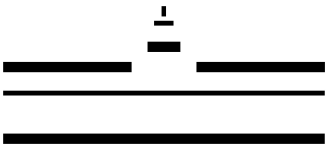

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Bachelor Thesis

The failure of harmonisation of support schemes for energy from renewable sources in the EU Directive 2009/28/EC

A liberal intergovernmentalist perspective

Submitted to obtain the academic degrees
Bachelor (BA): Public Administration (Special Emphasis European Studies)
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"Der allgemeine Lebenskampf der Lebewesen ist daher […] ein Kampf um die Entropie, welche durch den Übergang der Energie von der heißen Sonne zur kalten Erde disponibel wird."

Ludwig Boltzmann, 1884

0. Introduction

The primary energy consumption in the world has steadily been rising and has more than tripled in the past 50 years (British Petroleum, 2013). As the trend leads towards a growing world population of over nine billion people in 2050 (United Nations, 2013), the demand for energy will continue to increase. Especially since the major share of the growth is expected to take place in developing regions, where the gap between energy need and energy provision is the highest, the need to find a sustainable solution for the energy problem is one of the biggest challenges for the future. As the demand for energy rises, distributional conflicts about the finite fossil resources will surface and prices are estimated to increase further, creating challenges for the policy makers of tomorrow (International Energy Agency, 2012, pp. 49-73). Additionally, climate change has become an important issue, which needs to be addressed in modern-day energy policy. It is with high confidence caused by human activity in the last 150 years following the period of industrialisation, where development was mainly facilitated through increased use of fossil fuels (Intergovernmental Panel on Climate Change, 2007). However, in the aftermath of the Oil Crisis in 1973/4, a scientific idea and production process has started to (re)emerge, which could both reduce climate emissions and increase the amount of available energy at the same time – the research and production of power from renewable sources on a large scale. (Sørensen, 1991).

Those lines of development started to be seen as interdependent and thus climate change, increasing need, decreasing fossil fuel resources and renewable power creation grew together as one connected issue-solution complex. In the last decades a growing number of policy makers have adopted measures to support and develop energy produced from renewable energy sources (RES-E). As finite resources and climate change are global problems, international solutions became the main mean of addressing those issues.

The EU is one of most reliant regions on energy imports (Pollak, Schubert, & Slominski, 2010, pp. 44-59). Thus it has put the promotion of RES-E as a clean (reducing greenhouse gas emissions) and sustainable (guaranteeing security of supply) power source as a top priority in energy policy since 1996 (Pollak et al., 2010, p. 85). Following this decision the Commission ventured into the field of promotion mechanism and tried to increase the amount of

integration. However, the most recent proposal to create a harmonised support framework for RES-E in 2008/2009 has failed. This divergence between the mutually agreed aim of increasing security of supply and reducing climate impact through the promotion of RES-E and the actual political outcome in the EU raise questions about the process of integration.

This thesis analyses the case of failure of harmonisation in the process of Directive 2009/28/EC by adopting a European integration theory approach, namely liberal intergovernmentalism. This theory focuses on ways of increasing European integration based on the central paradigms of methodological individualism and state rationality. Firstly the theory will be reviewed for key factors leading to cooperation and harmonisation and afterwards the influence of each factor on this case will be examined.

This approach will lead to answer for the following descriptive question: "*What were the deciding factors leading towards the failure of RES-E harmonisation in the EU in Directive 2009/28/EC?"* Furthermore, applying a theory testing approach will make it possible to judge the accurateness of liberal intergovernmentalism theory in describing real world energy policy in the EU.

1. Concepts and theoretical framework

The framework applied to this research will be based on a two level approach. Firstly a definition and conceptualisation of policy instruments will produce a basic understanding of the research's content. The following typology of RES-E support instruments will structure the different instruments available to actors. Further, harmonisation will be defined according to a conceptualisation related to the field of the research. Secondly, the theoretical approach of liberal intergovernmentalism will supply a structured framework of possible reasons and influencing factors on policy cooperation in the EU.

This framework will provide the basis to understand and apply the concepts during the analysis and work towards an understanding of causal relations in the field of RES-E harmonisation policy in the EU.

1.1. Concepts

1.1.1. Policy instruments

Political actors have a vast number of options for reaching a certain policy objective (Howlett, Ramesh, & Perl, 2009, p. 114). Those tools are often referred to as *policy instruments*. According to Howlett et al. (2009) policy instruments are "the actual means or devices which governments have at their disposal for implementing policies" (ibid.).

In a second step, Howlett differentiates between "substantive" instruments and "procedural" instruments. Substantive instruments are defined as "those instruments intended to directly affect the nature, types, quantities and distribution of the goods and services provided in society" (Howlett, 2000, p. 415) while procedural instruments are their counterpart, mainly designed "to affect or alter aspects of policy processes rather than social or economy behaviour per se" (Howlett et al., 2009, p. 116). In this work the scope of policy instruments will be limited to substantive policy instruments due to the research's focus. Those policy instruments are largely substitutable, as actors have a pool of design options to choose from and different actors use a variety of instruments to achieve the same goals. This will be shown in the conceptualisation of RES-E promotion instruments (1.1.3.).

1.1.2. Harmonisation

Following the creation of the single European market, the need to unify certain aspects of legislation emerged pursuing the aim of competitive and mutually binding standards in different sectors and ensuring the quality of products and the safety of the consumer. Starting

with leading cases like Cassis de Dijon, harmonisation has become a key element on the EU's agenda (cf. Alter & Meunier-Aitsahalia, 1994).

Especially in the areas of product and social standards, labour law and consumer protection, multiple guidelines and directives have established EU-wide harmonisation.

In the area of RES-E we understand harmonisation as "top-down implementation of standardised, binding provisions concerning the support instruments of RES-E throughout the EU*"* (Ragwitz & Held, 2008, slide 5). Thus harmonisation is a *policy instrument* with the goal of reaching competitive and distortion-free trade in the EU and increasing the efficiency of the support (Ragwitz & Held, 2008). As mentioned above many different policy instruments can be used for the same purpose and thus harmonisation needs to be understood as one of many solutions to reach those policy objectives (Jacobs, 2012, p. 5).

The degree to which harmonisation is implemented can vary, depending on the level of steering control given to the supranational actor. Ragwitz and Held (2008) identify three different degrees of harmonisation: full harmonisation, central coordination and policy convergence. Full harmonisation is defined as the existence of one binding support system for all member states although technology specific promotion strategies can exist. Central coordination on the other hand is defined as a binding framework for support mechanisms with mutual minimum design criteria, where the member states keep the legislative power over the concrete design of the instrument.

Additionally a harmonised state can be achieved in a bottom-up process through policy convergence (cf. Jacobs, 2012; Kitzing, Mitchell, & Morthorst, 2012; Liefferink & Jordan, 2005), again emphasising the need to understand top-down harmonisation through legislation as one possible policy instrument. Knill (2005, p. 5) defines policy convergences as "any increase in the similarity between one or more characteristics of a certain policy (e.g. policy objectives, policy instruments, policy settings) across a given set of political jurisdictions (supranational institutions, states, regions, local authorities) over a given period of time." Hence this process is not necessarily initiated or steered by the supranational power but rather by individual member states. While the debate about the existence of policy convergence in the field of RES-E will be excluded from this work, the concept will be used to identify existing trends towards certain policy designs.[1]

[1] For more detailed discussions on policy convergence in the field of RES-E see: Haase (2008); Jacobs (2012); Jordan (2005); Kitzing et al. (2012); Liefferink and Jordan (2005); Reiche and Bechberger (2004)

[2] While the EC often uses "capacity-driven", most of the scientific literature uses "quantity-driven", thus quantity-driven will be used in this work.

[3] It needs to be noted nevertheless, that Moravcsik only adds this approach to show its shortcomings and

1.1.3. Types of RES-E promotion schemes

Different types of support mechanisms with the aim of increasing the market penetration of RES-E have been implemented, adopted and abandoned in the member states. The main rational behind such schemes is to supplement the use of fossil fuels in energy production with the use of renewables, hence the "focus must [...] be to trigger investment in new [RES-E] capacity" (Haas et al., 2004, p. 834). Two main economic ways of pursuing this goal have emerged, one is price-based, the other capacity- or quantity-based[2] (European Commission, 2008c, p. 4; Haas et al., 2004, p. 834; Jacobs, 2012, p. 25). A more detailed typology also differentiates between investment focused and generation based strategies, voluntary and regulatory approaches and direct and indirect instruments (Haas et al., 2004; Haas, Panzer, et al., 2011; Haas, Resch, et al., 2011; Held, Ragwitz, & Haas, 2006).

Fundamental types of promotion strategies.

		Direct		Indirect
		Price-driven	Quantity-driven	
Regulatory	Investment focused	Investment incentives Tax credits Low interest/soft loans	Tendering system for investment grant	Environmental taxes Simplification of authorisation procedures Connexion charges, balancing costs
	Generation based	(Fixed) Feed-in tariffs Fixed premium system	Tendering system for long term contracts Tradable green certificate system	
Voluntary	Investment focused	Shareholder programs Contribution programs		Voluntary agreements
	Generation based	Green tariffs		

Source: Haas, Panzer, et al. (2011, p. 1012)

The first clear distinction exists between the indirect and direct types of promotions strategies. Indirect incentives aim at long-term goals and are often used as supplementary measures to other strategies. Examples include the exemption from taxes (e.g. energy tax for fossil fuels only) or the removal of subsidies for other forms of energy, making them comparatively more expensive.

Voluntary strategies are based on the “willingness to pay” by the customer and thus political actors can wield little influence. Such measures are mostly initialised by market forces outside the political sphere and connect the two market participants (customer and supplier) directly with each other on the basis of a mutually accepted higher price for “green” energy than for energy from fossil sources. Such voluntary promotion instruments exist in almost every member state and have led to small increases in RES-E capacity (Faber et al., 2001, pp. 15, 23).

However, both voluntary and indirect incentives are problematic, as they either have little room for political intervention or possibly undesired side effects on other areas. Hence it can be observed that most of the implemented policies are allocated in the array of direct and

[2] While the EC often uses “capacity-driven”, most of the scientific literature uses “quantity-driven”, thus quantity-driven will be used in this work.

regulatory measures (cf. Faber et al., 2001; Fischer, 2011; Fouquet & Johansson, 2008; Haas et al., 2004; Haas, Resch, et al., 2011; Held et al., 2006; Ringel, 2006).

The regulatory strategies are divided into price- and quantity-driven approaches. Price-driven ones are based on financial incentives provided by the government to the producer of RES-E, either per unit produced or capacity installed. Quantity-driven strategies on the other hand are based on a desired amount of RES-E by the regulatory body. This amount is fixed in a quota for either market penetration or generation, mostly with a target date. The price is then set trough competition between producers (Haas, Panzer, et al., 2011, p. 2187).

Investment focussed and price-driven strategies include tax incentives or rebates. Such systems use the existing infrastructure to provide certain financial reimbursement for investments in RES-E. The German "1000 roofs" program is a prime example for rebates, where up to 70% of the investment costs in PV capacity were reimbursed by the government (Hoffmann, 1996). Tax incentives on the other hand can be designed either to lower the taxes during creation of new capacity or to lower the income taxes for the earnings from RES-E (Faber et al., 2001).

Investment focussed and quantity-driven strategies are focussed on tendering and bidding systems for grants. In this promotion type competitors are called to tender proposals for a certain capacity in a certain technology (e.g. wind, PV, hydro). If they are considered viable and are on par or cheaper than other bids they are awarded a grant. This strategy nevertheless has proven to be inefficient, as often contracted projects are not implemented or implemented projects are having negative environmental impacts (Faber et al., 2001, p. 21).

Generation-based and price-driven strategies include feed-in tariffs (FiT) and fixed market premium models. The less common strategies are based on fixed market premiums, e.g. Germany's *Marktprämienmodell*. A fixed additional premium is added to the price the producer receives from selling his RES-E directly on the market. The revenue thus consists of the actual selling price and the premium, which (in Germany) is calculated according to the monthly average price on the EPEX-spotmarket (European Power Exchange) (Walter, Munz, & Halank, 2012). This model integrates the RES-E producer directly into the market and thus primes the full integration of RES-E in the equal energy market of the future. Nevertheless this strategy can be problematic when the revenue of the producers is minimized due to small or even negative energy prices (Haas, Resch, et al., 2011).

Feed-in tariffs can be understood as a fixed price per unit a RES-E producer is guaranteed when selling his energy. Such FiTs are implemented by the legislative power and are thus binding for energy producers, providers and consumers. They can be (and in fact often are)

designed in a technology-specific manner to guarantee greater support for less mature technologies. Jacobs (2012) points out two other key components to a feed-in tariff solution: *"a purchase obligation […] and a long duration of tariff payment"* (p. 27). The purchase obligation guarantees the producer a buyer regardless of actual need and the long duration allows for long-term planning and investment security.

Generation-based and quantity-driven strategies are focussed on guaranteeing a certain amount of generation, mostly fixed by quotas set by the legislator power. This quota is then to be fulfilled by a certain member of the energy supply-chain (either consumer, producer or supplier) (Fouquet & Johansson, 2008, p. 4080). The producer of RES-E receives a certain fixed amount of certificates for each unit of energy produced. Those certificates can then be sold to or within the group that needs to comply with the targets. This group will present the required amount of certificates to the authorities in charge. Thus the legislative body fixes the goal, while the market determines the price for the Tradable Green Certificates (TGC). This is the crucial part of such an instrument, as an overproduction of TGC will lead to "close to zero" prices. An undersupply on the other hand can lead to extremely high prices (Haas, Resch, et al., 2011, pp. 2186-2191).

TGC and FiT schemes will be the main instruments discussed in this work, as most of the currently existing promotion strategies in the member states are based on either of these approaches, while some of the above mentioned promotion strategies are employed additionally (Haas, Panzer, et al., 2011). Due to the dominance of FiT and TGC instruments the economic harmonisation debate revolves around these two types as well.

1.2. Theory

1.2.1. European Integration Theory

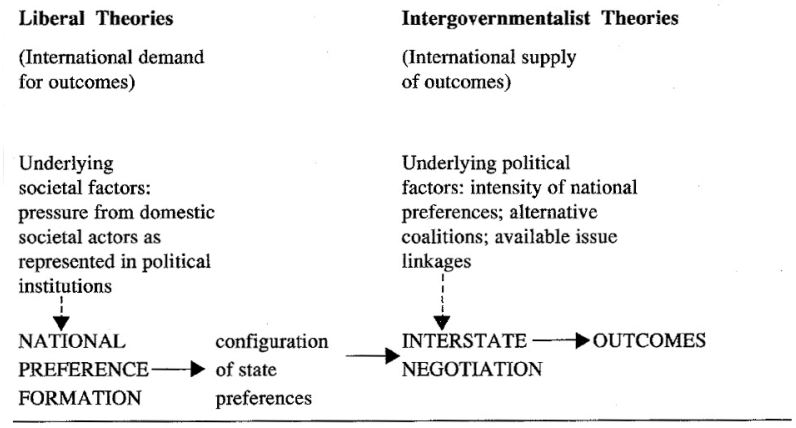
The scientific debate about the fuelling forces behind the growing integration in the EU as an organisation *sui generis* has resulted in a wide array of different theoretical approaches and theories. In his insightful article "Of Blind Men, Elephants, and International Integration" Puchala (1971) compares integration theorists to a group of blind men touching an elephant to get an idea of what the "beast" looks like. But since every man touches a different part, they have different ideas of its appearance and will have different descriptions and theories of the entire animal. This characterisation is still somewhat valid seen from the perspective that different scientific approaches towards explaining the European integration exist: some normative, some descriptive, some focussed on politics, some on polity, some others on

policy, some build on a historical approach and some are focussed on predicting future developments (Bieling & Lerch, 2013; Knill et al., 2005; Wiener & Diez, 2005).

The evolving of new theories, the reformulating of existing theories to adapt to the changing pattern of European integration, or even the dismissal of entire theoretical approaches are characteristic for the field. The approach used in this work – liberal intergovernmentalism – can hence only offer a certain point of view on the issue. It is chosen due to its currency, rather strict methodology, small focus, direct causal relations and the ability to test hypotheses empirically (Steinhilber, 2013, p. 145). In contrast to other large theories, e.g. the governance approach that tries to identify how Europe is governed, liberal intergovernmentalism tries to identify the *reasons* for growing integration. Thus for the research question this theoretical approach is well suited. Furthermore, applying Moravcsik's theory can give clues to one of the central conflicts in European integration theory: the struggle between supporters of intergovernmentalism and supranationalism.

1.2.2. Liberal intergovernmentalism

Andrew Moravcsik, who stands in the tradition of "liberal" approaches to integration research, mainly developed this theory. Liberal intergovernmentalism is designed as a two level framework based on two distinct concepts: The first theory of liberalism focuses on intra-societal preference building and articulation by different groups, which are then "aggregated by the governments" (Moravcsik, 1993, p. 483). The second and sequential theory of intergovernmentalism deals with "interstate strategic interaction" (Moravcsik, 1993, p. 482).



Source: Moravcsik (1993, p. 482), figure 1

Liberal theory of national preference formulation

The liberal and first key element of Moravscik's framework is defined by the paradigm of intra-societal preferences determining the political agenda for countries (Steinhilber, 2013, p. 142). The core of such a perception of civil society is the idea of methodological

individualism, which stipulates that "the fundamental actors in politics are members of domestic society, understood as individuals and privately-constituted groups seeking to promote their independent interest" (Moravcsik, 1992, p. 6). Under certain circumstances as Moravcsik further points out those individual preferences are accumulated and can "promote social order and the progressive improvement of individual welfare" (ibid). Individuals try to pursue their preferences in the intra-societal competition. In this process the political system, the size of the group and their commitment to their goal in relation to those of competing interests determine the winner of this process (and not the amount of net gain for society) (Moravcsik, 1993, p. 487).

Hence, international political action of a county is rooted and grounded in civil society, where boundaries and the context are defined (Moravcsik, 1993, p. 483; 1997, p. 518). This theoretical idea influences the definition of a state for Moravcsik strongly: "The state is not an actor but a representative institution constantly subject to capture and recapture, construction and reconstruction by coalitions of social actors" (Moravcsik, 1997, p. 518).

The second key element to Moravcsik's liberal intergovernmentalism is the concept of state rationality defined as the idea that any particular movement "is purposively directed toward the achievement of a set of consistently ordered goals or objectives" (Moravcsik, 1993, p. 481).

Policy co-operation based on national preferences

In a further step Moravcsik tries to identify the reasons leading to policy co-operation on the European level. The core of the argumentation revolves around the idea of externalities. Negative international externalities can occur, when costs for nationals of one country arise due to a certain policy from a foreign country. Such externalities create an incentive for national governments to cooperate, to "increase their control over domestic policy outcomes" (Moravcsik, 1993, p. 485) and thus reduce or remove the negative effects. An example of such externalities can be weak environmental standards, where costs can occur and "undermine […] the policy goals of foreign governments" (ibid.). Thus two major ways of co-operation exist: *the liberalisation of markets* and *policy harmonisation*. Both can remove negative externalities and hence lead to higher domestic control. "Where economic interdependence links jurisdictions, divergent national policies may undermine each other's effectiveness. Co-ordinated (or common) policies may therefore result in greater *de facto* control over domestic policy outcomes than unilateral efforts" (Moravcsik, 1993, p. 486). The conditions under which governments can pursue international cooperation are defined by

societal preferences and their convergence: When the interests of the dominant groups across countries converge, international agreement is possible (Moravcsik, 1993, p. 487).

A further prerequisite, as Moravcsik argues, for international policy co-operation is the compatibility of national goals. The further those goals diverge, the more "costly and difficult" (Moravcsik, 1993, p. 492) cooperation becomes, due to the cost associated with the "burden of adjustment" (ibid.) for each state.

Summing up the first and liberal approach, it can be concluded that states are assumed rational and their position on certain issues defined by societal actors and coalitions who influence the state to accumulate the different position and form one agenda for international negotiations to reduce negative externalities. In those the convergence of general policy goals across the partners in the negotiation, the convergence of general goals and convergence of national policy instruments influence the possible outcomes of such negotiations.

Interstate bargaining

For Moravcsik the purpose of an international organisation is to lower transaction costs by presenting a common arena for political exchange and cooperation, thus increasing the efficiency of negotiations (Moravcsik, 1993, p. 497). In his later work, Moravcsik supplements his own intergovernmental view by a competing supranational one to challenge his theoretical framework and its key elements[3] (1998, pp. 54-60).

Information asymmetry, high transaction costs and *supranational actors*, *who enjoy a comparative advantage* over the national actors as policy entrepreneurs due to an informational margin, characterize the supranational approach. The key element to such a supranational understanding is the Coase theorem, stipulating "the existence of a "bottle-neck" in the generation of the technical, political, or legal information or ideas required to initiate, mediate, and mobilize negotiations" (Moravcsik, 1998, p. 58). This bottle-neck creates an informational advantage for the supranational actors and can be explained by their creativity, trust put in them or their communication. In a supranational view the existence of such a margin is the central driver for policy innovation. If such an edge exists and the transaction costs of generating information are high, supranational actors can influence the outcome of international negotiations due to their bargaining power. If no comparative informational advantage exists, the theoretical model can be called "*inappropriate*" [sic!] and the role of supranational actors as prime policy entrepreneurs can be negated (Moravcsik, 1998, pp. 58-59).

[3] It needs to be noted nevertheless, that Moravcsik only adds this approach to show its shortcomings and demonstrate the "superiority of intergovernmentalism". For a more detailed analysis of his understanding of supranationalism see Moravcsik (1999)

Voluntary cooperation (no military or economic pressure for cooperation) based on *unanimous voting*, *information richness and availability* and *low transaction costs* characterize the environment of bargaining and negotiations in the intergovernmental approach (Moravcsik, 1993, pp. 497-498; 1998, pp. 60-63). If those characteristics are true, the outcome of such negotiations will reflect a number of the following determinants: unilateral policy alternatives, alternative coalitions and issue linkages (Moravcsik, 1993, p. 499; 1998, p. 63).

Unilateral policy alternatives

International cooperation is possible if a country will receive a net benefit from cooperation based on the level of maximum benefit it would receive when applying a unilateral policy. If such a unilateral policy exists, the rational state will prefer this option. The more possible gain a state would receive by a unilateral solution, the more leverage and bargaining power it has in international negotiations through the "*threat of non-agreement*" (Moravcsik, 1993, p. 499). Thus countries, which are less volatile to negative externalities, whose policy shifts are highly valued by other governments or are more prosperous, can be more demanding about their preferences (Moravcsik, 1993, pp. 499-502; 1998, p. 64). This leads to a race towards the lowest common dominator. "In sum, those who more intensely desire the benefits of cooperation will concede more to get them" (ibid.).

Alternative coalitions

Under the assumption that a government is rational, it needs to analyse every possible policy solution apt to solve a certain problem. In international negotiations, bilateral or multilateral agreements – without all negotiation partners being part of the new-formed coalition – are further possible solutions. Hence the loss associated with not being part of an *alternative coalition* and the gain of being in one need to be assessed by governments. This assumption adds a new perspective into the bargaining framework, as the threat of exclusion from an existing or the formation of a new multi-national regime (not under the EU framework) accounts for strong bargaining power (Moravcsik, 1993, pp. 502-504; 1998, pp. 64-65).

Issue Linkages

Issue linkages can occur due to the fact that governments have varying strengths of preferences across issues. The idea of making concessions to one negotiation partner for gaining his support on a different issue is the key element of this theoretical component of international negotiations (Moravcsik, 1993, pp. 504-507; 1998, pp. 65-66). Nevertheless this theoretical concept is very diffuse and problematic to analyse, as non-official trades and

agreements are often the mean of governmental bargaining. Thus this determinant will only be included in the analysis when applicable.

1.3. Factors influencing harmonisation of RES-E according to theory

As we have seen above many factors are influencing the level of integration in European negotiations. All those assumptions will be applied to the field of harmonisation of RES-E support instruments. Hence influencing factors and thus our independent variables are:

I. *The position of* society and hence *the individual state* as an aggregation of preferences according to societies' demands
II. *The convergence of policy instruments* in the member states on the specific issue
III. *The convergence of general policy goals* (in the relevant field) across the members states
IV. The *role of the European Commission* in those negotiations.
    The European Commission will be analysed according to its ability to be a *policy entrepreneur* by creating an *informational margin.* If no such margin can be found, the outcomes of the negotiation will be characterised by unilateral policy alternatives, alternative coalitions or issue linkages.

1.4. Research interest and hypothesis

The research interest of this work thus is twofold: firstly it will evaluate the reasons leading towards the failure of Harmonisation in EU RES-E policy and thereby it will secondly allow the testing of the accurateness of liberal intergovernmentalists assumptions against the reality of EU energy policy. Thus two research hypotheses are determined:

H1) If member states adopt a negative position towards the harmonisation of RES-E support instruments in European negotiations, no harmonisation is possible.

H2) If the European Commission cannot create an informational margin and act as a policy entrepreneur, it cannot pursue its agenda and thus the negotiations will not represent its preferences.

2. Research methodology

2.1. Research Design

The approach chosen for this research is a case study, which will *"allow one to peer into the box of causality to the intermediate causes lying between some cause and its purported effect"* (Gerring, 2004, p. 348). A case study is probably the most used, but also

misunderstood research design as no universally agreed definition exists[4]. Hence a research definition is necessary (Gerring, 2007, pp. 17-18). Gerring (2007, p. 20) proposes one, which will constitute as the basis for the understanding of the design in this work: "A *case study* may be understood as the intensive study of a single case where the purpose of that study is – at least in part – to shed a light on a larger class of cases."

A case study approach was chosen due to its focus on theory testing with observational data, no option to apply random assignment and the absence of time horizon or a "treatment" per se. Furthermore a case study is open in regards to data, which can be qualitative or quantitative, based on primary or secondary sources or stem from original research of the author (Gerring, 2007, pp. 68-70).

2.2. Case selection & sampling

Furthermore, definitions of the research population, the case and the process applied to find the case are necessary. Firstly, the population of the study can be defined as *EU energy policy decisions aimed at harmonisation* requiring cooperation from the member states. The reason for this rather small population definition is grounded in the theoretical approach applied[5] and the concepts used. Drawing interferences outside the scope of the framework could lead to misguiding results. Nevertheless, as Gerring (2007, pp. 82-83) points out, one might be able to draw results from this research which will apply to other cases further away from our centre of study (policy decisions in different fields (e.g. cooperation mechanisms for police work)).

Secondly, the case as the basis of the analysis will be defined. For the case selection a typical case was purposively selected. A typical case is defined by a clear presence of the variables, the researcher wishes to investigate (Gerring, 2007, pp. 91-93). Thus the present case "harmonisation of RES-E policy as proposed in Directive 2009/28/EC" is a typical case in the population.

2.3. Data

The data, which will be used in the analysis, will largely be taken from primary and secondary sources. While the positions of the member states will be examined based on their reply to policy questions asked by the Council in preparation of the directive (General Secretariat of the Council, 2008s [hereinafter policy questions]) and other official EU documents, the main

[4] for a structured approach to the definitions see (Gerring, 2004, 2007)

[5] Although a general theory explaining European integration (LI) is used, the theoretical framework is reduced to fit the research topic and scope of the work.

source for data regarding the existing policy instruments and general policy goals will be taken from secondary literature.

2.4. Operationalisation of the variables

Harmonisation has happened according to our definition if "*top-down implementation of standardised, binding provisions concerning the support instruments of RES-E throughout the EU*" (Ragwitz & Held, 2008, slide 5) represents the outcome of the negotiations. If no common rules concerning RES-E support are established, harmonisation has failed.

The *position of the member states* will be determined according to their official comments given in the Council meetings on the proposal and secondary literature. The comments will be analysed with a qualitative content analysis, more precisely by applying non-standardised content structuring (Mayring, 2010, p. 98; Weischer, 2007, pp. 331-335). In this approach three distinct categories are defined (in favour; against; indifferent) and the positions accordingly structured by a non-standardised approach. The key-phrases leading to the positions can be found in annex II.

The *position of the EC* will be analysed on two levels. Firstly, the existence of an informational margin will be examined by studying primary and secondary sources. An informational margin exists, if a decisive knowledge advantage of the Commission over the member states can be found. Secondly, the role of the EC as a policy entrepreneur will be analysed. If the EC was able to influence the agenda-setting process and the further steps of the policy cycle by presenting an idea which turned into an actual outcome, it will be understood as a policy entrepreneur (Howlett et al., 2009, pp. 103-108).

3. Analysis

3.1. Rhetoric of harmonisation of RES-E support in the EU

The idea to harmonise existing support mechanisms in the EU has been mentioned by the Commission as early as 1997. In its white paper it pointed out that it "is examining closely the different schemes proposed or introduced by the Member States in order to propose a Directive which will provide a harmonised framework for Member States [sic!]" (European Commission, 1997, p. 15). In the subsequent discussions, the Commission repeatedly argued in favour of a solution to reduce the *future* distortion effects of national support mechanisms, which were expected to arise alongside the intended growth of RES-E in the EU (European Commission, 1998, 1999). In 1999 the commission stipulated in a working paper that TGC-schemes are a better option in reducing such market distortion, since FiT-mechanisms are not

considered "viable competitive instruments" (Fouquet & Johansson, 2008, p. 4081) and thus "a move from FiT to 'trade and competition-based schemes' would 'at some stage be inevitable'" (ibid.). The claims leading to such an assessment are weak (cf. Fouquet & Johansson, 2008, pp. 4081-4085) and the major share of the scientific analyses dealing with the FiT vs. TGC discussion has pointed out the success FiT solutions had in creating growth in the production of RES-E in the EU.[6] Nevertheless the commission has mainly followed its line of arguing, emphasizing the benefits of a TGC-scheme since 1999.

In the subsequent Directive 2001/77/EC the EU set targets for the promotion of RES-E for the first time and introduced the concept of Guarantees of Origin (GoO) as a tracing option for RES-E. The role of the latter nevertheless was limited as they were designed to be non tradable and not constitute as a certificate under a TGC-scheme, unless member states whish to incorporate them in their own promotion scheme (Directive 2001/77/EC, Recital 10&11).

In the 2005 review over existing national schemes and possible options for harmonisation – required by Directive 2001/77/EC Article 4,2 – the commission pointed out that it is "too early to compare the advantages and disadvantages of […] support mechanisms" (European Commission, 2005, p. 16) and thus didn't recommend further steps.

The Commission "came of the fence slightly" (Buchan, 2010, p. 147) in 2008 in its working paper accompanying the proposal and displayed acknowledgement of the significantly better results *"well-adapted* [italics in original]*"* (European Commission, 2008c, p. 3) FiT systems had in promoting growth in RES-E production in the past.

In conclusion, the European Commission has pursued a pro-harmonisation, pro-TGC agenda since the first beginnings of RES-E policy in the EU and kept holding on to this position despite evidence suggesting the superior effectiveness of FiT-approaches[7].

3.2. The proposal and Directive 2009/28/EC

At the end of January 2008, the Commission presented its new proposed directive "on the promotion of the use of energy from renewable sources" (European Commission, 2008b [hereinafter proposal]). It contained new and demanding targets for renewable energy production in the EU[8] and laid out a framework how to address the diverging capabilities of member states to reach those targets via a flexible mechanism of trading GoO. This framework was designed to allow for cost-effective allocation of RES-E production across the

[6] Many studies have shown that in countries, were FiT systems were in place the growth of RES-E was much higher than in countries, where TGC schemes were adopted. See also: Faber et al. (2001); Haas et al. (2004); Haas, Resch, et al. (2011); Held et al. (2006); Lauber (2007); Reiche and Bechberger (2004); Ringel (2006)

[7] cf. Buchan (2010); Fouquet and Johansson (2008); Lauber (2007)

[8] by 2020, 20% of final end energy consumption should stem from RES-E in the EU

member states. RES-E will be produced in countries, where production is cheapest. Countries, where RES-E production is comparatively more expensive can buy missing certificates to reach their goals. For this purpose, GoO were redesigned to fulfil a double function, both as a tracing mechanism, but also to act as a tradable certificate in a TGC-scheme. Hence a new market with the product of GoO would be created (Fischer, 2011; Johnston, Neuhoff, Fouquet, Ragwitz, & Resch, 2008; Nilsson, Nilsson, & Ericsson, 2009).

The trade of GoO as proposed would not only be possible between countries, but also between companies. Governments could thus decide to leave the obligation to purchase GoO with them to achieve the targets. But they could also hand over their target obligation to the energy suppliers (i.e. per every kWh energy sold to the customer, a certain amount of GoO needs to be presented). This would leave the national suppliers with the obligation to purchase GoO from producers of other countries if national producers are not able to generate the necessary amount of RES-E (Ragwitz, del Río González, & Resch, 2009, pp. 301-302).

As envisioned in the proposal, the trade with GoO would be tied to certain prerequisites: Only member states that reached their interim targets should be able to trade their surplus in GoO to other states. Additionally an opt-out mechanism was introduced to allow member states not to trade GoO under certain conditions (Art. 9 of the proposal (see Annex I)).

The proposal and the idea of trade in GoO altogether presented a framework, which would introduce a state of quasi-*full harmonisation* of RES-E promotion under a TGC scheme and would thus challenge existing national support systems (Fouquet & Johansson, 2008, p. 4087).

While the proposal as a whole was mainly received positive, some scientists, industry advocates, environmentalists and certain member states voiced scepticism about the proposed framework of GoO and their trade[9] (Fischer, 2011, p. 201). The main critique points were centred on questions of effectiveness and legal certainty. The effectiveness debate was mainly revolving around the price of GoO. If there was a shortage in supply for GoO due to lower production than the target required, the price of such certificates would skyrocket and lead to ineffectiveness of the system. Such an under-supply was very likely (cf. Toke, 2008). The legal debate on the other hand was questioning the legal basis and certainty of the opt-out mechanism of prior-authorisation.

When comparing the final Directive 2009/28/EC (European Parliament and Council, 2009, [hereinafter Directive]) to the proposal, it is evident that the role of GoO was again reduced to being a pure tracing-certificate and the trading framework was taken out of the final text (see

[9] see also: Johnston et al. (2008); Nilsson et al. (2009); Toke (2008)

Annex I). Instead certain cooperation mechanisms for statistical transfer of RES-E and for joint project were introduced (Article 6-11). However, those are solely relying on the member states will to act jointly (Klessmann, Lamers, Ragwitz, & Resch, 2010). The next sections will cover the reasons leading to the dilution of the original proposal according to the framework presented in section two.

3.3. Member states positions

During the preparation of the proposal, influences of the member states could already be observed. An early draft version of the proposal included a mandatory trade of GoO if the interim-targets were failed in a country. However, an initiative from Germany and Spain backed by Slovenia and Latvia succeeded in removing this element (Endsreport, 2008a; Taylor, 2008). After the proposal was released on January 23rd 2008, the official negotiations in the Council started.

The press release following the first Council Meeting on February 28th already mentions certain disagreements over the concrete design of the GoO trade, however noting general support:

> […] the importance of trade in guarantees of origin has been underlined as a flexible instrument which should enable and not hinder Member States to reach their targets, as well as the continuation of current national support schemes for renewables. The interaction of the different instruments will probably need more clarification..
>
> [double punctuation in original] (Council of the European Union, 2008f, p. 11)

The press release however does not represent the view of certain governments as clearly as their answers to the policy question (on which the press release is supposed to be based).

Figure II

Country	Belgium	Bulgaria	Germany	Estonia	Finland	France	Greece	Italy	Lithuania	Poland	Portugal	Romania	Sweden	Spain	Slovak Republic	Hungary	United Kingdom	Cyprus	Total
against	x		x			x			x	x			x					x	7
in favour		x					x	x	x					x	x	x			7
indifferent				x	x						x	x							4

Source: Own visualisation on the basis of: General Secretariat of the Council (2008a,b,c,…,r) Key phrases leading to the positions see Annex II

Especially Germany, Spain and Poland were strongly arguing against the proposal made by the Commission. The main concerns were legal uncertainty and the possible effects enterprise-level trading would have on the effectiveness of national support schemes. At the end of February the member states were fairly evenly divided in countries agreeing and disagreeing to the system of GoO-trading as envisioned in the proposal (see Figure II).

Following Moravcsik's line of argumentation, harmonisation was not possible during this time in the negotiations. Hence it is not surprising that further discussion followed.

During the next months a growing amount of member states in the council switched from a pro-GoO trade position towards a more sceptical one (Nilsson et al., 2009, pp. 4456-4457). During the preparation for the two Council meeting of the working groups on Environment (June 5th) and Energy (June 6th), the Presidency of the Council mentioned growing resistance towards the proposed system of GoO trade as "many Member States fear possible negative consequences […]" (Council of the European Union, 2008e, p. 18). Further, the paper notes that member states, which are expecting to buy GoO to reach their national RES-E target, are having concerns regarding the sufficient availability of certificates and thus the resulting prices. Finally the Presidency pointed out that different solutions to the problem of diverging potential in target-serving are explored as "'clustering' of national support schemes such as feed-in tariff" (ibid.) would be allowed in the envisioned directive as well. The notes showcasing member states positions during the meeting point out resistance to the idea of (especially state-uncontrolled) trade from Germany, Hungary, Finland, Poland, Belgium and Cyprus, while Italy and Lithuania remain positive (Council of the European Union, 2008a, 2008d). It was argued by Germany, Finland and Poland, that national support systems should remain intact and uninfluenced due to the idea of subsidiarity.

Eventually, as Nilsson et al. (2009, p. 4459) point out, countries like the UK shifted from a pro-GoO trade point of view to a more sceptical one due to societal pressure. This led to the presentation of a joint proposal from Germany, Poland and the UK to reduce GoO to a mere tracing-tool and introduce options for joint-cooperation based on the willingness-to-trade by the member states (Endsreport, 2008b, 2008c). This proposal was nearly identical to the official revised proposal the Council offered in its meeting document on 10th July (cf. Council of the European Union, 2008b; Endsreport, 2008d). From this point onwards the discussion on GoO vanished and other issues concerning the energy-climate package became more present (cf. Endsreport, 2008b). In its final policy report on the issue the presidency of the council summarized: "The role of Guarantees of Origins (Article 13a) is to be limited henceforth to the sole function of specifying the renewable source of the energy […]" (Council of the European Union, 2008c, p. 19).

Summing up this section, the negotiations in the Council have shown the original disagreement between member states over the proposed trade in GoO as a quasi-harmonised system of TGCs. During the negotiations certain pro-GoO trade countries switched their positions and thus a proposal was agreed upon, where some level of flexible cooperation was

retained, while national support schemes were not longer under thread from the pan-European GoO trade. The "race to the lowest common denominator" (see section 1.1.2.) had happened. The position of the member states refusing to establish a system of pan-EU GoO trade had a strong impact on the negotiations in the council and finally they succeeded in watering down the proposal to a degree, where full harmonisation was not included any longer. Instead voluntary cooperation mechanisms have been introduced. Those mechanisms nevertheless cannot be seen as a form of *central coordination* as defined above in section 1.1.2. due to the fact that no minimum design criteria are established and no influence can be wielded from the EU towards the policy instruments member states adopt.

3.4. Policy convergence

Figure III

Country	Austria	Belgium	Bulgaria	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovak Republic	Slovenia	Spain	Sweden	UK
FiT	✓		✓	✓ 5)	✓ 5)	✓	✓		✓	✓	✓	✓ 5)	✓	(✓)3)	(✓)	✓	✓		✓ 4)		✓ 2)		✓	✓	✓			
TGC		✓												✓	✓					✓		✓				✓	✓
invest./tax incentives							✓			✓ 2)								(✓) 6)			✓		✓				
others								✓ 1)																✓			

Source: Own visualisation on the basis of: Ragwitz et al. (2007)

1) FiT as main instrument, tender for large projects 2) FiT as main instrument, aditionally invest. Incentives 3) FiT only for PV 4) FiT: tarif level set to zero since 2006 5) FiT supported by investment grants 6) very low support in general

Policy convergence in the sector of RES-E support instruments between the member states as one independent variable will now be analysed. As Moravcsik argues, the closer together existing policy instruments are, the higher the likelihood of international cooperation. In the case of RES-E the picture is difficult to grasp, as country specific instruments or even designs of the same instrument exist for different kinds of technology. Some member states have adopted an approach of a one-fits-all support scheme, while others diversify their ways of promotion according to the technology. Looking at the existing designs at the time of the proposal, it is evident that largely two support mechanisms were adopted in the member states: TGC or FiT solutions (see Figure IV). Although, the number of countries applying FiT solutions seems to be significantly higher (19). Six countries applied TGC-schemes and two countries used tax-incentives or investment grants (Haas, Panzer, et al., 2011; Ragwitz & Held, 2008; Ragwitz et al., 2007). Looking at the change of support mechanisms from 1997-2007, a trend can be observed: While countries who introduced RES-E support for the first time tended to lean towards FiT solutions[10], countries who switched their instrument tended to switch to TGC solutions[11] (Haas, Panzer, et al., 2011). Due to this trend no policy

[10] Austria, Belgium, Cyprus, Czech Republic, Estonia, Hungary, Lithuania, Latvia, (Malta), Slovenia, Slovakia
[11] Belgium, Italy, Sweden, UK

convergence is observed prior to the proposal and instruments remained diversified. Altogether it can be stated that the majority of member states are using FiT systems and thus the harmonised proposal was based on a competing support system only applied by a minority.

3.5. Convergence of general goals

As RES-E is only one element in the field of energy policy it is – as other issues are – subordinated to the general policy goals of the member states. In general EU energy policy is based on the three pillars of sustainability, security of supply and competitiveness, which are accepted and agreed upon by all member states (European Commission, 2006, pp. 17-18). However, the interpretation of each goal and the relative weight member states put in them determines national policy positions. As Fischer (2011, pp. 20-21) argues, this openness for interpretation is a key factor in EU energy policy and its success or failure.

The fact that differences between the member states exist is displayed clearly when looking at the relative weight they put to the aforementioned goals. Many of the eastern European countries place a strong emphasis on security of supply, due to their dependence on Russian oil and gas. Additionally they used to see the use of climate-damaging coal as their only option for securing their energy supply, thus putting the goal of security of supply over the goal of sustainability (Pollak et al., 2010, pp. 86-96, 149-158). On the other hand, countries like Germany, where high levels of RES-E production have been reached and where the economy is comparatively stable, tend to stress the sustainability criteria. In fact it could be argued that the share of RES-E of the energy mix of a country prior to Directive 2009/28/EC could be used as an indicator of how much emphasis was put on sustainability in comparison to competitiveness and security of supply. Nevertheless, this is not the whole picture as other factors also influence this number strongly (cf. Marques, Fuinhas, & Pires Manso, 2010) and different measures exist to increase sustainability besides promoting growth of RES-E. Creating a methodology to identify and analyse the general energy policy goals of all member states in detail would strain the scope of this work, hence the relative strength of the general policy goals of two representative member states, the UK and Germany (as two countries with both contradictory opinions of the proposed GoO trade, as well as different existing support schemes) will be analysed.

Germany has always emphasised the promotion of *sustainable* solutions and can be seen as a driver for ecological trends in the EU. Nevertheless, when it comes to the field of *security of supply*, Germany plays a different role. For example in January 2009 in the aftermath of the Ukrainian-Russian gas conflict, when the European Commission proposed a mechanism to

increase the security of supply by granting financial support to infrastructure projects, Germany criticised the concept and ultimately succeeded in stopping it. It was argued that the prime responsibility of securing supply should lie with the energy providers and countries should only intervene in case of an emergency (Umbach, 2009). Regarding the third goal of *competitiveness* Germany plays a more national centred role. This can be seen at its *Erneuerbare-Energien Gesetz.* In the latter, Germany ensures smaller energy prices for energy-intensive industries than for other consumers, thus creating market distortions and benefits for its own industry (Süddeutsche Zeitung, 2013). Nevertheless it needs to be noted, that Germany is one of the prime countries in expenditures towards research for RES-E technology, thus creating international advantages for the EU (European Commission, 2004).

The *United Kingdom* on the other hand presents a different picture. Until the end of the 90s, its energy market was determined by abundant availability of fossil energy and thus little incentives towards changing its system were present. But becoming aware of the negative effects of climate change and realizing that the own natural sources of gas and oil are finite, the UK came to a paradigm shift. They started to put emphasis on *sustainability* and renewable energy to fight both climate change as well as finiteness of resources. Thus it became an advocate in the EU for increasing *security of supply* by promoting RES-E growth albeit being far behind the EU-average (Fischer, 2011, pp. 82-86). To keep being *competitive* the UK is adopting one of the most expensive programs to promote RES-E in trying to keep up with the rest of the EU (Helm, 2010, slide 12). At a first glance the two countries might seem different, but on a closer look both follow the same general goals while applying distinct national policy instruments according to their policy needs.

Summing up this section, a common set of goals exists in the field of energy policy in the EU, focussed on sustainability, security of supply and competitiveness. This allows for general agreement and creates a basis for discussion. But since the goals are loosely formulated, partly competing for emphasis and in need of interpretation, they should not be misunderstood as a comprehensive, unique set of values equal in every member state in every situation. Thus it is important to separate common general goals from common policy ideas as discussed above in the section on member states' positions towards the proposal. Common goals need to exist to create a basis for negotiations; without common goals negotiations will be condemned to fail.

3.6. The role of the European Commission

When looking at the role of the European Commission, one central dilemma becomes apparent: While FiT solutions seem to be more effective in promoting growth in RES-E, TGC

solutions are more apt to fit the EU as a whole from a design point of view. This problem has been addressed by the Commission in strictly following old pro-TGC argumentation and the negation of FiT solutions by declaring them less compatible with the internal market (cf. European Commission, 2008c, p. 12). This pro-harmonisation, pro-TGC agenda (c.f. section 3.1.) was put forward in the context of a new climate-energy package. The Commission tried to act as a policy entrepreneur by introducing a new instrument (harmonised GoO trade). Supranationalism argues that this is possible if an informational advantage exists. The creation of such a margin was tried by the Commission in putting forward the trade of GoO as a flexible system of reaching the national targets fixed in the new directive and leaving a "loophole" (Fischer, 2011, p. 199) open to establish a harmonised system of certificate trading between companies. In the documents accompanying the proposal, especially the impact assessment, the EC does neither evaluate the impact such a system would have on the national support system nor does it indicate to have looked at other harmonisation options, e.g. FiT solutions (cf. European Commission, 2008a). Thus the EC has created an informational advantage through knowledge creation and the control of the flow of information. Additionally the EC as the supplier of working documents and the proposal was able to shape the nature of the initial discussion. Hence, it can be argued that the creation of knowledge and the ability to shape the context of the negotiations through creativity can be seen indicative of the existence of an informational margin.

Nevertheless, the outcome of the negations did not reflect this supranational view. It is questionable whether *high transaction costs* characterised the process of negotiations towards the Directive as this theoretical paradigm stipulates. To the contrary the embeddedness in a larger energy-climate package minimized transaction costs, by creating an abundance of opportunities for national representatives to exchange views and argumentation. Furthermore the generation of knowledge was not costly for the member states, contrary to supranationalistic assumptions. The member states were able to gather knowledge from the existing pool of scientific analyses, their own research on RES-E promotion and related studies by the industry.

Following Moravcsik's line of argumentation unilateral policy alternatives, alternative coalitions or issue linkages should be observable and reveal the invalidity of the assumptions of supranationalism in this field (c.f. section 1.2.2). As elaborated above *unilateral policy alternatives* especially of Germany shaped the negotiations. They negated the effectiveness of the proposed GoO trade and repeatedly argued in favour of national support schemes. Finally the "race to the lowest common denominator" as one outcome of the negotiations was

observed. Furthermore the text of the Directive itself presents a solution allowing for *alternative coalitions* by introducing the mechanisms of "joint projects" (cf. Directive 2009/28/EC, Article 7-11). Judgement over the existence of *issue linkages* is problematic as mentioned above, but neither scientific analysis nor media coverage of the time indicate any "package deals" done in the context of GoO trade or the Directive altogether (cf. Schäfer, Lehmkuhl, & Wüstenhagen, 2012, pp. 315-316).

In conclusion the role of the Commission as a policy entrepreneur in the sense of supranationalism can be negated. However, this result should not be misunderstood or over-interpreted[12]. The Commission tried to act as a policy entrepreneur by providing new policy solutions but was not able to pursue them due to the nature of the negotiations. In this sense, the EC can be compared to a moderator: it provided input and oversaw the discussion, but was not able to push its own agenda through. In the end the Commission proposed a final wording, which was mainly following the suggestions made by a group of member states.

3.7. Findings

Summing up the analysis some central findings shall be presented.

Regarding the influence of member states positions it was shown that a strong scattering of positions towards the trade of GoO was present at the time of the initial proposal as well as at the time the compromise proposal was offered by Germany, the UK and Poland. After excluding the trade in GoO and thus the harmonisation of support instruments and instead introducing voluntary cooperation mechanisms, a quick agreement was reached, pointing towards the bargaining power of GoO trade opposing countries. The analysis regarding convergence of national policy instruments displayed that different approaches were applied in the member states and that the TGC-based proposal made by the Commission was contradictory to the FiT-instruments applied in most member states. Nevertheless section 3.5. exemplarily showed the existence of common general policy goals in the field of energy policy in the EU while also mentioning diverging amounts of emphasis put on each goal. In the final section, the role of the European Commission was examined based on the outcomes of the Directive. It was concluded that the EC rather acted as a moderator than as a policy entrepreneur in the policy process.

[12] The theoretical framework does not negate the importance of the European Commission as an institution; it merely defines its role differently.

4. Outlook

At this point of this thesis two questions need to be considered before a current and complete overview over the topic can be achieved: Is harmonisation actually beneficial and what is the status of harmonisation now?

4.1. Benefits of harmonisation

After the idea of harmonisation under a "Community framework" was introduced in Directive 2001/77/EC (Article 4.2.), a broad scientific debate has started about the benefits and disadvantages of a harmonised support scheme for RES-E in the EU.

One of the most comprehensive articles was written by del Rio (2005) prior to the presentation of the EC's assessment of the necessity of such an attempt. He bases his analysis on economic models and concludes that "an EU-wide TGC market may lead to very significant benefits […] both in terms of effectiveness and cost efficiency" (ibid, p. 1249). However, he relativizes this result by stating that the core assumptions of his economic model might not "hold in the real world" (ibid.). Hence local socioeconomic and environmental benefits resulting from national RES-E support schemes will be reduced and it is questionable whether this loss should be accepted to improve cost effectiveness. Finally he stresses that immature technologies with hidden potential could be left behind due to the price-driven nature of the system. He thus concludes that continuing national strategies as well as EU-wide harmonisation could result in either losses or benefits. Contrary to this findings Haas et al. (2004) stress the importance of keeping the successful national systems in the member states, pointing out the resulting investor insecurity if a new system was to be introduced. Additionally they conclude that a pan-EU trade in certificates would not lead towards CO_2 reduction, because the benefit of this reduction is not internalized in the price. The article thus judges that national systems are the best current solution to the challenges of RES-E promotion. Lauber (2004) analyses the effects of both a harmonised system based on FiT and TGC and concludes that a common framework needs to include both instruments, while also pointing out feasibility problems in establishing such a system. He argues that FiT approaches are needed to channel investment where it is most needed while a TGC or quota rule would guarantee reaching the fixed targets.

From this small literature review it is evident that no agreement over the way to move ahead was present in the scientific debate during the mid 2000s. The proposed system of harmonised GoO trade found little scientific support in 2008 as well, mostly based on the same argumentations used in earlier research while also criticising the actual design (cf. Fouquet &

Johansson, 2008; Jacobsson et al., 2009; Johnston et al., 2008; Nilsson et al., 2009; Ragwitz et al., 2009; Ragwitz & Held, 2008; Toke, 2008).

In conclusion a harmonised framework *might* introduce some benefits to some countries resulting in increasing cost-effectiveness and efficiency. This increase however depends strongly on the design. The introduction of anything but an optimal design will consume this benefit rapidly[13]. At the same time a pan-EU system will most likely induce local socioeconomic and environmental disadvantages.

4.2. Current situation

So far the impact of the voluntary instruments introduced instead of GoO trade is limited as they have rarely seen use until now (cf. Fischer & Westphal, 2012, pp. 22-23). However this is not surprising since more use of the mechanisms is expected the closer the finish line in 2020 comes. Only then countries can realistically estimate if or how far they will fall behind their targets. The renewable energy progress report published by the commission in March 2013 indicates that it is assumed that a "majority of member states" (European Commission, 2013, p. 13) will fall short of their targets, due to "*current* policies being insufficient to trigger the required renewable energy deployment" [emphasis in original] (ibid.). Thus it will be interesting to see how the mechanism of "statistical transfers" under Article 6 of the Directive will be able to relocate RES-E shares from countries that will surpass their goals to those who will fall short.

Until now harmonisation plays no role in the discussion about the common energy policy after 2020. However the Commission recently stated:

> Increased flexibility for Member States must be combined with an increased emphasis on the need to complete the internal market in energy. Different national support schemes need to be rationalised to become more coherent with the internal market, more cost-effective and provide greater legal certainty for investors.
>
> (European Commission, 2014, p. 7)

This statement could point towards the Commission moving away from its *full-harmonisation* agenda and towards an idea of national policy formulation under a common *harmonised framework*. However, the rhetoric adopts the same language that was used to rationalise the pro-TGC agenda ("more coherent with internal market"). On the other hand the EC proposed a EU-wide target for RES-E instead of split up national ones. This would have strong

[13] There is a debate (compare positions of del Rio, 2005; Lauber, 2004; Muñoz, Oschmann, & David Tàbara, 2007) how such an optimal design would look like. Nevertheless, if an agreement would be reached, it is questionable whether the solution would be both possible and feasible.

implications on national support instruments (e.g. Germanys EEG) as currently existing mechanisms could easily fall under the category of forbidden state aid (cf. Geden, 2013). However, if the promotion of RES-E will be reduced to an EU-wide goal or even be subordinated to the goal of reducing the CO_2 emissions as proposed by Poland, the UK and the Netherlands (cf. Geden, 2013), it could constitute a hindrance to the Commissions pro-harmonisation agenda.

5. Conclusions

The purpose of this thesis is to identify factors leading to the failure of harmonisation in the process leading to Directive 2009/28/EC by applying liberal intergovermentalist theory to the case. Thereby it tests its explanatory power for the reality of EU energy policy. Central factors have been identified in the theory leading to harmonisation and cooperation and have been applied on the case. Regarding the first variable it has been found that certain member states were reluctant to agree to a harmonised framework of GoO trade. Other member states were in favour of the proposal made by the Commission or were even asking for further harmonisation (e.g. Italy). In the end the opposition succeeded in watering down the proposal. This result can be explained by theory, as the nature of intergovernmental negotiations is characterized by unanimous voting under no thread for compliance, leading to a "race towards the lowest common denominator". It is concluded that the lowest common denominator is based on a mechanism of voluntary trading and options for joint projects, without endangering the existence of national policy instruments. Thus, our first hypothesis *H1* is correct if reformulated to $H1_{new}$: *If certain member states adopt a negative position towards the harmonisation of RES-E support instruments in European negotiations, no harmonisation is possible.* $H1_{new}$ would be more precise as it indicates the nature of negotiations where individual positions determine the outcome. This prevents a misreading of the hypothesis implying that all member states were opposing harmonisation.

As Moravcsik points out, the relative strength of preferences of the society in each member state determines how hard they will bargain to pursue their own agenda. It can thus be concluded, that especially in Germany, the societal pressure was strongly favouring national solutions over a harmonised framework of GoO trade. This theoretical explanation is also reflected in data. For example, 95% of Germans found the development of RES-E important according to a study by the German *Bundesministerium für Umwelt, Naturschutz, Bau und*

Reaktorsicherheit[14] (2009). The German government saw the introduction of a harmonised framework as a potential threat for the future success of its own RES-E promotion instrument, thus opposing it (cf. General Secretariat of the Council, 2008g). [15]

Focussing on our second variable, the convergence of policy instruments, the analysis brought a wide array of solutions to light, most of them focussed on FiT and TGC mechanisms. This aspect is especially interesting in connection with our typology of harmonisation degrees (c.f. section 1.1.2), where it was emphasised, that harmonisation can not only result from top-town implementation through legislation, but also from other factors (e.g. a trend of copying a more efficient solution from a foreign country). The theory of liberal intergovernmentalism argues that diverging national policies are a hindrance for policy harmonisation due to the "burden of adjustment" and thus convergence would allow for easier harmonisation. In sum, the spreading of policy instruments also negatively influenced the chances for harmonisation of RES-E mechanisms.

Furthermore the existence of common goals was examined. It was concluded, that in general common goals for energy policy exist, and that they establish a basic direction for EU energy policy. While the existence was obvious (agreed to by all member states), the actual weight countries put on the different goals was shown to diverge at the exemplary case of Germany and the UK. In accordance with theory, it can thus be concluded that common goals exist and that they enable the member states to communicate solutions for problems in the realm of the goals.

Finally the role of the European Commission was evaluated based on the outcomes of the negotiations. It was shown that overall the supranationalistic theory assumptions could not be validated and that the intergovernmentalistic assumptions provided a better account of the situation. This result is based on the fact that the Commission was not able to act as a policy entrepreneur in the end, but was rather put into a moderator role.

While on the one hand the outcome of the negotiations reflected intergovernmentalists predictions, the ways the Commission acted are in fact better explained by supranationalism. The Commission created an informational margin for itself at the beginnings of the negotiations and was able to shape content and direction of initial debate. Nevertheless this margin was reduced and finally removed during the process of EU decision-making.

[14] German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

[15] However, this example should not be over interpreted. Only an analysis of national interest groups and their ability to pursue their goal in the intra-societal competition can give a clear picture of reasons leading to individual member states positions. This would go wide beyond the constraints of this thesis and would answer the diverging research question: Why did the member states adopt their positions in the negotiations?

The second hypothesis *H2*, can thus only partly be validated. Contrary to the expectations based on the theory, the EC *succeeded* in creating an initial informational advantage and act as a policy entrepreneur. However the second part of the hypothesis is true as the Commission was not able to keep their role and pursue its own pro-harmonisation agenda due to nature of intergovernmental negotiations and the strong preferences by certain member states.

All in all Moravcsik's theory of liberal intergovernmentalism created a valuable framework to look into the reasons for the failure of harmonisation. Answering the research question, it was shown, that especially the strong preferences of some member states and inability of the Commission to act as a policy entrepreneur played an important role. The fact that common goals existed was thus not enough, but provided a basis for negotiations where in the end a weak but mutually agreed mechanism was established. Furthermore convergence of policy instruments could not be observed prior to the proposal and thus no "harmonisation from the bottom" that a EU directive could formalise was possible.

The results of this case study cast an interesting light on the field of EU energy policy. As noted above the pressure to find solutions to common problems of climate change, finiteness of resources and thus security of supply are high. This however did not lead to the member states surrendering to the Commission and allowing it to act as a supranational policy entrepreneur. For the "population" – harmonisation in the field of EU energy policy – it can thus be assumed, that decisions will only happen if all member states agree to not only the idea, but also the concrete instrument proposed. Mutual goals are not enough and the Commission cannot act as a policy entrepreneur to push through new ideas outside the scope of willingness of member states, as the race to the lowest common denominator will determine the outcome of the negotiations.

It is thus interesting to compare the results with studies of cases in which harmonisation was possible. Maltby (2013) analyses the role the European Commission played in the liberalisation of the internal gas market in the EU and comes to the conclusion, that the Commission gained an "increasing role in the external energy policy dimension" (ibid., p. 441). However, his analysis puts the focus mostly on the role of the Commission and largely ignores member states positions during the negotiations. Thus he argues, that "increasing supranationalism" (Maltby, 2013, p. 435) could be observed in the field of EU energy policy, based on the observation, that the Commission was successful in framing the discussion of security of supply (hence creating an informational margin) and acting as a policy entrepreneur. However, as analysed above, initial entrepreneurship does not necessarily lead to supranationalistic outcomes, if member states are not agreeing with the proposal. Hence it

would be interesting to analyse how the individual member states positioned themselves in the negotiations.

Overall, this thesis allowed the author "*to peer into the box of causality"* (Gerring, 2004, p. 348) leading to the failure of harmonisation of RES-E support in the EU. It further showed that this policy field is following an intergovernmental logic and thus provides an example where the theoretical assumptions made by Moravcsik fit fairly well.

6. Limitations

While the study as a whole is seen as consistent, some limitations need to be mentioned concerning omitted variables or alternative explanatory factors.

As already discussed in the theory section, this study uses one of many approaches on describing European integration. However it cannot be ruled out that a different theory can do the same.

Furthermore, the influence of lobbying groups and NGOs was omitted as they play a limited role in Moravcsik's framework when analysing outcomes of the integration process. It could be argued that Moravcsik intends this, as in his definition a state is an actor aggregating all preferences of society hence including lobby organisations and NGOs. While this argumentation might be logical in itself, especially international and European lobbying groups outside the "society" of one state can also wield influence on policy outcomes. Moreover, national lobby organisations have also started to influence European organisations directly. Schäfer et al. (2012) conclude on this matter that while transnational interest groups might have had a small impact in shaping the context of the debate concerning the directive, most of the actual outcomes were decided due to intergovernmental negotiations (ibid., p. 311). This view is contrasted by Ydersbond (2011), who analyses the influence of German lobby organisations and concludes, that especially those had a strong impact in the Directive[16].

An actor, which is entirely omitted in the analysis, is the European Parliament (EP). This is rooted in the framework of the analysis. The European Parliament has no actual right of initiative[17] and thus cannot act as an initial policy entrepreneur. Furthermore, the individual

[16] Ydersbond further concludes that the explanatory value of LI is limited when looking at lobbying groups. In the authors' opinion this is grounded in her misunderstanding of the central concept of "government" or "state". Governments are not individual and self-deciding actors, but they present an aggregation of interests. Hence lobby organisations play an important role in intrasocietal preference aggregation and articulation. This leads to her (false) claim.

[17] c.f. Article 17(1), Consolidated version of the Treaty on the European Union (TEU). However it needs to be noted that Article 225 of the Treaty on the Functioning of the European Union (TFEU) grants some sort of

positions of national states are directly presented in the European Council and it is questionable whether every MEP would correctly represent their national interests. Nevertheless, the proceedings of the Parliament definitely influenced the discussions in the Council. Especially the report of Claude Thurmes, who was appointed rapporteur, provided further critique on the proposed GoO-trade (cf. European Parliament, 2008). In the end the outcome of the parliamentary process was mirroring the outcome of the negotiations in the Council and was mainly in line with the proposal made by the UK, Germany and Poland (Endsreport, 2008e).

A final note needs to be made on positions of the member states towards GoO trade as analysed in this work. While the positions stem from official comments, not all countries submitted positions and thus the distribution of opinions might not be a full description of the situation. However analysing scientific and media coverage of the debate confirms the fairly even distribution of positions towards GoO trade.

In the end, coming back to Puchala's article, this thesis simply remains the work of one of many blind men trying to describe the elephant of EU integration in the specific field of energy policies. This might create a further small piece of the puzzle. As a consequence, the more blind men describe a part of the elephant, the more pieces are available and the closer we come to a better understanding of "the beast".

indirect right of initiative to the Parliament, where the latter can request a proposal from the Commission under certain conditions.

VIII. References

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IX. Annex

Annex I

The role of GoO in the proposal and in Directive 2009/28/EC

Article 6 *Guarantees of origin of electricity, heating and cooling produced from renewable energy sources*	**Article 15** *Guarantees of origin of electricity, heating and cooling produced from renewable energy sources*
1. Member States shall ensure that the origin of electricity produced from renewable energy sources, and of heating or cooling produced from renewable energy sources in plants with a capacity of at least 5 MWth, can be guaranteed as such within the meaning of this Directive. To that end, Member States shall ensure that a guarantee of origin is issued in response to a request from a producer of renewable energy. A guarantee of origin shall be of the standard size of 1 MWh. No more than one guarantee of origin shall be issued in respect of each MWh of energy produced. 2. Guarantees of origin shall be issued, transferred and cancelled electronically. They shall be accurate, reliable and fraud-resistant. A guarantee of origin shall specify, at least: (a) the energy source from which the energy was produced and the starting and ending dates of its production; (b) whether the guarantee of origin relates to – (i) electricity; or – (ii) heating and/or cooling; (c) the identity, location, type and capacity of the installation where the energy was produced, and the date of the installation's becoming operational; (d) the date and country of issue and a unique identification number; (e) the amount and type of any investment aid that has been given for the installation. 3. Member States shall recognise guarantees of origin issued by other Member States in accordance with this Directive. Any refusal by a Member State to recognise a guarantee of origin shall be based on objective, transparent and non-discriminatory criteria. In the event of refusal to recognise a guarantee of origin, the Commission may adopt a Decision requiring the Member State in question to recognise it. 4. Member States shall ensure that all guarantees of origin to be issued in respect of renewable energy generated in a given calendar year are issued, at the latest, three months after the end of that year.	1. For the purposes of proving to final customers the share or quantity of energy from renewable sources in an energy supplier's energy mix in accordance with Article 3(6) of Directive 2003/54/EC, Member States shall ensure that the origin of electricity produced from renewable energy sources can be guaranteed as such within the meaning of this Directive, in accordance with objective, transparent and non-discriminatory criteria. 2. To that end, Member States shall ensure that a guarantee of origin is issued in response to a request from a producer of electricity from renewable energy sources. Member States may arrange for guarantees of origin to be issued in response to a request from producers of heating and cooling from renewable energy sources. Such an arrangement may be made subject to a minimum capacity limit. A guarantee of origin shall be of the standard size of 1 MWh. No more than one guarantee of origin shall be issued in respect of each unit of energy produced. Member States shall ensure that the same unit of energy from renewable sources is taken into account only once. Member States may provide that no support be granted to a producer when that producer receives a guarantee of origin for the same production of energy from renewable sources. The guarantee of origin shall have no function in terms of a Member State's compliance with Article 3. Transfers of guarantees of origin, separately or together with the physical transfer of energy, shall have no effect on the decision of Member States to use statistical transfers, joint projects or joint support schemes for target compliance or on the calculation of the gross final consumption of energy from renewable sources in accordance with Article 5. 3. Any use of a guarantee of origin shall take place within 12 months of production of the corresponding energy unit. A guarantee of origin shall be cancelled once it has been used. 4. Member States or designated competent bodies shall supervise the issuance, transfer and cancellation of guarantees of origin. The designated competent bodies shall have non-overlapping geographical responsibilities, and be independent of production, trade and supply activities. 5. Member States or the designated competent bodies shall put in place appropriate mechanisms to ensure that guarantees of origin shall be issued, transferred and cancelled electronically and are accurate, reliable and fraud-resistant. 6. A guarantee of origin shall specify at least: (a) the energy source from which the energy was produced and the start and end dates of production; (b) whether it relates to: (i) electricity; or (ii) heating or cooling; (c) the identity, location, type and capacity of the installation where the energy was produced; (d) whether and to what extent the installation has benefited from investment support, whether and to what extent the unit of energy has benefited in any other way from a national support scheme, and the type of support scheme; (e) the date on which the installation became operational; and (f) the date and country of issue and a unique identification number. 7. Where an electricity supplier is required to prove the share or quantity of energy from renewable sources in its energy mix for the purposes of Article 3(6) of Directive 2003/54/EC, it may do so by using its guarantees of origin. 8. The amount of energy from renewable sources corresponding to
Article 7 *Competent bodies and registers of guarantees of origin* 1. Each Member State shall designate a single competent body to undertake the following tasks: (a) establish and maintain a national register of guarantees of origin; (b) issue guarantees of origin; (c) record any transfer of guarantees of origin; (d) cancel guarantees of origin; (e) publish an annual report on the quantities of guarantees of origin issued, transferred to or from each of the other competent bodies and cancelled. 2. The competent body shall not carry out any energy generation, trade, supply or distribution activities. 3. The national register of guarantees of origin shall record the guarantees of origin held by each person. A guarantee of origin shall only be held in one register at one time.	
Article 8 *Submission of guarantees of origin for cancellation* 1. A guarantee of origin, corresponding to the unit of energy in question, shall be submitted for cancellation to a competent body designated in accordance with Article 7 when: (a) the production of a unit of electricity from renewable energy sources, or the production of a unit of heating or cooling from renewable energy sources in a plant with a capacity of at least 5 MWth, receives support in the form of feed-in tariff payments, premium	

payments, tax reductions or payments resulting from calls for tenders, in which case the guarantee shall be submitted to the competent body designated by the Member State that established the system of support;
(b) a unit of electricity produced from renewable energy sources, or a unit of heating or cooling produced from renewable energy sources in a plant with a capacity of at least 5 MWth, is taken into account for the purposes of assessing an entity's compliance with a renewable energy obligation, in which case the guarantee of origin shall be submitted to the competent body designated by the Member State that established the obligation; or
(c) an energy supplier or energy consumer chooses to use a guarantee of origin for the purpose of proving the share or quantity of renewable energy in its energy mix, without claiming the benefits of a support scheme in accordance with points (a) and (b); in this case, the guarantee of origin shall be submitted to the competent body designated by the Member State in which the energy described by the energy mix in question is consumed.
2. Where an operator has submitted one or more guarantees of origin to a competent body in accordance with paragraphs 1(a) or (b), the operator shall:
(a) request guarantees of origin, in accordance with Article 6(1), for all future production of renewable energy sources from the same installation;
(b) submit these guarantees of origin for cancellation to the same competent body.
3. Guarantees of origin shall not be submitted to a competent body for cancellation more than 1 year after their date of issue.

Article 9

Transfer of guarantees of origin

1. Member States whose share of energy from renewable sources equalled or exceeded the indicative trajectory in Part B of Annex I in the immediately preceding two-year period may request the competent bodies designated in accordance with Article 7 to transfer the guarantees of origin submitted for cancellation under Article 8(1) to another Member State. Such guarantees of origin shall immediately be cancelled by the competent body in the receiving Member State.
2. Member States may provide for a system of prior authorisation for the transfer of guarantees of origin to or from persons in other Member States if, in the absence of such a system, the transfer of guarantees of origin to or from the Member State concerned is likely to impair their ability to ensure a secure and balanced energy supply or is likely to undermine the achievement of the environmental objectives underlying their support scheme.
Member States may provide for a system of prior authorisation for the transfer of guarantees of origin to persons in other Member States if in the absence of such a system, the transfer of guarantees of origin is likely to impair their ability to comply with Article 3(1) or to ensure that the share of energy from renewable sources equals or exceeds the indicative trajectory in Part B of Annex I. The system of prior authorisation shall not constitute a means of arbitrary discrimination.
3. Subject to the provisions adopted pursuant to paragraph 2, guarantees of origin may be transferred between persons in different Member States provided they have been issued in relation to energy produced from renewable sources by installations that became operational after the date of entry into force of this Directive.
Such transfer may accompany the transfer of the energy to which the guarantee of origin relates, or may be separate from any such transfer.
4. Member States shall notify the Commission of any system of prior authorisation they intend to have in force pursuant to paragraph 2, and any subsequent changes thereto. The Commission shall publish that information.
5. By 31 December 2014 at the latest, depending on data availability, the Commission shall assess the implementation of the provisions of this Directive for the transfer of guarantees of origin between Member States and the costs and benefits of this. It shall, if appropriate, submit proposals to the European Parliament and to the Council.

Article 10

Effects of the cancellation of the guarantees of origin

When a competent body cancels a guarantee of origin that it did not itself issue, an equivalent quantity of energy from renewable sources guarantees of origin transferred by an electricity supplier to a third party shall be deducted from the share of energy from renewable sources in its energy mix for the purposes of Article 3(6) of Directive 2003/54/EC.
9. Member States shall recognise guarantees of origin issued by other Member States in accordance with this Directive exclusively as proof of the elements referred to in paragraph 1 and paragraph 6(a) to (f). A Member State may refuse to recognise a guarantee of origin only when it has well-founded doubts about its accuracy, reliability or veracity. The Member State shall notify the Commission of such a refusal and its justification.
10. If the Commission finds that a refusal to recognise a guarantee of origin is unfounded, the Commission may adopt a decision requiring the Member State in question to recognise it.
11. A Member State may introduce, in conformity with Community law, objective, transparent and non-discriminatory criteria for the use of guarantees of origin in complying with the obligations laid down in Article 3(6) of Directive 2003/54/EC.
12. Where energy suppliers market energy from renewable sources to consumers with a reference to environmental or other benefits of energy from renewable sources, Member States may require those energy suppliers to make available, in summary form, information on the amount or share of energy from renewable sources that comes from installations or increased capacity that became operational after 25 June 2009.

Articles 6-11

Not included in this overview, as they deal with new/voluntary support mechanisms. Refer to Directive 2009/28/EC

shall, for the purposes of measuring compliance with the requirements of this Directive concerning national targets: (a) be deducted from the quantity of energy from renewable sources that is taken into account, in relation to the year of production of the energy specified in the guarantee of origin, in measuring compliance by the Member State of the competent body that issued the guarantee of origin; and (b) be added to the quantity of energy from renewable sources that is taken into account, in relation to the year of production of the energy specified in the guarantee of origin, in measuring compliance by the Member State of the competent body that cancelled the guarantee of origin.	

Annex II

Overview over key phrases leading to positions in Figure II

Country	Position	Key-words
Belgium	No	continues to question [...] effectiveness and [...] compatibility; concerns; risk premium could outweigh the possible gain; clearing up the many remaining causes for concern
Bulgaria	Yes	support; direct investments [...] most efficiently; in favor
Germany	No	inappropriate; rejects the idea of trading at enterprise level; impossible; proposal would be [...] hard to implement in legal terms; the [...] feed systems [...] will be undermined; consequences will be higher costs; huge windfall profits
Estonia	Maybe	supports establishment; further discussion; is not sure if the market [...] gives clear signals; electricity and heat market are different; only one type of GoO might be less beneficial [...]
Finland	Maybe	advocates the possibility of trading GoO between MS; transfer of GoO between operator should not impair MS [...] national aid schemes; [...] reservations for the transfer of GoO between operators; prior authorisation system [...] should be specified
France	Yes	are necessary; should not undermine support schemes; exercise strict control over any system of trade in GoO; step in the right direction; must be examined whether is legally workable
Greece	No	most important is feed-in tariffs; any harmonisation based on TGCs or GoO would only have significance if one single electricity market; should made be clearer with regards to installation and operation
Italy	Yes	GoO will be a useful instrument in achieving national targets; expanded to sources outside the EU; in favor of the harmonisation of incentive schemes; backed up by a process of harmonisation of the level and intensity of national support mechanisms; clear preference would therefore be [...] a proposal for harmonisation of national incentive schemes
Lithuania	Yes	separate member states potential is limited, thus necessity to establish an efficient mechanism pursuing use of energy in the most cost effective way; support systems to early to harmonise; GoO provides sufficient flexibility and is cost-effective; system of tradable GOs should be unified
Poland	No	National instruments [...] should be [...] fundamental; concerned about Community-wide trade of GoO; may lead to negative results; jeopardise realisation of EU's objectives; may not accept the trade of GoO between enterprises;
Portugal	No	GoO not a sufficient mechanism; FiT still necessary; analyse in greater detail implications of trade in GoO and how they tie in with FiTs

Romania	Maybe	trade in GoO corresponds to the objective; necessary clarifications with regards to transfer between states; view to clarification is necessary; make clarifications concerning the use of income arising from trade in GoO
Sweden	Maybe	trade is generally good; how [it] will work in practice is unclear; still uncertain as to how far system will promote investment; proposal is comprehensive; carry out further analysis
Spain	No	only trade in surplus, otherwise illogical; premium systems may also be used; FiT more effective and efficient than TGC or GoO; cost of FiT is lower than market system; trade between companies has so far proven inefficient; must ensure, that GoO trade does not undermined FiT-systems; only inter-state transfer
Slovak Republic	Yes	solidarity; establish clear rules and minimize barriers to the trade with GoO
Hungary	Yes	flexible solution; might stimulate investment; cost-effectiveness; fully agree with the principle; but elaboration of rules; national control and authorisation; decrease the burdens of MS regarding the high national targets
UK	Yes	could reduce overall costs; welcome the proposal; some restriction seem unnecessary; how to use GoO regime to reduce costs further
Cyprus	No	strong reservations about workability, fundamental added value and general economic consequences

Declaration of Academic Honesty

I hereby confirm that the present thesis is solely my own work and that if any text passages or diagrams from books, papers, the Web or other sources have been copied or in any other way used, all references – including those found in electronic media – have been acknowledged and fully cited.

Place	Date	Signature