thesis is: How have the national support schemes, with application provided for by the RE Directive, been implemented, functioned and succeeded in promoting the use of energy from renewable sources within the EU? This broad question has been broken down into four more narrow research questions. Sections 5.1-5.4 contain discussions in relation to these four research questions respectively, and section 5.5 some final conclusions.

5.1 Strengths and weaknesses

What strengths and weaknesses can be found within the different support schemes employed?

The reasons given for the use of incentives in the form of support schemes, as provided for by the RE Directive, is in line with how the need for and function of incentives are presented in ELM. All the different economic incentive methods analysed use mainly an economic carrot approach, with an economic stick approach only being used for fulfilment of an obligation in connection to the support schemes. The strengths and weaknesses of the different support schemes employed by the Member States (see sections 4.1-4.3) can be viewed from a number of perspectives: that of an investor, that of implementation, a technology mix perspective and that of a market perspective.

From the viewpoint of an investor, the factors that matter are risk and security in relation to potential revenues. A quota obligation scheme with green certificates have an advantage with their bankability (tradable, assignable and can be used for a mortgage or warranty). On the other hand, the penalty fee sets a ceiling price on the certificate which means less revenue certainty. Both feed-in tariffs and premiums are guaranteed for long periods which give investor confidence. On the negative side is the difficulty to bank them, and the regulatory risk that comes with adjustments of support levels.

The factors that matter, viewed from an implementation perspective, are easiness in management and understanding. Feed-in tariffs are easy to administrate, operate and understand, and has been the most commonly used support scheme, and feed-in premiums have the same characteristics in this respect. One problem from this perspective might be that a support scheme is chosen mostly out of simplicity to implement, without due concern for weaknesses. With influence from the Support scheme guidelines (see section 4.3) there will probably be a gradual change towards more use of feed-in premiums instead.
In regard to the technology mix perspective, the most important factor is the ability to be flexible enough to be technology specific. It seems as if all different support schemes have the flexibility to facilitate technology specific support, which gives a possibility to promote innovative and new technologies that need more initial support, and by this way contribute to a diversification of renewable energy technologies.

The factors that matter, seen from a market perspective, are cost-efficiency and avoidance of market distortions. Investment-based schemes have an advantage in that production-based costs are not affected, and it does not intervene in the market operation. The Commission consider that well-designed auction systems, if used together with feed-in premiums, should provide the most cost-efficient conditions for promotion of energy from renewable sources. Even so, there is still need to set the conditions right for the process, and for exemptions concerning small-scale producers as well as certain technologies with difficulties in the markets.

5.2 Compatibility with the internal market

Under which circumstances are the support schemes considered compatible with EU’s primary legislation on the internal market?

The support schemes compatibility with internal market rules were analysed with a focus on free movement of goods and State aid (see sections 4.4-4-5). A Member State’s measure constituting a barrier to trade on the internal market has been capable of being justified by the objective to promote the use of energy from renewable sources. The grounds of justification referred to in case law are mandatory requirements concerning environmental protection, public interest concerning the protection of health and life of humans, animals and plants in accordance with Article 36 TFEU, and that the objective pursued is in line with Treaty-based policy objectives.

Once this is settled, a lot of focus lands on the proportionality principle and whether the Member State’s measure with a support scheme can pass the test this principle entails. It is concluded by the Court of Justice that support schemes have not been harmonised, the nature of electricity makes it difficult to determine its origin and source at a later stage, and that the Member States need to have control of the effects and costs of support schemes. Furthermore, that a territorial restriction may be necessary to attain the legitimate objective pursued.

Even so, the assessment of the proportionality concerning a support scheme will always come down to the specific characteristics in the individual case. The Court of Justice found no
reason to doubt the choice, ability or effect of the support schemes involved, but concerning
the use of green certificates, the schemes were deemed proportionate provided that there was
a genuine market for certificates and that no excessive penalty fees were imposed on suppliers
for not fulfilling the quota obligations. This means that different support scheme details or
national circumstances can lead to different outcomes.

Concerning Article 107 TFEU, the case law presented provided a distinction between
when aid fall within the scope of the concept of State aid granted by a Member State or
through State resources and when it does not. A support scheme with an offset mechanism
where an entrusted public body managed the resources constituted State aid, since the
resources were considered as being under the Member State’s control. Even if aid is classified
as State aid in this manner, it still needs to fulfil the other three conditions set in Article
107(1) TFEU to be incompatible with the internal market. Moreover, there is the possibility
for the aid to comply with the provision in Article 107(3)(c) and the State aid guidelines (see
section 4.4), and be exempted and authorised by the Commission. The change in approach in
the State aid guidelines with effect from 2016 and 2017, with a demand on the use of
competitive allocation processes opens up the possibility of new disputes that may help settle
the law in this area.

5.3 Implementation deficits
What deficits can be found in the implementation of the RE Directive and the support
schemes?

In line with ELM terminology, the renewable energy targets are actor-related goals. They
are directed towards the Member States to have as a minimum a certain degree of energy from
renewable sources in their energy consumption. If the targets are not reached, then there is an
implementation deficit. First, there is a need to assess whether the substantive law, the RE
Directive, is sufficient based on whether overall full compliance would result in the renewable
energy targets being reached. If the RE Directive is deemed insufficient, then there is an
environmental legal deficit. In the Progress report 2015 (see section 4.6), it was concluded
that the RE Directive is fit for its purpose, and all its articles have contributed and been
successful in meeting the directive’s objective. Since the national overall targets are consistent
with the 20% target for EU’s energy consumption in 2020, and the 10% target in transport is
set the same for all, full compliance by the Member States should result in the targets being
reached.
Second, there is a need to assess whether there is full compliance with the RE Directive, or if there is a compliance deficit. Unfortunately, compliance deficit is an unavoidable factor, but it does need to be minimised. In the Progress report 2017, it was presented that the percentage reached was above the indicative trajectory for the EU as a whole, but three Member States were not expected to meet their 2015/2016 targets. Regarding the transport sector, 23 Member States had been behind schedule in 2013, and this sector was still behind schedule in 2015. Consequently, there is a compliance deficit in the progress by some Member States towards the 20% target, and towards the 10% target in transport, even a considerable such deficit.

The implementation deficit could be assumed as the result of the legal deficit plus the compliance deficit, but there are always other factors not addressed by the substantive law that affect the actual result. Even if the Member States introduce support schemes in order to reach the targets, financial crises or a decrease in overall energy consumption can affect the situation. Reasons offered for the compliance deficits include administrative barriers, technical hurdles and regulatory uncertainty due to reforms of support schemes, as outlined in the Progress report 2015. Concerning the transport sector, specific reasons mentioned were certain type of biofuel production causing an increase in GHG emissions, political uncertainty concerning this matter and lack of commercial availability of more advanced biofuels.

5.4 Renewable energy targets and ecological sustainability

Do the support schemes fulfil their aim in relation to the renewable energy targets set, and is ecological sustainability achieved?

With a projected deployment of 21%, it was concluded in the Progress report 2017 (see section 4.6) that the EU as a whole would reach its 20% renewable energy target by 2020, provided that sufficient efforts are continued as planned. In this regard seen overall, the support schemes have fulfilled their aim in relation to the target set. However, Ireland, Luxembourg, the Netherlands and the United Kingdom were projected not to meet their national renewable energy targets by 2020, and consequently seen individually, the support schemes employed in these Member States have not fulfilled their aim in relation to the targets set. With a very short projected gap for the United Kingdom, the exit from the EU will not make any significant change in the overall projected deployment.

With a projected share of 6% in 2015, and with an average 0,5% increase per year up to 2014, but with only a 0,1% increase between 2014-2015, the implicit conclusion made in the
Progress report 2017 seems to be that the 10% target in transport will not be met by 2020. Thus, it can be concluded that the support schemes employed by almost all of the Member States specifically for this sector have not fulfilled their aim in relation to the target set.

The promotion of the use of energy from renewable sources through the RE Directive contribute to the protection of the environment by reducing GHG emissions and thereby combating climate change. With this complex global issue put in relation to ecological sustainability defined in ELM as the situations and conditions in the biosphere that are sufficient for sustaining mankind for innumerable generations to come with reliable and safe resilience, including full biodiversity, it is already concluded by the EU that further efforts are needed in the years to come to combat climate change, and new targets are set for both 2030 (in line with the intended contribution under the Paris Agreement) and 2050 concerning reductions in GHG emissions (see subsection 2.1.3.4).

Seen from this perspective, the projected reach of the 20% target for the EU as a whole by 2020 does not mean that ecological sustainability is achieved, but it is a step in the right direction. At least, with the progress made in this area, the RE Directive has not counteracted ecological sustainability.

5.5 Final conclusions

The Member States have implemented a wide range of support schemes in order to reach the renewable energy targets. There have been reforms during the years of employment, and there are more reforms on the way sought by the EU to move towards more market-based mechanisms and cost-efficiency. Even if the ambition with the RE Directive is well-founded in EU’s environmental, energy and climate change policies, there have been implementation deficits with the employment of support schemes, as evidenced by the fact that some Member States will not meet their national renewable energy targets, and that the 10% target in transport will not be met. Different reasons are given for the implementation deficits, but the Member State’s freedom of employment of support schemes is also constrained by internal market rules.

To find a solution from an ELM point of view would entail making the most of internal market considerations within an ecological framework. The emphasis should be put on the most effective support schemes in relation to reaching the targets set in the RE Directive as part of EU’s environmental and climate change policies, and then design those as much as possible to favour a well-functioning internal market. This would instead maximise economic
sustainability within an absolutely fundamental ecological framework. However, from an environmental protection perspective, the legal framework for the EU is first and foremost the legal framework of an economic union, and environmental considerations are therefore to be integrated into this Union.
De lege ferenda

Proposal for a new RE Directive

After beginning preparations for this thesis, a proposal for new legislation concerning energy from renewable sources has emerged for the period 2021 to 2030.\textsuperscript{426} The main features of the proposal are presented here below.

Reasons for and objectives of the proposal

Based on proposals of the Commission (see subsections 2.1.2.4 and 2.1.3.4),\textsuperscript{427} the European Council agreed in October 2014 on the 2030 framework for climate and energy. The framework sets out the EU target of 27% for the share of renewable energy consumed in the EU in 2030. This target is binding at EU-level and will be fulfilled through individual Member States’ contributions. New and changed policies are considered needed to deliver collectively for the EU on the commitments made in the Paris Agreement adopted in 2015.\textsuperscript{428}

Delivery under the 2020 framework relies much on the mandatory national overall targets, and allow the Member States discretion regarding the choice of national measures, such as, support schemes. The 2030 framework is based on a holistic approach with this single overarching EU-level binding renewable energy target, which is not in turn divided into mandatory national overall targets for the Member States, and without a specific target set for the transport sector. Given this difference between the frameworks, EU-level effort is considered in the proposal as an appropriate instrument.\textsuperscript{429}

Furthermore, it is considered that the 27% target can in favour be achieved through cooperation between Member States combining their efforts. There will be possibilities to promote electricity from renewable sources by implementing cost-effective national support schemes. These will be subject to State aid rules and the framework conditions set at EU-level, including rules for cross-border participation.\textsuperscript{430}

\textsuperscript{427} COM(2014) 15, A Policy Framework for Climate and Energy in the period from 2020 to 2030.
\textsuperscript{428} Proposal (n 426) 2.
\textsuperscript{429} ibid 3 and 23.
\textsuperscript{430} ibid.
Legal basis of and legal approach in the proposal

Since the TFEU now contains a specific legal basis for energy policy, it is considered in the proposal as appropriate to use it. Consequently, the proposal is based on Article 194(2) TFEU (see subsection 2.1.2.3). The specific legislative approach chosen in the proposal is a recasting of the RE Directive, since with this approach some provisions remain unchanged, while new substantive changes are introduced in the former directive. An adoption of the proposal will lead to the repeal of the existing RE Directive as of 1 January 2021.

Specific provisions of the proposal

Some of the main provisions of the RE Directive are either substantially changed or new parts are added by the proposal. The target with a 27% share of renewable energy consumed in the EU by 2030 is set out in Article 3 of the proposal. The provision establishes a baseline consisting of the national targets for 2020, meaning that the Member States must progress from those targets from 2021 onwards. In the same provision, there is also a reference to a mechanism for planning, reporting, monitoring and enforcement measures as set out in another proposal, a proposal for a Regulation on the Governance of the Energy Union.

Article 4 of the proposal contains general principles for the design of support schemes. The Member States shall make these schemes cost-effective to provide for a market-based and Europeanised approach. As mentioned above under reasons and objectives, the support schemes will continue to be subject to State aid rules. Article 5 of the proposal introduces a gradual and partial opening of support schemes to cross-border participation. This is to be established only in the electricity sector. Article 6 of the proposal has as a function to ensure that the levels of support, or conditions set in a support scheme, are not changed in a manner that negatively affects renewable energy projects concerned.

Furthermore, administrative barriers are addressed in the proposal. By way of example, Article 16 of the proposal lays down rules on a one-stop-shop permit granting process for

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431 ibid 6.
432 ibid 23.
433 ibid 21.
434 ibid 3 and 21.
436 Proposal (n 426) 21.
437 ibid.
438 ibid.
renewable energy projects, with a single designated authority in charge. In the same provision of the proposal, there is also a maximum time limit for the process established.\textsuperscript{439}

On a final note, the Commission considers that the proposal contains “measures across the three sectors of renewable energies, strengthening the visibility for investments in renewable energy, enhancing the general regulatory framework and exploiting the potential of all sectors in contributing to reach the 2030 target”.\textsuperscript{440}

\textsuperscript{439} ibid.

\textsuperscript{440} ibid 23.
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