

Supporting Renewable Energy Development

A case study of the political process on feed-in schemes in Denmark
leading up to the agreement on energy policy in 2012

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Master's thesis in Political Science, Department of Political
Science

UNIVERSITY OF OSLO

Spring, 2018

Word count: 26 745

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2018

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<http://www.duo.uio.no/>

Press: Representralen, University of Oslo

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Abstract

An increase in renewable energy in a country's energy mix is one of the measures countries can take in order to mitigate climate change. One way of increasing the renewable energy share in a country's energy mix is through support schemes. This thesis investigates the political process on support schemes in Denmark from 1999 to 2012. In 1999, Denmark started liberalizing their renewable energy market, and there were a subsequently drop in investments in renewable energy. However, in 2006 the incumbent government made a U-turn on their planned liberalization, and gradually increased the level of the support scheme. The support scheme in Denmark's case, were feed-in tariffs and feed-in premiums. The U-turn in 2006 paved way for the current energy agreement in Denmark, which were agreed upon in 2012.

The research question for this thesis is: how can the Danish energy agreement from 2012 be explained? Applying path-dependency and political field perspectives, this article analyses the political process on feed-in tariff and feed-in premium in Denmark from 1999 to 2012. The results from this thesis suggest that the changes can be explained as political competition, where politicians view the political issue as having high salience and therefore engage in political competition as they believe it will help them get elected or re-elected. In addition, the results suggest that the outcome can be explained by the Fogh Rasmussen having ill-defined preferences and not a clear understanding of the functioning of the feed-in scheme from 1999 to 2001. Nonetheless, after 2006 the Fogh Rasmussen cabinet gained an environmental and energy agenda in line with the opposition, which paved the way for the 2012 energy agreement.

In addition, the liberalization from 1999 to 2005 can be explained as a reaction to Denmark spending too much money on climate change policy. Subsequently, the U-turn in 2006 leading up to the 2012 energy agreement can be explained as a reaction to the liberalization and the pressure the government received from the industry and other political actors to reinstate a higher level of feed-in support. On the other hand, the policy outcome of the 2012 energy agreement can be understood as being reinforced since the 1980s, and therefore difficult for the Fogh Rasmussen cabinet to change.

Acknowledgments

At the beginning of the writing process for this thesis, a former master's student described writing a master's thesis as a "painful privilege". Writing a master's thesis is a painful and long-lasting process. All the reading, deleting, restructuring, and long days at the library, are not visible on this pages. Nevertheless, it has indeed been a privilege to be given the opportunity and time to immerse myself into a topic which I am greatly intrigued about.

Now that I have finished my master's thesis, I am also completing a five year study. There are numerous people whom deserves acknowledgments. In regards to the master thesis, I want to especially thank my guidance teacher, Elin Lerum Boasson, for all her valuable advice and her patience guiding a master's thesis which took some time before it got fully under way. I also want to thank all the interview participants for taking the time to speak with me.

Further on, there are two people who deserves a special acknowledgment – my parents. Their support and encouraging words have been invaluable during the process of writing the master's thesis, and also for the five years I have been a political science student. I also want to thank my sister for all her support, and also for taking on the job as proofreader.

Lastly, but not least, I want to thank my fellow students for making the years at Blindern a memorable adventure. The long days at Blindern would be dreary and monotonous without all those much needed breaks at "tacoteket". In particular, I want to thank the regular lunch crew, for all the regular lunches and support.

All support and help have been gladly received. Nonetheless, I alone am responsible for the content and any errors of this thesis.

Kristine B. Hermanrud
Blindern, 27.04.18

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1. Introduction

Under most conditions, increasing the share of RE in the energy mix will require policies to stimulate changes in the energy system (Edenhofer et al., 2011:7).

Climate change seems to be one of the most pressing issue of our time. Research on the effects and cause of climate change has been improved over the years and the conclusion is that climate change is most likely caused by human actions and will have serious consequences (Edenhofer et al., 2011). According to IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation from 2011, renewable energy has a large potential to mitigate climate change, as well as, if implemented correctly, “contribute to social and economic development, energy access, a secure energy supply, and reducing negative impacts on the environment and health” (Edenhofer et al., 2011:7). For this to happen, IPCC argues, it will require policies to stimulate changes in the energy system.

One way for policies to stimulate changes in the energy system is through support schemes. The European Commission argues that “energy markets alone cannot deliver the desired level of renewables in the EU, meaning that national support schemes may be needed to overcome this market failure and spur increased investment in renewable energy” (European Commission, 2018). Different instruments can be used to support renewable energy production in the EU. The most commonly used are feed-in schemes, quota obligations, tax exemptions, tenders, and investment aid (European Commission, 2018).

1.1 Research question

Different support schemes have been used for decades in various countries. However, there is a continuously debate about whether the market can provide the necessary incentives for investment in renewable energy or if there is a need for support schemes, as the EU and IPCC argues. A country that stand out as an interesting case and where this debate has been present for some time, is Denmark. After starting the transition from nearly fossil-fuel dependency some forty years ago to a renewable energy share of around 25 % in 2014, Denmark stands out as a robust transition case (Eikeland and Inderberg, 2015). More interestingly, Denmark qualifies as a puzzling study object because of the undoubted trend anomaly in the years of 2001-2008, when investment in renewable energy saw a dramatic fall (Eikeland and Inderberg,

2015). A factor explaining this dramatic fall in renewable energy investments was the newly elected Anders Fogh Rasmussen's cabinet, whom lowered Denmark preferred support scheme - the feed-in tariff or feed-in premium- in 2002 (Ryland, 2010). Fogh Rasmussen surprisingly had a second shift in 2006, when he announced at a conference for the Left Party a fully metamorphosed energy and environment agenda, that some argue sparked the increase in investments in renewable energy (Eikeland and Inderberg, 2015).

Scholars (Eikeland and Inderberg, 2015; Ryland, 2010) points to the newly elected Anders Fogh Rasmussen's cabinet as an explanatory factor to the drop in investments in early 2000 as a consequence of a policy shift. Eikeland and Inderberg (2015: 164) also argues that the second shift can be explained by "mobilization of interests that had grown to include actors that generally supported de-regulation but saw their commercial interests threatened". They argue that there has been a policy derailment from 2002 and that the energy transition come back on track in 2008 (Eikeland and Inderberg, 2015: 164). However, the liberalization of the Danish renewable support scheme started in 1999, three years before the Fogh Rasmussen cabinet were elected (IEA, 2012). At this time the Social Democrats were in government. Looking at the changes in legislation on feed-in schemes, the changes entails a lowering of the feed-in schemes first in 1999, then an additional decrease in 2002, and a subsequently increase in 2008.

This thesis seeks to explain the outcome of the 2012 energy agreement, in light of changes in policy seen in Denmark from 1999 and to the 2008 agreement which paved the way for the 2012 agreement. In doing so, I will try to understand why the initial decrease in feed-in scheme in 1999 might be explained, how the policy shift in 2001 and subsequently decrease in feed-in scheme and why the second shift came about in 2008. This is explained by looking at the political process leading up to the 2012 agreement. The research question is therefore:

How can the outcome of the Danish agreement on energy policy from 2012 be explained?

As an elaboration of this issue, I have formulated three key questions. The first questions is of a descriptive nature and the latter two will be explained through theoretical perspectives. Firstly, can the policy changes between 1999 and 2008 be describes as a derailment? Secondly, how can the policy shifts in 1999 and in 2002 be explained? Lastly, how can the policy shift in 2008 be explained?

The 2012 agreement has been chosen to mark the end of the political process on support mechanisms for renewable energy in Denmark. This is because the 2012 energy agreement is the current energy agreement in Denmark. Also, it is interesting to have the 2012 agreement as the dependent variable because it expires in 2020, meaning a new agreement has to be negotiated and agreed upon in the near future.

In addition, the feed-in scheme has always been the support mechanism in Danish legislation. However, in 2001 there was planned a shift to green certificates in 2004, but this policy change did not happen as planned. Given that the changes in the energy system in Denmark in the early 2000s entailed altering the level of feed-in schemes and not a change in the preferred instrument, it is interesting to discuss whether the period from 2002 and 2008 in Danish energy renewable policy can be described as a derailment or not.

This thesis is an empirically interesting and important case. There is surprisingly little literature on Danish renewable energy policy and it is an interesting question to ask why there are so few scholars interested in writing about this topic. There are some few examples of scholars writing about this subject such as Eikeland and Inderberg (2015), Ryland (2010) and Andersen and Nielsen (2017). Why are so many scholars interested in writing about Germany (Beveridge and Kern, 2013; Sühlsen and Hisschemöller, 2014; Joas et al., 2016)¹ when Denmark is a country that many associate with renewable energy? This is why this thesis is of importance. The policy changes in the Danish renewable energy policy between 1999 and 2008 (and until the energy agreement in 2012), can help explain why scholars of political science have little interest in Denmark as a case. Gaining an understanding of how to explain the policy instability can provide insight into the renewable energy discussion in Denmark. Also, the policy instability from 1999 to 2008 makes Denmark a very important country to understand the renewable energy policy, since Denmark is expected to present a new agreement soon as the 2012 agreement expires in 2020.

Another reason why Denmark is a compelling case is the paradox that Denmark has been recognized as top reformer by the independent Climate Change Performance Index over three

¹ There are several examples on research on the German energy transition, but I will not present a complete collection in this thesis.

consecutive years, simultaneously as Denmark's greenhouse gas emissions per capita remain above the EU average (Andersen and Nielsen, 2017: 83). While scholars like Francis Fukuyama have proclaimed the 'getting to Denmark' a desirable approach (cited in Andersen and Nielsen, 2017:83), Denmark has had varying climate change policy in the last decades.

1.2 Feed-in schemes

The feed-in schemes is a central concept in this study, and clarifying the meaning of feed-in scheme is therefore important. A feed-in tariff is a climate policy-measure. It is a measure that can be described as a governmental industry development measurement (Boasson, 2015: 9). This is when the government engages specifically in industrial decisions concerning the choice of technology directly, rather than regulating the acceptable costs of the various choices of technology (Boasson, 2015: 9-10). In regards to feed-in schemes for renewable energy, the government interferes directly by setting the price on specific technologies (Boasson, 2015). Feed-in schemes have for the most part been the preferred mechanism for state support on renewable energy in Denmark. However, in 2001, prior to the VK-cabinet winning the election, there were intended to change from feed-in schemes as support mechanism, to green certificates in 2004. This, however, did not happen.

In Denmark, the feed-in scheme has evolved from being on a stable high level until 1999, decreased in 1999, 2001, 2002, and 2004, to an increase in 2008 and 2012. Prior to 1999, the feed-in schemes were at 0.60 DKK/kWh (IEA, 2012). In 1999 the feed-in was lowered to 0.43 DKK/kWh for turbines for turbines connected to the grid in the period 2000-2002 and to 0.10 DKK/kWh for turbines connected to grid 2003-2005 (IEA, 2012). In 2001, prior to the election when the Social Democrats were still in office, the feed-in scheme were changed to a fixed price of 0.33 DKK per kWh for the first 10 years of production and a premium of DKK 0.10 per kWh was added to the market price (IEA, 2015). After the election when the Fogh Rasmussen cabinet won, the feed-in tariff was lowered to 0.10 DKK per kWh for a maximum of 10 years in 2002 (IEA, 2013). In 2008, the government agreed to give a feed-in at 0.25 DKK per kWh, for 2200 full load hours, for up to 10 years (IEA, 2014). This was an increase from the previous level of support. This increase of support was followed up in the 2012 Energy Agreement (Energi, klima og forsyningsministeriet, 2012).

What is interesting is that many have pointed to the Fogh Rasmussen cabinet for the changes in the feed-in schemes and subsequently drop in development of renewable energy. However, as I will discuss more in length in this thesis, the liberalization started when the Social Democrats were in office.

1.3 Theoretical perspectives and data material

The study of policy process is a complex task and the need for theories is essential (Weible, 2014: 3). Weible (2014) argues that in order to study such complexity, researchers must be cautious not to be restrained by cognitive presuppositions that can make him or her biased in assessing the policy process. The proposed strategy for mitigating such bias is to choose more than one theory by “highlighting the most important items for study and specify relationships between them (Weible, 2014: 3). Thereby one can assure a robust result.

Applying path-dependency and political field perspectives, this article analyses the development of the Danish energy system as in context of previous actions and as behavior amongst politicians. The path-dependency perspective is concerned with explaining policy change by “tracing an given outcome back to particular set of historic events, and showing how these events themselves are contingent occurrences that cannot be explained on the basis of prior historical conditions” (Mahoney, 2000:507-508). On the other hand, the political field perspective is concerned with explaining political behavior based on whether the politicians view the policy issue with high or low salience and how that will affect how they deal with the policy issue (Boasson, 2015). Also, I will present concepts for measuring policy change in order to describe the political change.

The data material used to tell the story of the political process on feed-in schemes is the Danish legislation renewable energy, literature and interviews. The information that is required on how the feed-in schemes have changed in the legislation and what the political debates have been on these changes. Data material on the former will be found in the legislation, and data material for latter will be provided through literature and interviews. There are two empirical chapters in this thesis, and the first is a background chapter which includes a brief introduction to the Danish history on renewable energy and information on the political actors and government coalitions in Denmark. This chapter is important to include because the composition in parliament says something about the distribution of power amongst the political actors. The

distribution of power amongst the political parties have an effect on what concerns that wins the negotiations for a new energy agreement.

The second empirical chapter describes the political process on feed-in schemes in Denmark. The political process will be described through the changes in legislation and also through literature and interviews on the political negotiations and political difference amongst the political actors.

1.4 The structure of the thesis

The research design for answering the research question is through process tracing. This study is based on a process tracing, where the case under study is the renewable energy policy in Denmark leading up to the 2012 energy agreement. Chapter two will consist of a presentation of concepts for measuring policy change and the two theoretical expectations. The presentation of the theoretical expectations will be followed up by the theoretical expectations. Chapter three will consist of a brief presentation the history on renewable energy in Denmark and the political actors. Chapter four will consist of a discussion of the research design and research method. Chapter five will consist of the political process on feed-in schemes in Denmark from 1999 to 2012. It will focus on the changes in legislation, the political negotiations and differences on the feed-in scheme. In chapter six, I will discuss the findings from chapter five in light of the theoretical perspectives and research qualifications discussed in chapter four. Finally, I will present my final remarks and conclusion in chapter seven.

2. Theory and analytical framework

In this chapter, I will present concepts for measuring change and two theoretical perspectives. I will begin by presenting the concepts of measuring change, and expectations to the concepts. Secondly, I will present the path-dependency perspective and theoretical expectations based on this perspective. Lastly, I will present the political field perspective and the theoretical expectations from this perspective.

2.1 Measurement of policy change

In order to explain an event of policy change, it is necessary to have concepts for how to measure the policy change under study (Knill and Tosun, 2012: 258). It is important to define what the policy change entails, meaning how to understand the transformation of the given policy. According to Knill and Tosun (2012: 258) the definition of policy change represents a strategic issue for the researcher, and argues that policy change can be defined in terms of “the transformation of the definition of the issue in question, or as the structure and content of the policy agenda, or in terms of the content on the policy program, or as the outcome of implementation of policy”. Meaning, that policy change can be described in different ways, and researcher should account for how they measure the change under study.

In addition to the importance of specifying the object of change, it is important to specify what sort of change has happened. According to Knill and Tosun (2012: 258), there are in particular four problems deserving analytical attention. These challenges are tied to temporal issues, level of abstraction, the intensity and density of policy change and the expansion or reduction of policy change.

Temporal issues regarding policy change is concerned with the time frame where the political change has occurred. A time frame consists of at least two points in time, and these two points are necessary in order to assess that a policy has changed its characteristics (Knill and Tosun, 2012: 258). Consequently, it is imperative to have data material of the case under study that cover a period of several years. The risk connected to placing a policy change within a time frame is that a researcher censors important data in order to be able to understand the policy change by not defining an appropriate time frame. Knill and Tosun (2012: 259-260) use the example of a study of political change in Canada after a newly elected party entered into government. For the study to make sense, the observations need to start at the time of the newly

elected party entered into government and not later. If that were to be done, it “would be possible to underestimate the extent to which public policies have changed due to the new partisan composition of the government” (Knill and Tosun, 2012:259-260). Hence, it is important to define the time frame based on the issue under study.

The second measurement challenge is linked to the evaluation of the “degree of policy change (e.g. radical versus incremental) is affected by different levels of abstraction” (Knill and Tosun, 2012: 258). The issue here is whether the change is in the core of the policy or merely in secondary aspects. This entail that the policy change can be measured by changes in beliefs of the coalitions of the actors concerned (Knill and Tosun, 2012: 260). According to Knill and Tosun (2012: 260) changes in core beliefs are more unlikely to occur than changes in secondary beliefs. Knill and Tosun (2012: 206) advice to be cautious in the assessment of the policy change occurred based on changes in secondary or core beliefs. This is because the research design of the case under study might influence the results, that is if the researcher looks at the policy change as an isolated event or view the policy change in the context of long-term changes.

Knill and Tosun (2012: 258) third and fourth concept for measuring change are interlinked. They argue that a feature of policy change that is often overlooked is the direction of the policy change, which is policy reduction or policy expansion. Policy expansion involves the introduction of a new policy or the intensifying of an already existing policy (Knill and Tosun, 2012: 260-261). Policy reduction implies that the policy change dissolves a policy, or parts of it, without a new one being introduced (Knill and Tosun, 2012: 261). However, this is not sufficient to describe the changes in a policy. Knill and Tosun (2012: 261) proposes a “differential measurement of policy change based on two basic dimensions: policy density and policy intensity” in order to complement the explanation possibilities from the policy expansion and policy reduction concepts.

The dimension of policy density says something about quantity of governmental intervention on a specific policy area. Hence, the quantity describes how large or small the policy area is covered by governmental activities (Knill and Tosun, 2012: 261). Change can be measured as a decrease implying a policy reduction and any increase implies a policy expansion (Knill and Tosun, 2012: 261). There are two ways in which changes in policy density can be assessed:

“the number of policy targets and the number of policy instruments that are applied in a given policy field or subfield” (Knill and Tosun, 2012: 261). These indicators are expected to work interlinked, as a high number of policy targets the broader policy involvement on a given policy sector or subsector in a country (Knill and Tosun, 2012: 261).

The other dimension, policy intensity, is concerned with the level and scope of policy intervention (Knill and Tosun, 2012: 262). The setting of the applied instrument, can be characterized depending on the nature of the item in question (Knill and Tosun, 2012: 262). A change in setting can entail a lowering of for example tax rates, as Knill and Tosun (2012: 262) argues, which further on makes the policy change a policy reduction. On the other hand, for another policy a lowering of the level of pollution a certain industry can emit, is interpret as a policy expansion, according to Knill and Tosun’s reasoning (2012: 262). Consequently, one can measure policy change by the strictness or policy generosity over time, but also through the number of policy interventions on a given field.

According to Knill and Tosun (2012) policy change suggest that it is more likely to find policy expansion than policy reduction and that it is reasonable to expect instances of policy expansion more frequently than instances of policy reduction. The reasoning behind this expectation is that “... the adoption new as stricter or generous policies generally meets less political resistance than terminating or cutting back regulations or public services (Knill and Tosun, 2012:263-264).

When there is an expectation to find more instances of policy expansion, it implies that there is also an expectation to witness a continuous growth of policy density and policy intensity over time (Knill and Tosun, 2012: 264). A continuous policy expansion over time can be measured through the number of instances of expansion and the number of instances of reduction. If there is a higher number of expansions, it would indicate a direction towards policy expansion.

Knill and Tosun (2012: 264) argues that the expectation of policy expansion over policy reduction is in line with the law of growing state activities. The law of growing state activities holds that a nation's public sector will grow over time as a nation industrialize (Knill and Tosun, 2012: 264). The growth in public sector and public spending “... is needed because of three main reasons, namely socio-political factors (the expansion of the state’s social function over

time), economic factors (an increase of state involvement in the science, technology and various investment projects as a result of scientific and technological progress) and historical factors (increases in servicing debts)” (Knill and Tosun, 2012: 264).

2.1.1 Expectation to the measurements

The concepts for measurement proposed by Knill and Tosun (2012) is temporal issues, level of abstraction, the intensity of the policy and the density of the policy and expansion versus reduction. For the temporal issue, I will in the analysis place the policy change within a time frame. The time frame is important to place in the correct time in order to avoid censoring data material relevant for the case (Knill and Tosun, 2012:259-260). For the level of abstraction concept, I expect to find that changes in secondary beliefs are more likely to occur than changes in core beliefs. I expect to find policy expansion where the policy show signs of increasing policy intensity and policy density over time. These expectations are in line with the reasoning of Knill and Tosun (2012).

2.2 Path-dependency perspective

Political change can be understood as path-dependent development (Knill and Tosun, 2012: 256). Mahoney (2000: 507) argues that “path dependence characterizes specifically those historical sequences in which contingent events set into motion institutional patterns or event chains that have deterministic properties”. Institutions are here understood as “sets of legal rules that can be enforced by state actors - they are the ‘rules of the political game’” (Knill and Tosun, 2012: 41). Contingent events are events that occur or exist only due to prior events. Hence:

The identification of path dependence therefore involves both tracing a given outcome back to a particular set of historical events, and showing how these events themselves are contingent occurrences that cannot be explained on the basis of prior historical conditions (Mahoney, 2000: 507-508).

According to Mahoney (2000), there are two ways in which scholars analyze path dependency, which is through the self-reinforcing sequences logic and the reactive sequences logic. The self-reinforcing sequences often display what Mahoney calls “increasing returns” (Mahoney, 2000). The sequential development of a policy over time reinforces the policy as the benefits for the

actor's concerned increases (Knill and Tosun, 2012: 256). When a policy has been reinforced in a long-term of reproduction, it becomes increasingly challenging for political actors whom wish to change the existing policies or to try to shift to previously available options (Knill and Tosun, 2012: 256). This is also a challenging task for political actors, even if the present policy is viewed as suboptimal by several political actors (Knill and Tosun, 2012: 256; Mahoney, 2000).

On the other hand, path-dependency can be viewed as a reaction to the previous event. According to Mahoney (2000: 509) "reactive sequences are chains of temporally ordered and causally connected events". In other words, each event within a sequence is in part a reaction to a previous event (Knill and Tosun, 2012: 256). Thus, an outcome of a policy can be viewed as the final event, and "the overall chain of events can be seen as a path leading up to this outcome" (Mahoney, 2000: 509). This reasoning conceive of policy development as involving temporally ordered and causally chain of events can be seen as a path leading up to this outcome (Knill and Tosun, 2012: 256). Also, a new event or step in the path leading up to an outcome is dependent on prior steps. However, this does not mean that the reactive sequence are causally connected events, rather the historical event that sets the chain into motion must have properties of contingency, that is they events in the chain exists because of the previous events (Mahoney, 2000). Also, "the overall event chain itself must be marked by process of inherent sequentially" (Mahoney, 2000: 509). This line of reasoning departs from the long-term reinforcement theory, as it opens up for a reaction on a previous event that might depart from the existing way of thinking which is challenging the existing policy path. That meaning, a newly elected government might react to the previous government's choice of spending more money on a public service, with lowering the budget on that specific public service and thus choose not to reinforce the previous policy.

The difference between the self-reinforcing sequence logic and the reactive sequence logic, is that the former is "characterized by processes of reproduction that reinforces early events" and the latter is characterized by "backlash processes that transform and perhaps reverse early events" (Mahoney, 2000:526). Whereas the self-reinforcing sequence emphasis the strength of the recurrence of a pattern, the reactive sequence emphasis that events are triggered by earlier events. In a reactive sequence, the chain of events does not produce a given pattern, but sets in motion a chain of tightly linked reactions and counteractions (Mahoney, 2000). Mahoney cite

Pierson, whom suggests that “initial disturbances are crucial not because they generate positive feedback, but because they trigger a powerful response... action and reaction move the system in a new direction, but one that reinforced the first move” (Mahoney, 2000: 527). The self-reinforcing theory expect policy stability, with change being restricted to incremental adjustment of existing patterns. Here path-breaking can only be explained through a shock to the policy.

2.2.1 Theoretical expectations from the path-dependency perspective

In accordance with the path-dependent development theory, I expect to find that a policy is difficult to fundamentally change when it has previously been reinforced for a long time. The long term reinforcing makes it difficult for political actors to change the policy due to that the stability of the policy. From the self-reinforcing perspective, I expect to find that the shift in late 1999 and early 2000 can be explained by exogenous or endogenous factors that challenge the current policy, and therefore made a “break” from the path possible. However, the self-reinforcing perspective also contributes to the explanation to why the first shift did not become permanent, that meaning that the second shift put the policy back on track and in line with previous events.

TE1 = A policy that has been reinforced over a long period of time is difficult to change.

On the other hand, if there are shifts deviating from the previous path, it can also be explained by path-dependent development theory. For the reactive sequence perspective, I expect to find that the shift in late 1990 and early 2000 can be explained as a reaction to previous policy on feed-in schemes and that the shifts were a reaction to this policy. Also, I expect the second shift in 2008 to be explained as a reaction to the first shift.

TE2= A policy outcome is a reaction to a previous event, and thus policy changes can be viewed as a reaction to previous events.

2.3 Political Field Theory

This subchapter will consist of the theoretical arguments proposed by Elin Boasson (2015) on two political logics (competition and garbage can) and social mechanisms. The logics and

mechanism works in a specific political field. According to Boasson (2015: 38) a political field will produce differing mechanisms that will have an impact on climate policymaking. But the political field also have a set of structural characteristics. Boasson (2015: 39) distinguish between two characteristics: firstly, “the distribution of votes among parliamentary blocs and the composition of the government” will delegate the authority among political parties. Secondly, different parts of the government will have specific powers over a specific issue, which will “affect which minister and which parliamentary committees have a say” (Boasson, 2015: 39). Following this reasoning, “authority is rooted in parliamentary positions as well as in the government apparatus (Boasson, 2015: 39).

The structural resources can either be concentrated or distributed, and the structuring will influence policy making in different ways. Firstly, if the structural resources are “concentrated, and are controlled by the political leadership of one state ministry, they are likely to evade political steering altogether” (Boasson, 2015: 40). In addition, the parliament and the other political executive are less informed on a political issue when they are not involved in the decision-making, and thus they will show very little interest in the specific issue (Boasson, 2015: 40). Subsequently, the minister in charge of the political issue will also pay limit interest for the issue. However, if she or he does have an interest for the issue, she or he will have a large amount of power in that situation, according to Boasson (2015: 40).

On the other hand, when the structural resources are distributed and several political actors share the responsibility for an issue the situation will be different (Boasson, 2015: 40-41). In this situation more political actors will share the responsibility for an issue, they have more information about the issue, more incentives to engage in political discussions and prioritize putting energy and time into the issue (Boasson, 2015: 40-41).

Political logics on development of climate change policies

Boasson’s (2015) argument on the development of climate policy is tightly linked to the concepts of high or low salience. If an issue is of high salience it means that the political issue is important for the political actors, and subsequently, issues of low salience will be less important for political actors. According to Boasson’s (2015: 41) reasoning “whether a climate-policy issue is regarded as being of high or low salience will thus have major influence on how it is approached and handled by political elects: if we can understand the significance of an

issue, it will be easier to predict how politicians will treat it". Boasson (2015: 41) proposes two different political logics for explaining the actions of political actors on a given issue: competition and garbage can.

The first thought about political competition that people might have, might be that political competition revolves around quarrels between parties in parliament whom seeks to influence policy making. However, as Boasson (2015: 42) argue, it is more than quarrels, competition involves the many considerations political actors must take, amongst them their chances of getting elected or re-elected. The political actors choose issues to bring up to discussion based upon whether they see an advantage of bringing it up (Boasson, 2015: 42). When an issue of importance is brought up for discussion by politicians, the issue is not left to the bureaucratic employees, but rather the discussion will occupy the party or parties in government as well as the rest of the parties in parliament (Boasson, 2015: 42). From this reasoning, it might seem that politician's main concern is securing a position in the cabinet and securing this is the main factor in choosing political fields of interest. Boasson (2015: 42) argues that choosing issues based on the advantages it might bring is important because elections are important for politicians, and that there are no substitute for winning an election.

However, knowing what issues will win the votes of the electorate is a difficult task. The public might state that they want environmental friendly policies, but at the same time they want lower taxes (Boasson, 2015: 42). Hence, obtaining knowledge of what the electorate really wants is highly difficult due to inconsistency (Boasson: 2015: 42). According to Culpepper (cited in Boasson, 2015: 42), politicians can obtain knowledge about the electorate preference on a given issue, but what is more difficult is assessing the salience of the given issue.

When the politician knows little of the salience the public have on a political issue, they "will position themselves in relation to other politicians" (Boasson, 2015: 42). The positioning between parties will, according to Boasson (2015: 42), happen in different areas within the political field. It will play out in media, between parliamentary coalitions, within the state executive, and also within political parties. All this areas plays out at once, and politicians must aim their attention to several of the areas at the same time, in order to please the audience (Boasson, 2015: 42).

According to Boasson`s (2015: 43) reasoning, we can expect that when the competitive logic is dominating a policy issue, “the political actors will take into account the arguments and actions of other politicians - all the while trying to present themselves as normatively superior, with stable and reliable positions, and finally as the winners”. This type of behavior, however, demands a large amount of energy from the political actors and will probably only revolve around a few issues at the same time (Boasson, 2015: 43). Hence, a political issue may receive a large amount of attention for a short time period and subsequently fade from the spotlight (Boasson, 2015: 43).

The other political logic of Boasson (2015) is the garbage can logic. Boasson follows the logic of Michael D. Cohen, Jim March and Johan P. Olsen and their garbage can process (referenced in Boasson, 2015: 43). The garbage can process contains of three characteristics. The first characteristic portrays the politicians as having ill-defined preference at the beginning of the political process (Boasson, 2015: 43). According to Boasson (2015: 43) the process will begin with the political actors not knowing “what they want until they can see what they can get”. Rather than political beliefs and preferences guiding action, preferences will emerge through action (Boasson, 2015: 43). The political preferences the politicians do advocate for on a political issue will have largely symbolic importance, and “neither the politicians themselves nor the electorate will have good long-term memories” (Boasson, 2015: 43).

The second characteristic describe the politicians as not having a comprehensive understanding of the technology or the functioning of the policy (Boasson, 2015: 44). In addition, when the garbage can logic is present, the politicians will not be aware of the “full range of instruments available to them, nor will they be able to understand all the consequences of the various decisions alternatives” (Boasson, 2015:44). The third characteristic describes why politicians becomes involved in a specific political issue. There are many factors from which politicians can be influenced by to become involved with a political issue. Boasson (2015: 44) mentions: “the historical affiliations of their political parties, the inputs received when decisions are made, whether the policymakers have a special personal interest in the issue and whether they have time available to devote to a new issue”.

According to Boasson (2015: 44) reasoning, political actors will be aware of their opponent`s action within the specific field when the competitive logic dominates, whilst when the garbage

can logic dominates political actors will not follow their opponents closely and will be prone to echo their prior stands on the specific issue. Also, when the competitive logic dominated actors will see decision-making as an opportunity for gaining political wins, which is increasing their odds for election and re-election (Boasson, 2015:44). On the other hand, for the garbage can logic, decision-making will only have symbolic importance (Boasson, 2015: 44).

Boasson (2015: 44) also predict when we can expect stability of political positions. We can expect stability when the political competition logic dominates, and expect it to be low in the case of the garbage can logic (Boasson, 2015: 44). Further, Boasson (2015: 44) expects that when political competition dominates, the majority in office will have the main to say. Likewise, when the garbage can logic dominates. The decision-making will be done by those actors how happen to have time and energy available to use on the specific issue (Boasson, 2015, 44).

The social mechanisms

The mechanism legislature governing is a mechanism where national politicians are in focus, and work when formal powers are distributed and politicians compete over the issue in question (Boasson, 2015:44). This mechanism is often at work over an issue with high salience and of normative importance for the politicians. When such an issue is in a policy process, every aspect of the issue will be subjected to political deliberation, and all actors will work hard in order to win decision-situations related to the issue no matter have small or large (Boasson, 2015: 44-45). This mechanism has generally high distribution of authority and power compared with other fields, as it is the politicians that will have the final say in a policy formulation, not organizations or the EU. It is those politicians will devote energy to an issue and pay close attention to how it is dealt with in other fields (Boasson, 2015: 45). In regards to climate policy, politicians have often been on the forefront in this mechanism (Boasson, 2015: 45). But as Boasson (2015) holds, this may not be constant as all environmental issues tend to develop in cycles, and no issue will continue to be dominated by this mechanism forever.

Another social mechanism in the national political field, is the random decision making mechanism. The random decision making mechanism will be seen in “low-salience issues when many ministries and/or legislative committees share authority over an issue-area, or when formal decision-making authority over an issue is not clearly defined” (Boasson, 2015: 46).

This mechanism will work in relation to other issues, when few actors have time and energy for other issues. Some actors might engage based on personal motivation, but these actors will not be well coordinated, which will likely lead to an incoherent decision outcome (Boasson, 2015: 46).

2.3.1 Expectations from political field theory

From the political field perspective I expect to find policy stability when the political competition logic dominates, and expect it to be low in the case of the garbage can logic.

When the political competition logic dominates, I expect to find that politicians bring up an issue if they see an advantage of bringing it up. Politicians will position themselves in relation to other politicians. Politicians will present themselves as normatively superior. This type of behavior demands a lot of attention, and will not last for a long time. In case of the political competition logic, I expect to find that legislature governing mechanism is dominating.

TE3: In case of the political competition logic, I expect to find that legislature governing mechanism is dominating.

When the garbage can logic dominates, I expect to find that politicians will have ill-defined preferences at the beginning of the political process. The politicians will not have a comprehensive understanding of the technology or the functioning of the policy. Politicians will engage in an issue dependent on the historical affiliations of their political party, inputs received when decisions are made, when they have a personal interest in the issue and if they have available time to devote to a new issue. In case of the garbage can logic, I expect to find that the random decision making mechanism is dominating.

TE4: In case of the garbage can logic, I expect to find that the random decision making mechanism is dominating.

2.4 Summary

In this chapter I have accounted for concepts for measuring policy change, and the path-dependency theory and political field theory on how to understand the policy changes. The

concepts for political measurement has as descriptive purpose and the theories provide different explanation perspectives on the changes in Danish policies feed-in schemes on renewable energy in Denmark. The theories have in common that they emphasize on explanations on policy change. Whereas path-dependency emphasis the sequence of events and how a policy outcome must be viewed in terms of previous events, the political field theory emphasis political competition and garbage can logics based on if the politicians consider the issue as low or high salience and how structural power is distributed.

3. Background

In this chapter I will present information about the political parties in Denmark. I will present information about the elections in 2001, 2005, 2007 and 2011, in order to give a clear picture of the political landscape in each cabinet. This chapter also includes a brief historical background of renewable energy policy in Denmark.

3.1 Historic background

In 1979, the Danish government created the first ministry for energy policy. The Ministry worked with topics such as electricity supply, fees and prices, as one interviewee recalls whom worked in the ministry at the time (interview, former office chief in the Danish Energy Agency, 30.11.17).

Researchers points to the anti-nuclear movement as an alternative to nuclear power as a method of counteracting the oil crisis as the beginning of renewable energy policy in Denmark (Toke and Nielsen, 2015). Eikeland and Inderberg also point to the oil crisis as critical juncture for the development of renewable energy in Denmark, where Denmark's energy system has since "evolved from import- and fossil fuel dependency to self-sufficiency with a high share of renewable energy" (2015, 164). This transition has been supported by co-evolving energy policies road (Eikeland and Inderberg, 2015).

In the middle of the 1980s, the Danish parliament "decided to replace investment support to wind power with support to production; generators were granted a minimum support per kWh delivered to the grid, amounting to 85% of the household end-use tariff" (Eikeland and Inderberg, 2015: 167). However, through this policy turbine owners had to live within a certain distance from the turbine and also within the municipal of the turbine (Eikeland and Inderberg, 2015: 167). There were also restrictions on how much capacity they could own (Eikeland and Inderberg, 2015: 167).

The first policy on renewable energy in Denmark came in 1990 and was the first comprehensive energy policy embedded in a climate change frame (Andersen and Nielsen, 2017). The previous

energy agreements were framed in terms of energy security, rather than climate change. The ‘Energy 2000: Action plan for sustainable development’ from 1990:

... constituted an effort at cognitive and exemplary leadership, stating Denmark as one of the largest per capita CO₂ emitters carried a special responsibility for contributing to efforts towards an international agreement on preventing the greenhouse effect, and that this contribution would depend on the ability and determination to implement sustainability principles in Denmark’s own energy system (Andersen and Nielsen, 2017: 84-85).

In the ‘Energy 2000: Action plan for sustainable development’ from 1990, Denmark set targets for reduction of CO₂ emission at 20 percent by 2005 and also a 15 percent reduction on energy consumption (Andersen and Nielsen, 2017). These targets were to be accomplished through the conversion to cleaner energy sources for supply and increased integration of wind power in electricity production, underpinned by tax signals (Andersen and Nielsen, 2017: 85).

From 1993 to 2001, the Social Democratic party leads a series of coalition governments and during this time boost the ongoing energy transformation (Eikeland and Inderberg, 2015: 167). The reinforcing included “the decentralized structure of the energy sector and the state’s right to instruct power and district heating plants to use renewables and natural gas” (Eikeland and Inderberg, 2015: 167). The reinforcing also included wind power, and a feed-in tariff system were introduced that would grant “independent renewable energy producers priority grid access and a fixed guaranteed tariff based on production costs” (Eikeland and Inderberg, 2015: 167).

From the 1970s toward the 1990s, the Danish energy system saw a transformation from a high dependence on energy import to self-sufficiency. In 2000, the renewable energy share was 15% of the total energy supply, with wind power counting for 11, 6% (Eikeland and Inderberg, 2015: 167).

3.2 The political actors in Denmark 2001-2012

In the timescope of this study there has been four general elections in Denmark. From 2001 to 2011 the Left Party and the Conservative People's Party were in cabinet, the so-called VK-cabinet. This government coalition was led by Prime Minister Anders Fogh Rasmussen until

2009, when he became the General Secretary for NATO (Ryland, 2010). In 2009, Lars Løkke Rasmussen took over as leader of the Left Party and as Prime Minister in Denmark (Ryland, 2010). The cabinet was given the name the VK-cabinet, consisting of the first letter of each party (“Venstre” and “Konservative Folkeparti”).

The electoral system in Denmark is based upon that the reigning PM calls for new election within a four-year period. The election threshold to enter the parliament is on 2%, which gives room for representation from a numerous parties. For a description of the political parties in Denmark and the composition in the Danish parliament from 2001-2009, see table 1. The two largest and oldest parties in Denmark, the social democrats and left, are usually the party in government and with the prime minister.

The social democratic party was the largest opposition party to the VK government from 2001 to 2011, with 24-29% of the voters (see table 1). In 2011, the Social Democrats won the election, and formed a cabinet with the Social Liberal Party and the Socialist People’s Party (Danmarkshistorien.dk, May 27, 2015d).

Table 1. Political parties in Denmark

| The party | Originated | Description | % Of votes in the election in 2001 | % Of votes in the election in 2005 | % Of votes in the election in 2007 | % Of votes in the election in 2011 |
|---|-------------------|--|---|---|---|---|
| Social Democrats (Socialdemokrati et) | 1870 | Centre-left, social democratic party. | 29,1% | 25,8% | 25,5% | 24,8% |
| Danish People's party (Dansk Folkeparti) | 1995 | Right wing, Populism, national conservative. | 12,0% | 13,3% | 13,9% | 12,3% |
| Left, Denmark's liberal party (Venstre) | 1870 | Centre-right, conservative liberal party. | 31,2% | 29,0% | 26,3% | 26,7% |
| Socialist People's Party (Socialistisk Folkeparti) | 1959 | Left wing, democratic socialist and green | 6,4% | 6,0% | 13,0% | 9,2% |
| Conservative People's Party (Det konservative Folkeparti) | 1870 | Centre-right, liberal conservative party. | 9,1% | 10,3% | 10,4% | 4,9% |
| Radical left (Det Radikale Venstre) | 1905 | Centrist, social liberal party. | 5,2% | 9,2% | 5,1% | 9,5% |

| | | | | | | |
|--|--------------------------|--|------|------|---------------|------|
| Red-Green Alliance (Enhedslisten) | 1989 | Left wing, socialist party. | 2,4% | 3,4% | 2,2% | 6,7% |
| Liberal Alliance/New Alliance (Liberal Alliance) | 2007 | Centre-right, classical liberal party. | | | 2,8% | 5,0% |
| Center democrats (Centrum demokratene) | 1973 (dissolved in 2008) | Centre | 1,8% | 1,0% | (Did not run) | |
| Christian democrats (Kristen demokratene) | 1970 | Centre right, Christian democracy | 2,3% | 1,7% | 0,9% | 0,8% |

(Danmarkshistorien.dk, May 27, 2015a; Danmarkshistorien.dk, May 27, 2015b; Danmarkshistorien.dk, May 27, 2015c; Danmarkshistorien.dk, May 27, 2015d; Folketinget, 2018).

3.2.1 The VK-cabinet (2001-2011)

This subchapter will consist of information from the governmental platforms of the four VK-cabinets. The information from the governmental platforms provide information about the overarching goals and prioritizing of issues of the cabinet and how it might change over time. General elections were held in Denmark on November 20th 2001. For the first time since 1924, the Social Democrats did not win the majority of the seats. Anders Fogh Rasmussen won the election and became Prime Minister in coalition with the Conservative Party, as head of the first Rasmussen government, with the support from the Danish People's Party (Danmarkshistorien.dk, May 27, 2015a; Eikeland and Inderberg, 2015).

The governmental platform mainly contains environmental efforts such as securing a healthy aquatic environment, renovation of sewage systems, and monitoring of oil spill (VK

Regjeringen, 2001). Further, it says that the government will conduct an environmental policy that secures a clean environment for future generations (VK Regjeringen, 2001). Denmark shall live up to the commitments of international environmental agreements and be the industrial country that is “best” at reducing pollution (VK Regjeringen, 2001). According to the governmental platform these ambitious environmental goals shall be reached in the economically most efficient way (VK Regjeringen, 2001). The VK-cabinet wishes to develop an environmental policy that combines a responsibility for their surroundings with a realistic international cooperation for reducing pollution, where they can get the most for their efforts (VK Regjeringen, 2001). With regard to getting most environment for the money, the government wanted to draft a report on “green market economy” that shall analyze the possibilities for practical use of market oriented instrument for enhancing a better environment (VK Regjeringen, 2001).

General elections were held in Denmark February 8th 2005 and Anders Fogh Rasmussen party retained the largest number of seats in the Parliament (Danmarkshistorien.dk, May 27, 2015b). The coalition between the Left Party and the Conservative Party remained intact, with the Danish People’s Party still providing parliamentary support necessary for the minority government. In the governmental platform to the Rasmussen II cabinet from 2005, their main focus is globalization and how Denmark shall handle it (VK Regjeringen II, 2005). The focus on globalization is how it can affect Danish businesses and competitiveness on an international market (VK Regjeringen II, 2005). About the environment, they write that the cabinet will continue their efforts on reducing pollution on a global level (VK Regjeringen II, 2005).

The 13th November 2007, the VK-cabinet were re-elected for another four years (Danmarkshistorien.dk, May 27, 2015c). For the first time, the governmental platform included a separate chapter for climate and energy policies (VK Regjeringen III, 2007). In previous platforms, issues on climate and energy were under the environment chapter (VK Regjeringen III, 2007). In this platform the cabinet states that they wish to double the share of renewable energy within 2025, and that they want to secure a more efficient way of using energy and research on energy technology (VK Regjeringen III, 2007). They wish to do this in order to protect the climate and become independent of fossil fuels in the future, which they have as a long term goal (VK Regjeringen III, 2007).

In the platform for the VK-cabinet III, they argue that they seek to reduce the dependency of fossil fuels and reduce the current energy use without putting a lid on economic growth (VK Regjeringen III, 2007). The VK-cabinet III wants to have a new law that focus the effort on gaining more renewable energy (VK Regjeringen III, 2007). In this law, they wish to determine the frames for the development of renewable energy, and they want more biomass and waste and less fossil fuels in central power plants (VK Regjeringen III, 2007). They want more development of wind energy, and wish to improve the efficiency of the energy tariffs so that they in order to reach the cabinet's goal on renewable energy and Denmark's international climate obligations in the most cost effective way (VK Regjeringen III, 2007).

In 2009 incumbent Prime Minister Fogh Rasmussen was offered the position as General Secretary of NATO. Subsequently, Lars Løkke Rasmussen took over as the party leader of the Left party and as Prime Minister for Denmark until 2011. Two years later, on September 15th 2011, the electorate votes were in favor of the Social Democrats.

3.2.2 The opposition (2001-2011)

This subchapter will consist of information on the main opposition party to the VK-cabinet, the Social Democrats. The information will consist on their overarching goals in party programs, in order to gain an image of what the competition to the VK-cabinet position is.

The largest party in opposition to the Fogh Rasmussen government, has been the Social democrats. At the election in 2001 the Social democrats received 29, 1% of the votes, while the Left received 31,2% (Danmarkshistorien.dk, May 27, 2015d). In the Social Democrats party program from 2001 the main message is a focus on globalization and its challenges (Socialdemokratiet, 2001). About environment policies, they state that they do not wish to play hazard with the economy, and they do not wish to play hazard with nature resources (Socialdemokratiet, 2001). Therefore there is a need for a firm hand in environmental politics, as such the principle of environmental sustainability maintains and constantly evolves (Socialdemokratiet, 2001).

The Social Democrats want the polluter to pay for its own pollution (Socialdemokratiet, 2001). They wanted new rules about product responsibility for the industry, so that they are made accountable for those substances they use in their production and products, which are released

out on the market (Socialdemokratiet, 2001). The Social Democrats want to focus more on renewable energy with continuing energy efficiency and the shift towards more renewable energy, with a goal that 30% of Danish electricity shall come from renewable energy, and in the longer run account for 50% of Danish electricity (Socialdemokratiet, 2001).

At the party congress for the Social Democrats in 2004 they harshly criticize the incumbent governments environmental policies (Socialdemokratiet - Sosialdemokraterne, 2004). They also propose a new energy plan with more renewable energy (Socialdemokratiet - Sosialdemokraterne, 2004). They criticize the government for cut the Danish environmental effort with 40%. They argue that 1 billion DKK is missing, that was previously used on securing the environment for future generations (Socialdemokratiet - Sosialdemokraterne, 2004). The Social Democrats wanted to strengthen the environmental effort for the benefit of future generations (Socialdemokratiet - Sosialdemokraterne, 2004). They wanted to secure that Danish businesses again can have the support to develop new products, where dangerous chemicals are replaced with less dangerous chemicals (Socialdemokratiet - Sosialdemokraterne, 2004). They wanted to invest in better use of the energy and secure access to nature (Socialdemokratiet - Sosialdemokraterne, 2004).

4 Research design and method

The objective of this study is to gain insight into the policy process leading up to the 2012 Danish energy policy on feed-in tariffs. In this time period, the Danish policy has shifted from reducing support on renewable energy to reinstating it. The objective of this study is to find out how the outcome of the 2012 energy agreement can be explained. This will be done through the research design and method presented and discussed in this chapter.

In this chapter I will begin with presenting the research design (case study) and research method (process tracing). I will then present the collection of the main empirical sources: journal articles, legislation on renewable energy and interviews. Finally, I will discuss the reliability and validity of the research design.

This project is assessed and approved by the Norwegian Center for Research Data, as the research I have conducted deals with personal data.

4.1 Case study as research design

A research design is most commonly divided into four components: the research question, the theory, the data and the use of data (King et al., 1994:13). The research design for this thesis is a case study. For this thesis, the case is renewable energy policy on support mechanisms in Denmark, and it is from this policy process I draw data from. The research question and theory is designed to explain the case of the political process in Denmark. The data and the use of data will be discussed further in this chapter, but firstly I will discuss case study as research design.

What is a case study? Case studies are stories with a point (Moses and Knutsen, 2012). They are, as Moses and Knutsen (2012) puts it, cases of something. That “something” is what makes the case under study interesting, relevant or “in focus” (Moses and Knutsen, 2012). The case is interesting, relevant or “in focus” because of a larger theoretical concern or a specific research project (Moses and Knutsen, 2012). For this thesis, that “something” is the political process on the support mechanism feed in-tariff/feed-in premium, and what makes it interesting is how it shifted in 1999 and 2006. A case study also has a purpose of shedding light on a larger class of cases (Gerringer, 2007:20). A case study examines a phenomenon in depth, not only to gain

knowledge about that specific phenomenon, but also similar cases as the case is a type of. In other words, the case study in this thesis seeks to generalize to a larger universe.

Given that the case study seeks to generalize, it is important to define what kind of universe one seeks to generalize about. The purpose of this study is to investigate the political process on a support mechanism for renewable energy, and thus gain an understating on the political debate evolving around such a policy mechanism. As argued in the introduction, political actors such as the European Commission and the IPCC holds that states should increase their share of renewable energy in order to mitigate climate change. The political debate and political processes on supporting renewable energy is therefore an issue for many countries. The case study of this political issue in Denmark is a case in the larger universe of cases regarding supporting the development of renewable energy.

Case studies can take on a supporting role to approaches that are better endowed to identify empirical patterns (Moses and Knutsen, 2012:134). When it is done correctly, “multimethod research combines the strength of large-N designs for identifying empirical regularities and patterns, and the strength of case studies for revealing the causal mechanism that give rise to the political outcomes of interest” (Moses and Knutsen, 2012:134). The naturalistic case study seeks to “isolate particular connections in the explanation that they might turn out to be causal” (Moses and Knutsen, 2012:134). By doing so, the case study may zoom in on causal processes as they naturally exist in the Real World, untainted by control techniques (Moses and Knutsen, 2012:134). This is what I seek out to do in this thesis, and by looking at finer levels of detail or a lower level of analysis than those proposed by theoretical explanations, the goal is to “document whether the sequences of events or process within the case fit those predicted by alternative explanations of the case” (Bennett 2008:705). The case study researcher is focused on explaining a single outcome (Moses and Knutsen, 2012). My aim with this case study, as all case studies, is to “unearth evidence of a hypothesized causal mechanism buried in the experience of a particular case” (Moses and Knutsen, 2012:134).

George and Bennett (2005:94) argues that one should indicate the initial expectations and if they were changed during the course of the study. I expected there to be more literature on the topic. Like in all research, I have to make the choice between “knowing more about less, or less about more” (Gerringer, 2007: 49). Initially, I sought to “know more about less” as I chose to

narrow my research scope to the support mechanism feed-in tariffs in Denmark. However, as I set forth my research, the story of the feed-in tariff was integrated in the larger climate discussion in Denmark.

One of the most central and widespread approach for causal case study research is process-tracing, which I will discuss in the following sub-chapter (Beach and Pedersen, 2016:3).

4.2 Process tracing as research method

The study of this thesis is interested in finding out variable, X1, inference with another variable, Y. In the case of process tracing there are often multiple independent variables (Xs), that meaning that process tracing usually involves long casual chains (Gerringer, 2007:173). The causal chain might be long, have multiple circumstances, switches and feedbacks (Gerringer, 2007:173). As Gerringer (2007) puts it, process tracing is akin to detective work. Where the detective collect information from the maid and the butler, I will collect information from various sources on the behavior of the politicians. As each of the facts from the maid and the butler is relevant to the central hypothesis - that Jones killed Smith - each fact collected in this thesis will be central to the theoretical expectations in this thesis (see chapter two). However, these facts are not directly comparable to one another (Gerringer 2007). Together, the information will collectively form the narrative of the political process which is under study.

The aim of this paper, as stated in the introduction, is to understand the policy process on renewable energy in Denmark. The methodological approach will therefore be a process-oriented approach. But what is a process? Bryman eloquently quote Pettigrew, which put forward that “process is a sequence of individual and collective events, actions, and activities unfolding over time in context” (Bryman, 2012:402).

Adcock and Collier (2011: 823) defines process tracing as “the systematic examination of diagnostic evidence selected and analyzed in light of research questions and hypotheses posed by the investigator”. Process tracing not only enable the researcher to describe a political phenomenon, but also to evaluate causal claims (Adcock and Collier, 2011:823). Adcock and Collier usefully describe an approach for begin to carry out a process tracing:

It can (therefore) be productive to start with a good narrative or with a timeline that lists the sequence of events. One can then explore the causal ideas embedded in the narratives, consider the kinds of evidence that may confirm or disconfirm these ideas, and identify the tests appropriate for evaluation this evidence” (Adcock and Collier 2011:828-829).

The definition above does define what process tracing is, but does not include what kind of data material is appropriate. Adcock and Collier (2011) argues that there are two common data material collection approached in process tracing: 1) personal notes from the people involved in the process and 2) interviews. Interviewing people involved in the process seems like the appropriate approach for this thesis, because it is not likely that enough people keep personal notes and that interviews can enable me to ask questions they might have not included answers to in their personal notes.

4.3 Triangulation: The datamaterial

Data are “systematically collected elements of information about the world” (King et al., 1996: 23). When I started studying this case I began with gathering the most easily accessible academic literature on the case. According to George and Bennett (2005:89), this is usually the first step in studying a case which one is not intimately familiar with. This search for information for the case, known as “soaking and poking”, can help the researcher form a narrative of the events of the case (George and Bennett, 2005:89). This process of “poking and soaking” can help identify possible gaps in existing accounts (George and Bennett, 2005:89). For my case, I found remarkably little previous journal articles on the renewable energy policy development in Denmark. I spend a lot of time searching on search engines such as “jstor” and “google scholar”. I did find a few contribution, such as Eikeland and Inderberg’s (2016) “Energy system transformation and long-term interest constellations in Denmark: can agency beat structure”, and Andersen and Nielsen (2017) “Denmark, small state with a big voice and bigger dilemmas”. These contributions were helpful in forming a narrative of the events of the case, but I still believed there was a story to be told about the political drama behind the negotiations. I expanded my “soaking and poking” to newspaper articles, but found remarkably few articles on the case.

When a single research method is inadequate, triangulation is used to ensure that the most comprehensive approach is taken to solve a research problem. Using more than one source of data means that the sources can be used for checking one source against another to reduce the danger of misleading information in the data sources, hence increasing validity (Mosley 2013:194). In addition to using journal articles as sources I have conducted interviews.

4.3.1 Interviews

The interviews conducted for this study were semi-structured. A semi-structured interview is described as where “the researcher has a list of questions or fairly specific topics to be covered, often referred to as an interview guide, but the interviewee has a great deal of leeway in how to reply” (Bryman 2012: 471). The advantage of using a semi-structured interview is that it is useful when the objective of a study is to evaluate causal arguments (Martin, 2013:117). The semi-structured interview has some of the advantages from both unstructured and structured interviews, as the interview opens for the interview participant to provide information that the interviewer does not know in advance. At the same time the semi-structured interview enables hypotheses explanation because similar questions have been asked to all the interview participants. This increases the reliability of the data collection.

Interviews with elite participants, should revolve around incidents that took place in the near future (Beckmann and Hall, 2013:203). For this case, this might pose as a challenge since the phenomenon under investigation happened from 1999 to 2012. I have tried to reduce the risk of measurement error in the interview guide and through triangulation with journal articles.

4.3.2 Identification of interview participants

As the objective of this study is to explain the political decisions process in Denmark, the interview participants must have substantial insight into the decisions being made. It is reasonable to assume that both politicians and governmental officials have been involved in the decision making process. It is the politicians who makes the decision, but politicians may lack objectivity in narrating the story. Government officials have a role as an objective civil servant, and might bring a more objective narrative of the story. Nonetheless, “identifying informants is far different from interviewing them” (Beckmann and Hall, 2013:200). Elite interview informants are busy, and often can getting the potential responded to return a call or an email

be the most difficult part of doing interview-based research (Beckmann and Hall, 2013:200). Beckmann and Hall (2013:201) suggests to start with a “toehold” respondent and then “snowball” through social networks to get others. By doing this, I can name-drop the “toehold”/background contact when contacting the target respondent. I followed the advice of Beckmann and Hall and reached out to “toehold” respondents to start a “snowball”.

When contacting the interview participants I send them an email with an information letter² containing information about myself, the project, and the objective of the research (Beckmann and Hall, 2013:203). After sending the emails, I sent them follow-up emails to secure a higher level of responds.

The objective of this study is also to get an understanding of the political drama in the negotiations, and therefore I sought contact with the chairman of the energy and environment committee for the Danish parliament. The energy and environment committee consist of representatives from each party in the parliament and the members are spokesperson from their respective parties. The chairman of the energy and environment committee had one suggestion of whom who had agreed to be contacted by me, and this person agreed to do an interview.

For finding government officials I contacted relevant people recommended by my guidance teacher from her social network on politics and renewable energy research. From this, I got in contact with one of the interview participants. I also contacted people in green think tanks in Denmark, however with minimal responds. Another relevant place to find government officials were in the Danish Ministry for Environment and Energy. From the Ministry I got an additional two interview participants, which summed up to a total of four interview participants. In the interviews I probed for potential additions to the sample, but the interview participants mostly proposed each other.

Although a higher number of interviews would be favorable, there comes a time in a research process where the collection of data must stop in order to facilitate completion of useful research (King et al, 1994:25). As King et al (1994:25) argues, “... more information, additional cases, extra interviews, another variable, and other relevant forms of data collection will always

² The information letter is attached as attachment number 2.

improve the certainty of our inference to some degree, promising, potential scholars can be ruined by too much information as easily as by too little”. There is an assessment that needs to be done on the amount of data collected and it that data is sufficient to answer the research question in a way that secure the quality of the results which are drawn from the information. The prescription for being unproductive is insisting on reading yet another book or finding yet another interview without writing a single word (King et al, 1994:25). I have tried to reduce the effect of a low number of interview participants through triangulation with journal articles.

The interview data together with the data from journal articles forms the foundation for the analysis and the conclusion on how the outcome of the 2012 energy agreement can be explained. In the presentation of the data in chapter 5 it is important to present them in manner that makes it possible to assess the conclusions being drawn. I therefore refer to the sources where I have collected the information from continuesly throughout the text.³

4.3.3 Conducting the interviews

The interviews were conducted on November 29 and November 30th 2017 in Copenhagen. I was able to make appointments with the interview participants within in a two day time period, which made it possible and reasonable to travel to Copenhagen and conduct the interviews in person. Conducting the interviews in person rather over the phone makes it easier to establish a good relationship between the interviewer and the interview participants.

The interviews were recorded after consent from the interview participants. Shortly after the interviews were conducted, they were transcribed with high precision. The interview participants were promised that the recordings and transcribed files would be saved on a safe computer and deleted after the research has been ended. They all agreed to this.

4.3.4 Interview guide⁴

The introduction for the interview guide is inspired by Beckmann and Hall (2013:203). In the introduction I quickly reaffirm what was said in the introductory email, where I introduced

³ Information about how the interviews are referred, see list of references.

⁴ The interview guide is attached as attachment 1.

myself, the project, and the objective of the research (Beckmann and Hall, 2013:203). In the introduction the interview participants were promised confidentiality, and that their answers would be put together with those of 3-4 other interview participants. After the introduction the interview participants received a letter of consent⁵ for the information they were about to share could be used in this study.

I start the interview with a grand tour question. Grand questions is useful in elite interviews as “they ask the informants to verbally walk the interview through an area which they are expert “(Leech et al, 2013:216). The grand tour question covers the entire time period of the study and ask the informant to shortly take me through the political process. From there, I organized the question chronologically after phases and thematically. I divided the time periods where it were natural. This will contribute to make up for the fact that the events under study happened 5-17 years ago. Each time phase is introduced with significant events categorizing the phase.

The questions are formulated in way that makes the informant describe the process. In the questioning I must be careful not to ask for analysis from the informants, and focus more on gaining facts from the interviews. I have started with more open questions, then followed up with more specific questions, or “prompts”. It might also happen that the interview participants provide their analysis of the events on their own initiative. These analysis can provide valuable insight, but at the same time it is important to be critical to this type of information as the informant in some instances analyze their own behavior.

According to Mosley (2013:194) “using journal articles and other public sources can be very useful to an interviewer if the interviews are being used to acquire facts or objective data”. In my research I am both interesting in what happened in the political process, but I am also interested in knowing why it happened. Asking questions as to why it happened is difficult in research because it depends largely on the objective information gathered. This is a concern both I as a research and readers of my results be aware of. Avoiding putting words in the interview participant’s mouth is crucial in order to secure high confidence of measurement validity. However, I also have a sense of what kind of information I want to get from the

⁵ The letter of consent is attached as attachment 3.

interview. In these situations there is a gray area before the questions becomes leading. This concern has been taken into account in the analysis.

The interview is designed to resemble a conversation, in order to promote an honest and open answers. This entails that the order for the questions might deviate some, and some question might already be answered by the interview participant in the “grand tour” question or another question. By doing this, the validity is increased, but at the same time the interviews become less reliable. However, by using the interview guide as a checklist to see if all the different thematic are covered in the interview, the confidence of reliability is strengthened. In the interviews I also tried to “prompt” more on the issues I knew from background information that the specific interview participant would have more knowledge of. Tailoring the interviews in this way can be at the expense of comparison across the interviews in the analysis. Nonetheless, tailoring did give valuable information.

4.4 Validity and reliability

The most prominent criteria’s for evaluation in social science is validity and reliability (Bryman, 2012:46). Validity is concerned with the integrity of the conclusions that are generated from a piece of research and reliability is concerned with the repeatability of the study (Bryman, 2012:46).

A case study has potential for achieving high conceptual validity (George & Bennett, 2005:19). For interviews, validity is concerned with “whether the researcher is asking the right questions in the right way, as well as whether the interview participant is offering truthful answers (and, if she is not, whether the researcher is able to detect this)” (Mosley, 2013:21). Knowing whether the interview participant is offering truthful answers is a difficult task to measure with a high degree of confidence. As King et al (1994:25) argues, if an informant responds to our question by indicating ignorance, all we can say with confidence was that he was ignorant, which is a valid measurement. But what the interview participant really means is an altogether different concept, which is a measurement which is difficult to measure with validity (King et al, 1994:25).

The interview data also depends upon receiving accurate and truthful information and “must guard against the possibility that the interviewee is - deliberately or inadvertently - “playing

her”, in order to secure a high level of confidence (Mosley, 2013:21). There is also a possibility that the interview participants simply don't remember correctly. As my research revolves around events that happened between 17 and 6 years ago, there is a concern that the interview participants lack accurate information due to the time passed since the events occurred. This uncertainty I have tried to reduce by informing the interview participants what the topic of the interview is, hence giving them time to think over the events prior to the interview. Also, in the interview guide I started the interviews with a “grand tour”-question, and asking the interviewer to “think back to 2001”. This is, according to Mosley (2013), a way of reducing the risk of poor memory, and subsequently increasing the possibility for receiving accurate and truthful information. The researcher can also guard against this threat by using what they have learned through previous interviews, and other empirical sources, to check the validity of future interviews (Mosley, 2013: 22). The interviewer can use the information about the context of the interview for his or hers advantages, as the researcher “usually has a sense of the internal consistency of the interviewees’ answers, the biases revealed by the interviewee, and the points of hesitation during the interview” (Mosley, 2013:22).

Another criteria for validity, is the concern of whether the researcher is asking the right question (Mosley, 2013:21). In order to secure that I am asking the right questions, I have gather information form research literature and legislation in order to secure a substantial knowledge of the issue at hand. I also try to ask more questions about what happened, rather than questions about why something happened. As I am also interested in gaining information as to why something happened, gaining a sense of how informants understand their reality is important for the research.

What conclusions can be drawn from the interviews with high confidence of measurement? Here I must guard against hearing what I want to hear (Mosley, 2013:22). Mosley (2013:22) proposes triangulation as a means of avoiding hearing what I what to hear, by evaluation the interview data in light of other empirical data, which I am. If I find that the information from the interviews differ from the empirical data, it does not necessarily mean that interview information is invalid (Mosley 2013:23). Rather, it could indicate that the “interviews are capturing a process more accurately than other forms of analysis” (Mosley, 2013:23).

The reliability of data material is concerned with “the confidence we can place in a given instrument of measurement “(Mosley, 2013:24). The most important measure to increase reliability is the detailed documentation of references. That is because it should be possible for researcher to replicate the research and find the same results (George & Bennett. 2005:23). In process tracing based on public written material, the problem of reliability is reduced. The public material I use in chapter five can be verified and are listed in my references. I have made an effort to indicate the page number of my references were possible, in order to increase reliability.

The questions a researcher must answer when dealing with the reliability of interviews is “to what extent is the information collected in an interview accurate, and how much confidence do we have that, were the interviews to be repeated again, would the same information be generated” (Mosley, 2013:24)? First, to collect accurate information in an interview requires the researcher to record the information in an effective way (Mosley, 2013:24). For my research I transcribed all my interviews shortly after the interviews were collected. I recorded the interviews on a tape recorded after asking for permission to record from the interviewees. The tapes have after transcription been deleted. Another concern is whether the interviewer may receive a different answer than another (Mosley, 2013:25). This is a concern linked to the reliability related to interviewer effects and positionality, and may be difficult to eliminate entirely (Moseley, 2013:25). However, triangulation might help secure reliability when the information from the interviews are weighted against the information from journal articles and official documents. Second, Mosley (2013:25) proposes that a final check on reliability would to interview the same individual again, and see if would result in the same results. By doing so the researcher could check the consistency in the data over time (Mosley, 2013:25). Conducting several interviews with the same individuals would however be time consuming and probably annoying for elite interviewees who have limited time to spare in their schedule. Where a second interview does not occur, I must rather be aware of the potential for measurement error (Mosley 2013:25).

5. The political process on feed-in schemes

This chapter will consist of a detailed timeline on the renewable energy policy on feed-in tariffs in Denmark. The timeline is based on interviews, Danish legislation and research literature, as discussed in chapter 4. This timeline will function as the basis for the later analysis in chapter 6, where I will discuss the theoretical expectations and results. The chapter starts with a description of how the feed-in schemes has changes up until 2012.

5.1 Feed-in schemes

In this sub-chapter, I will begin by defining feed-in schemes as policy mechanism. Subsequently, I will describe in short how the feed-in scheme has evolved from 1999, when the first signs of liberalizations began, until 2012, when the current energy agreement was agreed up on.

Feed-in payments can take the form of a tariff or a premium. A feed-in premium take the form of a payment “to the producers on top of the electricity market price” (Commission, 2008: 5). A feed-in tariff “take the form of a total price per unit of electricity paid to the producers” (Commission, 2008: 5). A main difference separating the feed-in tariff and the feed-in premium is that the feed-in premium “introduces competition between the producers in the electricity market” (Commission, 2008: 5). The feed-in scheme is used as a policy instrument, since “both feed-in tariffs and premiums can be structured to encourage specific technology promotion and cost reductions (the latter through stepped reductions in tariff/premium)” (Commission, 2008: 5).

Both feed-in premiums and feed-in tariffs have been used in Denmark. Feed-in premiums have been used on onshore wind turbines and biomass for electricity production (interview, former office chief in the Danish Energy Agency, 30.11.17). Offshore wind turbine tenders and biogas for electricity production have been given feed-in tariffs (interview, former office chief in the Danish Energy Agency, 30.11.17). Solar power have also been given a feed-in tariff.

5.1.1How has the feed-in scheme changed?

Prior to 1999 the feed-in tariffs were 0.60 DKK/kWh. In the subsidies for wind turbine act (1999), the feed-in tariff was lowered to 0.43 DKK/kWh for turbines connected to the grid in the period 2000-2002 (IEA, 2012). Turbines connected to the grid in the period 2003-2005 are eligible for a premium of 0.10 DKK/kWh (IEA, 2012). The turbine is eligible for premium until the turbine is 20 years old (IEA, 2012).

In other words, in 1999 it was decided that the feed-in should be lowered for new wind turbines being developed sequentially from 2000 to 2005. For the industry, this meant that they would receive less in subsidies on turbines connected to the grid after 2000, and only 0.10 DKK/kWh after 2003.

In June 2001, a few months prior to the election and change of government, it was decided that new wind turbines would be guaranteed a fixed price, that is feed-in tariff, of 0.33 DKK per kWh for the first 10 years of production (IEA, 2015). When these hours were used, remaining electricity produced by the wind turbine was to be settled at the market price. Furthermore, a premium of DKK 0.10 per kWh was added to the market price (IEA, 2015). The premium were to be replaced by green certificates for electricity production once the coming green market for renewable energy was established, as planned for 2004 (IEA, 2015).

In other words, from June 2001 new wind turbines would be eligible for a feed-in of 0.33 DKK per kWh for 10 years (IEA, 2015). The support changes from 0.43 DKK/kWh for turbine connected to the grid for 2000-2002 and 0.33 DKK/kWh for turbine connected after 2003 for a 20 year period, to granting 0.33 DKK/kWh for a period of 10 years (IEA, 2012; IEA, 2015). The latter were to be replaced by green certificates in 2004 (IEA, 2015).

5.1.2 Changes in the feed-in schemes after the election in 2001

In June 2002, the feed-in tariff was lowered to 0.10 DKK per kWh for a maximum of 10 years (IEA, 2013). The previous level had been 0.33 DKK/kWh for 10 years. Two years later, in 2004, a new agreement insured that the subsidy together with the market price ensured a price of 0.60 DKK/kWh for power plants connected to the grid before April 2004 (IEA, 2013). For renewable energy power plants connected to the grid after April 2004, will receive a premium of 0.10 DKK/kWh for 20 years. In the agreement from 2004 it was also included the two new offshore wind turbine parks.

This meant that the feed-in tariff was decreased to 0.10 DKK in 2002 from the 0.33 DKK per kWh in the agreement from 2002. However, it is interesting is that the feed-in was not replaced by green certificates, as expected from the discussions from 2001.

5.1.3 Changes after the political shift in 2006

In 2008, the government agreed to give a feed-in tariff at 0.25 DKK per kWh, for 2200 full load hours, for up to 10 years (IEA, 2014). In 2008, feed-in schemes were still the preferred support instrument. In other words, the feed-in tariff was increased with 0.15 DKK from the 0.10 DKK in 2004 to 0.25 DKK/kWh in 2008. This meant a higher subsidy, and thus more support to the renewable energy industry. In the agreement from 2012 it was decided to make two additional wind turbine farms (Energi, klima og forsyningsministeriet, 2012). One on Kriegers Flak and the other on Horns Rev III. Swedish "vattenfall" submitted a tender on the wind turbine park on Kriegers Flak for 0.37 DKK per kWh (interview, former office chief in the Danish Energy Agency, 30.11.17; Energi, klima og forsyningsministeriet, 2012).

To summarize, the feed-in scheme has evolved from being relatively high up until 1999, decrease in 1999, 2001, 2002, and 2004, to increasing in 2008 and 2012. Also, there were a wish in 2001 about changing over to green certificates in 2004, which didn't happen. Now over to the political process behind the legislative changes.

5.2 Phase one: The first signs of liberalization (1999-2000)

The process of liberalizing the energy sector started in 1999, according to one interview informant (interview, former office chief in the Danish Energy Agency, 30.11.17). Svend Auken, the incumbent Minister of environment, issued several legislations liberalizing the energy sector. At this time, the Social Democrats and the Danish Social Liberal Party were in government, called the Cabinet of Poul Nyrup Rasmussen IV. According to one interviewee, Up until 1999 there had been given a feed-in premium between 0.27 Danish kroners per kWh to 0.99 Danish kroners per kWh which was paid over the fiscal budget (interview, former office chief in the Danish Energy Agency, 30.11.17).

In 1999 there was a wish to save on expenses, and it was decided that the fiscal budget should include savings on the renewable energy as a consequence of the liberalization (interview, former office chief in the Danish Energy Agency, 30.11.17). This happened because the incumbent finance minister from the Poul Nyrup Rasmussen IV cabinet made a deal with the leader of the left party, Anders Fogh Rasmussen, “that the liberalization of the electrical sector should provide 2 billion Danish kroners in savings” (interview, former office chief in the Danish Energy Agency, 30.11.17). However, they had not agreed on how the savings should be obtained. So the Minister of Environment, Svend Auken, proposed that the subsidies should be removed from the fiscal budget over to the PSO charge⁶ (interview, former office chief in the Danish Energy Agency, 30.11.17). The subsidies was then removed from the fiscal budget to the PSO charge after an agreement between the social democratic party, the left party, and several other parties (interview, former office chief in the Danish Energy Agency, 30.11.17).

Eikeland and Inderberg (2015: 168) argues that an important backdrop for the policy shifts in late 1990s, were neoliberal governance ideas diffusing since the early 1980s. These ideas held that in order to promote economic efficiency, state regulation needed to be deregulated and taxes needed to be cut (Eikeland and Inderberg, 2015). Reforms based on these ideas spread also to the energy sector, and were taken up by neighboring Nordic countries and the EU in connection with the creation of an internal energy market (Eikeland and Inderberg, 2015). This in turn, challenged various parts of the Danish energy system governance: the not-for-profit norm, the local energy system ownership model and central planning orientation, and the generous state support system to promote further development of renewable energy industries (Eikeland and Inderberg, 2015).

Eikeland and Inderberg (2015: 168) argues that Svend Auken, the incumbent Minister of Energy and Climate, were against these neo-liberal ideas, but that he acknowledged that Denmark would have to follow EU requirements. Svend Auken followed the general reform ideas by the EU Commission, but “managed to upload the idea that the state could impose public service obligations on its energy industries in order to secure supply, consumer and environmental protection – points that were included in the EU 1996 Electricity Directive” (Eikeland and Inderberg, 2015: 168).

⁶ The PSO charge (Public service obligation) is an addition on the energy consumption for private consumers and business. The revenue goes to produces of green energy, amongst other things (Eikeland and Inderberg, 2015).

In 1997, Minister of environment Svend Auken was invited to an event in Washington hosted by the World Wildlife Fund, which would have an impact on the development of renewable energy in Denmark. According to an interview informant, the WWF had invited prominent people and encouraged them to do something good for the world (interview, former office chief in the Danish Energy Agency, 30.11.17). According to two interviewees, Svend Auken decided that he would give five offshore wind farms of 150 megawatts per hour on different locations in Denmark (interview, former office chief in the Danish Energy Agency, 30.11.17; interview, former parliamentarian from the Socialist People's Party, 30.11.17). However, Svend Auken had not made any political agreements on the construction of the five offshore wind farms because the Left Party were strongly against the construction because they viewed it too expensive (interview, former office chief in the Danish Energy Agency, 30.11.17). They reached the conclusion that two of them could be build, one on “Horns Rev 1” and the other one on “Rønland” as shown in figure 1, each 150 megawatts (interview, former office chief in the Danish Energy Agency, 30.11.17). The remaining three were up for discussion.

Nevertheless, with the election in November 2001 where the Left party alongside the Conservative party won the election, the development of Svend Auken´s wind turbines would be challenged (Ryland, 2010).

Figure 1. Wind turbine farms as of 2013.



(Energistyrelsen, 2018)

5.2 Phase two: A new government and further changes in the feed-in schemes (2001-2005)

This phase is characterized by the election of the center-right coalition led by PM Fogh Rasmussen in November 2001, and the subsequently changes to the feed-in scheme and to renewable energy leading up to 2005. During this phase, the Fogh Rasmussen coalition, made several changes in the feed-in schemes and conducted a policy of austerity on the renewable energy field. The new coalition's policy was more marked and less support (Ryland, 2010). With Prime Minister Fogh Rasmussen voiced skepticism about the cause of climate change, the government forged "a novel discourse by emphasizing that climate and environmental policies had to be economically sound" (Andersen and Nielsen, 2017: 85). The new mantra became 'environment worth the money' (Hansen and Olsen, 2008). As a result, since 2001 three planned offshore wind farms have been cancelled, government schemes for renewable energy abolished causing carbon emissions and energy consumption to rise after years of decline (Ryland, 2010). After the last projects from the previous administration were completed in 2003, wind power installations came to a halt.

There has been a tradition for broad agreements on energy policy in Denmark since 1973 (Eikeland and Inderberg, 2015: 166). Hence, the new coalition could not just change the policies on support by themselves, because they were tied to the agreements organized by the previous Minister for the Environment Svend Auken (interview, former office chief in the Danish Energy Agency, 30.11.17). This entailed that the new coalition had to include the Social Democrats, the Socialist People's Party and the Radical Left, alongside the Danish People's Party in order to change the feed-in scheme. The latter party being a support party for the coalition. Since the parties in opposition argued for keeping the feed-in schemes (Eikeland and Inderberg, 2015), the negotiations were long and tough, as an interviewee recalls (interview, former office chief in the Danish Energy Agency, 30.11.17). Nevertheless, the Fogh Rasmussen cabinet had the majority of the votes with the support of the Danish people's party, which resulted in lowering of the feed-in scheme in the 2002 agreement. However, the Fogh Rasmussen cabinet could not stop the development of two of Svend Aukens offshore wind turbines because the construction process had already started. He lost three of five that he wished to develop after the visit with WWF in Washington (Ryland, 2010).

Shortly after the Fogh Rasmussen coalition were elected, they cut development opportunities and research grants in half (interview, former parliamentarian from the Socialist People's Party, 30.11.17). This was seen as an act against Svend Aukens legacy as Minister of Environment. The Fogh Rasmussen cabinet meant that Svend Auken had spend too much money, and it was time to stop it (Andersen and Nielsen, 2017). One interview participant goes further, and argues that Anders Fogh Rasmussen made cuts on energy and feed-in tariffs as a revenge against the election the left party lost in 1998 (interview, Former parliamentarian from the Socialist People's Party, 30.11.17).

The cuts in development opportunities and research grants were followed by establishing a new Environmental Assessment Institute. This institute was headed by the controversial climate-skeptical political scientist Bjørn Lomborg (Eikeland and Inderberg, 2015: 168). The government granted 10 million Danish krone to renowned climate sceptic Bjørn Lomborg (interview, Former parliamentarian from the Socialist People's Party, 30.11.17). The money was given to Lomborg so that he could start a research center for researcher who believed that mitigation policies were too costly or suggested that climate change could be caused by solar activity rather than excessive CO₂ emission (Andersen and Nielsen, 2017: 85-86). 10 million

DKK were not a significantly large amount of money for establishing a research center, but the grant functioned more as ideological position from PM Fogh Rasmussen.

The lowering of the feed-in scheme in this phase can be viewed in the context of criticism of the emission target from the Kyoto protocol (Andersen and Nielsen, 2017: 89). Denmark had set a target for 21% domestic reduction, which was more than the proportioned allocation of reduction targets among member states would have suggested (Andersen and Nielsen, 2017: 89). By doing this, Denmark “provided support for Germany to commit to a similar reduction target, which was of significance for the overall EU reduction potential due to the crucial share of Germany’s emissions delivering 80 per cent of the net EU reduction” (Andersen and Nielsen, 2017, 89). However, the Danish targets for emission had included a correction for electricity trade. This meant that the actual reduction target were above 21% and possible as high as 28-29% (Andersen and Nielsen, 2017). Thus, it was implied that Denmark’s target were well above any other European country. The critics expressed concerned over the costs of the emission targets, which spurred a change in climate and energy policy.

The lowering of the feed-in scheme during this phase can also be viewed in the context of pressure from organizations and Danish industry. One interview participant argues that it was more likely that the pressure from the Confederation of Danish Industry that influenced Fogh Rasmussen view on feed-in tariffs than the voters (interview, Former parliamentarian from the Socialist People's Party, 30.11.17). The Confederation of Danish Industry argued that renewable energy and environment policies were too expensive (interview, Former parliamentarian from the Socialist People's Party, 30.11.17). Fogh Rasmussen led shift away from supporting renewable energy were not through protests amongst party members, but rather Fogh Rasmussen's strategic revolt with the former government, supported by the Confederation of Danish Industry (interview, Former parliamentarian from the Socialist People's Party, 30.11.17).

A consequence of the lack of ambitious, green goals were also seen in organization of energy policy. Up until 2001 energy policy were organized under The Ministry of Environment and Energy (Eikeland and Inderberg, 2015). In 2001 energy policy was placed under the Ministry of Economic Affairs alongside the former Ministry of City and Housing, and Environment. The leader of the Conservative party, Bendt Bendtsen, was named vice prime minister and Minister

of Economic Affairs (Folketinget, 2009). The idea behind placing energy policy in the Ministry of Economic Affairs was that energy could be an integrated part of economics, according to one interview participant (interview, former office chief in the Danish Energy Agency, 30.11.17). After all, energy is also an economical subject, by creating workplaces and developing offshore and onshore wind turbines. This, however, proved to be difficult. Those who advocated for renewable energy policy had to compete with the other branches of the ministry for the minister's attention. And that was not an easy task. According to interview participant, "Bendt Bendtsen was surprised by how complicated and comprehensive energy policy was, and often left the negotiations over to administrative employees" (interview, former parliamentarian from the Socialist People's Party, 30.11.17).

An important backdrop for the changes in organization of energy policy, is that the Ministry of Finance has been known to be skeptical about the realism of the promised co-benefits of combining green growth with economic benefits (Andersen and Nielsen, 2017: 92). According to Andersen and Nielsen (2017) the Ministry of Finance can be characterized as an increasingly strong player and that the attitudes of the ministry may have been decisive in decisions on climate policy. This is in line with the information shared in an interview with a former parliament member from the Socialist People's Party, whom states that "the Ministry of Finance were present at the negotiations on energy agreements, making sure that the agreements did not become too costly" (interview, 30.11.17).

A consequence of the shift on renewable energy policy and institutional change was the decrease in employees in the ministry working with renewable energy policy. One employee states that it was "difficult to work in the ministry at this point, with co-workers being fired and projects being downgraded" (interview, former office chief in the Danish Energy Agency, 30.11.17). People were also fired from the Energy Agency (interview, Chief Consultant in the Ministry of Energy, Supply and Climate, 29.11.17). An interview participant stated that "to lose certain initiatives and coworkers greatly affected the organization and the remaining employees" (interview, Chief Consultant in the Ministry of Energy, Supply and Climate, 29.11.17).

In 2005 a new institutional change were made by the Fogh Rasmussen government. In 2005 energy were moved to the Ministry of Transportation, which became the Ministry of

Transportation and Energy (Transport-, Bynings-, og Boligministeriet, 2005). Energy policy were again a part of the name of the ministry, after four years in the Ministry of Economic Affairs. The idea were that energy and transportation should be integrated (Transport-, Bynings-, og Boligministeriet, 2005). However, according to one interviewee energy and transport are two completely different policy fields and did not integrate as easily as the Fogh Rasmussen government wanted (interview, former office chief in the Danish Energy Agency, 30.11.17).

On the other hand, organizing energy policy under the Ministry of Transportation affected the work on renewable energy in a positive way, meaning they started looking at transportation and energy agreements (interview, Former parliamentarian from the Socialist People's Party, 30.11.17). On the negative side, the Minister for transportation were a minister with low influence on big questions like increasing the feed-in scheme (interview, former parliamentarian from the Socialist People's Party, 30.11.17). As a consequence of this, there were always a represent from the Ministry of Finance or the Ministry of Tax present at the negotiations for renewable energy in order to prevent the Minister from using too much money (interview, former parliamentarian from the Socialist People's Party, 30.11.17).

The government was criticized by the opposition parties in parliament for their new direction on renewable energy policy (Eikeland and Inderberg, 2015). The government were also criticized by the environmental movement and from industry associations representing renewable-energy interests (Eikeland and Inderberg, 2015). They were also criticized for the decision to cut the offshore program and R&D expenditure. The Danish Wind Power Producer Association argued that it was critical for Danish industry to have sufficient home-based demonstration capacity for developing new-generation wind power technology (Eikeland and Inderberg, 2015).

The government also received criticism from the Danish Technology Council and the Danish Engineering Association. They criticized the government's policy for being short sighted and possible destructive for development of energy technology in Denmark (Eikeland and Inderberg, 2015). The Danish Engineering Association criticized that a lack of industrial perspective in energy policy, and that Danish industry were at risk for losing contracts worth

billions of dollars if the support from the state wouldn't be reinstated (Eikeland and Inderberg, 2015).

5.2.1 The changes in legislation

From 2001 to 2005 there were three policies on renewable energy: “National Strategy for Sustainable Development” in 2002 and “National RD & D Strategies for Renewable Energy Technologies” in 2003, and “Subsidies for renewable electricity generation” act in 2004 (IEA, 2016).

In June 2002 the government signed an agreement with the Social Democrats, the Social People's Party, the Radical Left and the Christian People's Party on lowering the feed-in tariff on renewable energy (Nielsen, 2016). With the new agreement the feed-in tariff were 0.10 Danish kroner per kWh for a maximum of 20 years (Nielsen, 2016). In addition, the government committed to present a suggestion on how to fulfill Denmark's climate obligations in a cost efficient way (Nielsen, 2016). Denmark has a tradition of “broad agreements”, which means that there is a norm that most of the parties are participants on an agreement (Eikeland and Inderberg, 2015). According to one interview participant, the parties in opposition felt like “they had more to win in staying at the negotiation table, than not” (interview, former parliamentarian from the Socialist People's Party, 30.11.17). It was also important for the government with a “broad agreement” in order to create stability for the energy industry.

Nevertheless, the opposition, led by Svend Auken on environment and energy concerns, were not happy with the negotiations. One interview participant recalls Svend Auken as a strong critic of how low the feed-in tariff had gotten (interview, former office chief in the Danish Energy Agency, 30.11.17). The agreements Svend Auken had made when he was Minister of Environment and Energy had no expiring date, so Fogh Rasmussen had to include the parties in opposition in order to lower the feed-in tariff. According to an interview participant the incumbent government had the opportunity to terminate Svend Aukens energy agreements prior to an election (interview, former office chief in the Danish Energy Agency, 30.11.17). The termination would be valid after the election if the government prevailed. There were discussion amongst the incumbent government and the Danish people's party about doing this, but they decided not to do this (interview, former office chief in the Danish Energy Agency, 30.11.17). One reason why they didn't was because of “strong voices in Danish business community

argued for the continuity and predictability of broad settlements” (interview, former office chief in the Danish Energy Agency, 30.11.17).

In 2004 the opposition wanted something more, according to a former parliament member (interview, former parliamentarian from the Socialist People's Party, 30.11.17). One of the things the opposition wanted was “an increase in construction of offshore wind turbine farms with a 400 megawatt capacity” (interview, former parliamentarian from the Socialist People's Party, 30.11.17). A former parliament member describes the negotiations prior to the 2004 agreement, long lasting and that the opposition were able to include some issues in the agreement that they argue for. The opposition were able to include some issue because they had the support of the Danish people’s party (interview, former parliamentarian from the Socialist People's Party, 30.11.17). This was surprising since the Danish people’s party were at this time a support party for the incumbent Fogh Rasmussen government. The issue that the Danish People’s Party agreed with the opposition that the electricity net should be moved to an independent installation (interview, former parliamentarian from the Socialist People's Party, 30.11.17). In the agreement from 2004 it was also included the two new offshore wind turbine parks, money for solar energy, and a feed-in on onshore wind turbines (IEA, 2013). All parties in parliament signed the agreement, except the Red-Green Alliance (Nielsen, 2016).

With the “Subsidies for Renewable Electricity Generation” act of 2004 a price on 0.60 DKK/kWh were reinstated to the price level of the “Subsidies for wind turbines” act of 1999 (IEA, 2013). This premium is granted to energy plants connected to the grid before April 24th of 2004. Energy plants connected to the grid before April 24th of 2004 benefit from the following support: “The transmission system operator sells the production on the spot market and the subsidy together with the market price ensures a tariff of 0.60 DKK/kWh for 20 years from the date of the grid connection and for at least 15 years as from 1 January 2004” (IEA, 2013).

A former parliament member describes the negotiations as “continuously been a discussion amongst the parties about how low they can set the tariff and still have a desirable level of investment on renewable energy” (interview, former parliamentarian from the Socialist People's Party, 30.11.17). The opposition, as told by a former Parliament member for the Socialist People’s Party and member of the energy committee, proposed in 2002 and 2003 that they

should make a stepladder approach (interview, former parliamentarian from the Socialist People's Party, 30.11.17). A stepladder approach would set a feed-in tariff at one level at the time of investment, and then revisit the feed-in tariff after four years to determine if it possible to lower it. According to one interview participant, the Fogh Rasmussen cabinet did not agree on this matter (interview, former parliamentarian from the Socialist People's Party, 30.11.17).

5.5 Phase three: Turning green (2006-2008)

In 2006 the second shift came. Anders Fogh Rasmussen had turned green, and announced at the Left Party congress on 23 September 2006 a fully metamorphosed energy and environment agenda (Eikeland and Inderberg, 2015). According to Eikeland and Inderberg, “he justified the new policy line by explaining that it would ensure supplies of renewable energy for the future, when Danish North Sea oil and gas production would come to an end” (2015, 169). One parliament member remembers the speech clearly and said it was a shocking change (interview, former parliamentarian from the Socialist People's Party, 30.11.17). Fogh Rasmussen later repeated this new line of thought at the anniversary of the Danish Industry Association and at the opening speech of the Danish Parliament on October 3rd (Eikeland and Inderberg, 2015).

In 2007 Anders Fogh Rasmussen made another announcement at the Left party conference describing their new, green profile (Andersen and Nielsen, 2017: 86). Shortly after, the government started the negotiations for a new energy agreement starting with a statement from the Fogh Rasmussen cabinet in January stating their goals for the policy (interview, former office chief in the Danish Energy Agency, 30.11.17). The government proposed a long-term goal of fossil-free energy system based entirely on renewable energy with a medium-term goal of 30 percent renewables in the energy supply by 2025 (Andersen and Nielsen, 2017). The negotiations process was slow. The negotiations were supposed to start shortly after the statement made by the climate and energy minister in January 2007. However, a detailed plan for negotiations were not ready until June 2007 (interview, former office chief in the Danish Energy Agency, 30.11.17). The negotiations did not start at this point, due to the politicians going on summer vacation.

A former parliament member and member of the energy committee in Denmark describes the negotiations with Minister Flemming Hansens, as “... the government officials often sat at one side of the table and the spokespersons from the different parties on the other side” (interview,

former parliamentarian from the Socialist People's Party, 30.11.17). The parties in opposition were not allowed to bring with them an adviser. This meant that the parties in opposition had to prepare well before the negotiations in order to be fully aware of what they were discussing (interview, former parliamentarian from the Socialist People's Party, 30.11.17). This created an imbalance in the negotiations, according to the former parliament member (interview, former parliamentarian from the Socialist People's Party, 30.11.17).

In august, the negotiations took another turn. Incumbent Minister of Transportation, Flemming Nilsen, announced that he would not stand for reelection in the upcoming parliamentary election (interview, former office chief in the Danish Energy Agency, 30.11.17). Jakob Axel Nielsen took over the position of Minister of Transportation on September 12th 2007 (Transport-, Bynings-, og Boligministeriet, 2018). However, it would not be a position he would keep for very long. On October 24th 2007 Anders Fogh Rasmussen called for a new election, and the election took place on December 13th 2007 (Danmarkshistorien.dk, May 27, 2015c). The left party and the conservative party kept the majority of the votes, and formed the Anders Fogh Rasmussen III Cabinet.

After the election, the energy field were moved from the Ministry of Transport to a new ministry - the Ministry of Climate and Energy. Connie Hedegaard became the new Minister of Climate and Energy and resumed the negotiations started by Flemming Hansen in the beginning of 2007 (Andersen and Nielsen, 2017). However, with the parliamentary election, some spokespersons from the parties in opposition had been changed and therefore needed time to familiarize themselves with the content of the proposed agreement (interview, former office chief in the Danish Energy Agency, 30.11.17). The spokesperson from the parties in opposition argued for changes, additions and improvements and the parties did finally agree upon an agreement on February 21st 2008, after a long and though negotiations process.

Explanations for the second shift

There are several factors in the explanation as to why the second shift occurred in 2006. There are four factors explaining the U-turn, and they are 1) geopolitical shifts, 2) the EU bring renewable energy on the agenda, 3) the Danish people wanting "to do something" for the climate, and 4) pressure from Danish business. The geopolitical factor is connected to the Russia-Ukraine gas dispute which escalated in 2009 (Ryland, 2010). The geopolitical factor

also affected the EU, and the EU realized how vulnerable they were in regards to energy security of supply. Also, there were a public opinion amongst the Danes of climate change concern and support for renewable energy (Eikeland and Inderberg, 2015).

In 2008 the EU wanted to put climate and energy on the political agenda (Ryland, 2010). Prime Minister Fogh Rasmussen and Minister Hedegaard started drafting a report with ambitious EU climate and renewable energy goals (Eikeland and Inderberg, 2015). According to a former parliament member, “they formulated a report on the historic development with the description of former energy agreements, energy plans, and links between economic growth and energy consumption” (interview, former parliamentarian from the Socialist People's Party, 30.11.17). At this time, the government had broader support from the Ministry of Finance, who now argued that there were a large market for Denmark to earn money based on the EU's new ambitious climate goals (Eikeland and Inderberg, 2015).

However, the most important factor can be argued to be that incumbent Prime Minister Fogh Rasmussen realized that renewable energy had the ability to become a large export product. Danish companies that made energy saving equipment, wind turbines, geothermal heat, and district heating, argued for that the government increased the feed-in tariff because that would be beneficial to their businesses (Eikeland and Inderberg, 2015: 169). According to Eikeland and Inderberg (2015: 169), the technology companies Grundfos and Danfoss held talks with Socialist party the summer of 2006, “on how to build industry-friendly climate policy”. They choose to ally themselves with the Socialist Party because “they were the ones who had understood what it was all about” (Eikeland and Inderberg, 2015: 169).

At this time there came a set of new formulations from the Fogh Rasmussen government. The new formulations entailed “policies that combined climate consideration with business considerations” (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17). The idea was that “the Danes could use their expertise and strongholds on green technology to make solutions for the future” (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17). By doing so, the government connected economic growth with green development (Eikeland and Inderberg, 2015). This was based on “the combination that the Danish business community had a set of skills that had been given a lower priority for several years and insight that the global development will follow the green, climate

friendly path in the long run” (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17). That it is more beneficial for Denmark to work alongside the green development and take advantage of it, rather than working against it.

Another important event in the history of climate and renewable energy history in Denmark, is the 15th Conference of the Parties (COP 15) to the United Nations Framework Convention on Climate Change (UNFCCC) which were hosted in Copenhagen. Minister Connie Hedegaard was central in organizing the COP 15 (Andersen and Nielsen, 2017). Denmark being host for the COP 15 also influenced the incumbent government and Fogh Rasmussen in turning green. With the COP 15 approaching and energy being organized in the Ministry of Environment, renewable energy policy were again a priority (Andersen and Nielsen, 2017). According to one interview participant, it was important for Minister Hedegaard to have an ambitious, green agreement before the COP 15 started (interview, former parliamentarian from the Socialist People's Party, 30.11.17). The same interview participant also describes Connie Hedegaard as “a Minister who fought for an ambitious agreement, and were active in increasing the level of the feed-in tariff” (interview, former parliamentarian from the Socialist People's Party, 30.11.17).

5.4.1 Changes in legislation

The negotiations ended with an agreement on February 21st 2008, with the ‘Danish Energy Agreement for 2008-2011’ (IEA, 2014). In the agreement the political parties in parliament “set a target that 20% of the energy use in 2011 should come from renewable sources” (Andersen and Nielsen, 2017: 86). Included in the agreement, were a new system for feed-in schemes and new energy-related taxes (Andersen and Nielsen, 2017).

According to one interview participant, the suggestion was that the support for wind and biomass should be increase from 0.10 DKK to 0.15 DKK per kWh (interview, former office chief in the Danish Energy Agency, 30.11.17). However, the organizations for wind turbines argued that “it was not reasonable to give a subsidy on 0.15 DKK the entire lifetime of the wind turbine” (interview, former office chief in the Danish Energy Agency, 30.11.17). They found it unreasonable because when constructing a wind turbine the costs are higher in the early stages of the wind turbines life. This is because they need a loan to finance the construction of the wind turbine. They could get a loan for 10 years, and therefore wanted a higher feed-in tariff

for 10 years. The government agreed to give a feed-in at 0.25 DKK per kWh, for 2200 full load hours, for up to 10 years (interview, former office chief in the Danish Energy Agency, 30.11.17). This led to an increase in investment in wind construction again, as illustrated in figure 1.

Figure 2. Annual number of turbines installed in Denmark.

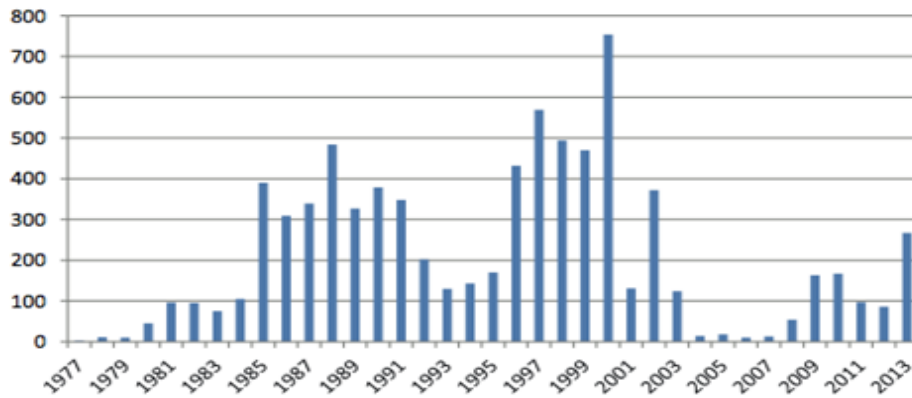


Fig. 1. Annual number of turbines installed in Denmark.

(Cited in: Eikeland and Inderberg, 2015:170)

In addition, a Climate Commission of experts was organized (Andersen and Nielsen, 2017). The objective of the commission was to analyze how the long-term vision of a fossil free energy system could be realized (Andersen and Nielsen, 2017). Nonetheless, the agreement signed in 2008 by most parties in the parliament set a target that 20 percent of the energy use in 2011 should come from renewable energy (Andersen and Nielsen, 2017).

According to an interview participant, the support mechanisms were to be designed to support the electricity market (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17). Since late 1990s the electricity sector had been in a liberalization process, and there were still an interest for that the electricity sector to be market-driven (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17). The combination that they wanted economic growth and that they wanted support mechanisms that were highly market conformal, feed-in tariff became an important political tool (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17). Instead of give a fixed feed-in tariff per kWh at any time of the day, the government wanted producers to produce electricity when

the price were higher (interview, Chief Consultant in the Ministry of Energy, Supply and Climate, 29.11.17).

In 2008, feed-in tariff was still the preferred support instrument, and not green certificates as planned in early 2000s (IEA, 2014). The disagreement was directed at how much support one should give and how high one would set the feed-in tariff, and whether the ongoing development would make the support more market conform (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17). For the politicians it was not necessary to agree that an increase in feed-in tariffs were beneficial for the climate or for business affairs, but rather to agree “on how to adjust the feed-in tariff to the market in the best way possible” (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17). At this time each renewable energy source were dealt with separately, and were therefore in competition amongst each other. Also, as one interview participant states, renewable energy was at this time synonymous with wind energy (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17). Nonetheless, support for electricity production from biomass also started to win forward (interview, chief consultant in the Ministry of Energy, Supply and Climate, 29.11.17).

Another discussion amongst the politicians were about “how many full load hours that were given support and in what size” (interview, former parliamentarian from the Socialist People's Party, 30.11.17). According to an interview participant, the opposition concern have always been that the support should be large enough for the investors to invest in onshore and offshore wind, solar, and biomass energy (interview, former parliamentarian from the Socialist People's Party, 30.11.17). Both the opposition and the Fogh Rasmussen were “interested in finding a level that was low but still be enough for the investors (interview, former parliamentarian from the Socialist People's Party, 30.11.17).

In the 2008 agreement the parties agreed on building a new wind turbine park, which would be a large 400 megawatt park (Andersen and Nielsen, 2017: 88). The wind turbines park, after the liberalization of the electricity sector starting in 1999, was established by companies submitting tenders, and hence creating competition (Eikeland and Inderberg, 2015). For this particular wind farm there were only one bidder, Dong Energy, according to one interview participant (interview, former office chief in the Danish Energy Agency, 30.11.17). The bid was on 1, 51

DKK per kWh, which shocked the politicians (interview, former office chief in the Danish Energy Agency, 30.11.17; interview, former parliamentarian from the Socialist People's Party, 30.11.17). But this was a time when the economy in Denmark and the rest of the western world were booming and the price on steel and other materials increased. The politicians agreed that these factors contributed to the high price, but the opposition who had fought for years for more wind turbine development, still wanted the turbine park developed (interview, former office chief in the Danish Energy Agency, 30.11.17). The government and the parties in opposition then discuss what to do with the bid from Dong Energy, and decided to accept it (interview, former office chief in the Danish Energy Agency, 30.11.17; interview, former parliamentarian from the Socialist People's Party, 30.11.17).

5.6 The last phase: The way towards the 2012 energy agreement (2009-2012)

In 2012, it was time to agree upon a new energy agreement, since the last had its expiring date at this point. During this phase, Lykke Friis was Minister of Environment and Energy. The negotiations started in 2011, but according to a parliamentary member of the opposition, the opposition held back on signing anything, also because of the new prime minister had to call for elections within 2011 (interview, former parliamentarian from the Socialist People's Party, 30.11.17). The opposition started preparing for the negotiations for the new energy agreement for 2012 in 2009 (interview, former parliamentarian from the Socialist People's Party, 30.11.17). The opposition met and drafted a document with what they wanted to do on energy efficiency and what instruments they wanted to use on renewable energy (interview, former parliamentarian from the Socialist People's Party, 30.11.17).

The opposition (pre-election 2012) worked with the negotiations for 2012 agreement intensively and with an eye for details (interview, former parliamentarian from the Socialist People's Party, 30.11.17). The opposite sides in the negotiations knew the other sides position well, and that made it possible to reach an agreement that would last until 2020 (interview, former parliamentarian from the Socialist People's Party, 30.11.17). The disagreement evolved around what was the easiest way to the green shift and development of renewable energy and the issue of the costs being planned to be passed on to energy users through taxes and tariffs (Andersen and Nielsen, 2017).

The social democrats won the election in 2012, and Helle Thorning-Schmidt became the new prime minister. The new social democratic lead government were more ambitious on green, renewable energy policy than the prior government had been (Andersen and Nielsen, 2017). The newly elected cabinet soon initiated negotiations for the 2012 agreement, and the result were an broad agreement signed by all parties in parliament (except one) to a new energy plan (Andersen and Nielsen, 2017: 87). The plan included several initiatives, and the goal was to achieve a 34% reduction in of Denmark's greenhouse gas emission by 2020 from the level of greenhouse gasses from 1990 (Andersen and Nielsen, 2017: 87).

The plan also included “a renewed emphasis on wind power, which was to supply 50 per cent of electric consumption by 2020 through new onshore and offshore facilities “(Andersen and Nielsen, 2017: 87). The offshore wind farms were proposed to be at on Kriegers Flak and the other on Horns Rev III. According to an interview participant the “Swedish”vattenfall” submitted a tender on the wind turbine park on Kriegers Flak for 0.37 DKK per kWh” (interview, former office chief in the Danish Energy Agency, 30.11.17). This bid was remarkable lower than the bid from Dong Energy in 2008. In the following years there have been a dramatic price fall on onshore and offshore wind turbine parks (interview, former office chief in the Danish Energy Agency, 30.11.17).

The Social Democrats and the Socialists People's Party were describes as being known for being notably detail oriented in the negotiations by one interview participant (interview, former office chief in the Danish Energy Agency, 30.11.17). They wanted to describe precisely what were supposed to happen in the agreement (interview, former office chief in the Danish Energy Agency, 30.11.17). The left party and the conservative party were more concerned with the direction the politics were headed and that the expenses for businesses were at a low level (interview, former office chief in the Danish Energy Agency, 30.11.17).

5.7 Summary

This chapter has consisted of the political process on feed-in scheme from 1999 to 2012. During this time, the feed-in scheme has undergone changes and the discussion on state support and renewable energy have been subject of change. Phase one is characterized by early signs of liberalization of the feed-in scheme through the development of the PSO-charge and lowering

of feed-in scheme. In this phase there were also discussions on switching to green certificates in 2004. Simultaneously, the incumbent Minister of Environment and Energy, Svend Auken, were reluctant to undertake the liberalizational changes. Phase two is characterized by the election of the center-right coalition led by Fogh Rasmussen whom engaged a series of cuts on feed-in schemes.

The second phase is characterized by the U-turn of Fogh Rasmussen and his coalition. Negotiations for the 2008 agreement were lengthy, but from the agreement was a raise in feed-in premiums on wind power, biomass, and biogas, and plans for new 400 MW offshore wind farms. The last phase is characterized by the paved way to the 2012 by the policy shift in 2006 and the subsequently agreement in 2008. The 2012 agreement was finalized after the election of the new center-left coalition led by the Socialist party. With the 2012 agreement, the new coalition introduced new plans for significant expansion by 2020 of off-shore and onshore wind power, and also an improved framework for biogas (Andersen and Nielsen, 2017).

6. Analysis

This chapter will start with an outline of the occurrence, direction and intensity of policy change, in line with the concept for measurement of Knill and Tosun (2012: 258). Then I will discuss the derailment of the renewable energy policy on feed-in schemes through the theories presented in chapter three. The chapter is organized after the three key questions put forward in the introduction: 1) can the policy changes between 1999 and 2008 be describes as a derailment? 2) How can the policy shifts in 1999 and in 2002 be explained? 3) How can the policy shift in 2008 be explained? Lastly, I will discuss the main research question, which is How can the outcome of the Danish agreement on energy policy from 2012 be explained?

6.1 How can the political change on feed-in schemes in Denmark be measured?

Temporal issues

How can the time period of the political change be measured? In line with the arguments put forward by Knill and Tosun (2012), I have place the case under study based when the political changes started. Hence, the study must start in 1999 when the liberalization process started. The liberalization process was continued with the newly elected VK-government in 2001.

The VK government lost the election in October 2011 to the Social Democrats, Radical Left Party and the Socialist People's Party. Nonetheless, despite the fact that there was a shift in government in 2011, it is sensible to include 2012 in the last phase, because it is relevant to include the present energy agreement in Denmark into the discussion on feed-in schemes. It is important to include, not only that the 2012 energy agreement concludes eleven years of debate on the issue of level of payment on feed-in schemes, but it is important to include for further research and discussion energy agreements in Denmark. The Danish parliament are, as off April 2018, in the process of agreeing upon a new energy agreement that might have implications on the level of feed-in schemes on renewable energy development. Including the energy agreement in this study, enables further studies to compare the policy process leading up to the 2012 agreement with the agreement being discussed in Denmark in the future.

The study starts with phases from 1999. However, the study includes historical background information prior to 1999. This is done, in the line with path dependency theory development, as it is imperative to see political actions in interaction with previous events.

Level of abstraction

Are the policy changes in level of feed-in schemes a consequence of changes in core beliefs or secondary beliefs? According to the reasoning of Knill and Tosun (2012), changes in secondary beliefs are more likely to occur than changes in core beliefs. Measuring the changes in beliefs of politicians is a difficult task, considering that it is difficult to obtain knowledge about what the politicians truly believe at any given time. Consequently, any discussion on changes in core beliefs versus changes in secondary beliefs should be based on the information available from the interviews and secondary literature, and can only draw explanation from that information.

For the policy changes in the first phase, the policy changes that started the liberalization process can be described as changes in secondary beliefs. This is because the Social Democratic led government were still reluctant to alter the setting of the feed-in schemes, but changed the settings after pressure from the opposition (Andersen and Nielsen, 2017). The pressure came from the leader of the Left Party, Anders Fogh Rasmussen government, whom had a belief that the previous government had spent too much money on climate policies (interview, former office chief in the Danish Energy Agency, 30.11.17).

In the second phase, the policy changes continued the path set in 1999. The Fogh Rasmussen cabinet was a liberal and market oriented government, which ideology argues for a lower level of government intervention (Eikeland and Inderberg, 2015). Based on this, one might argue that the Fogh Rasmussen cabinet's core belief was that a lowering of the feed-in tariff was necessary, because the government should not spend extensive amounts of money of climate change policies. By this reasoning, the policy change that occurred in Denmark in 2001 on the level of the feed-in schemes, might be a change in the core belief of the previous accepted view on feed-in tariff and governmental intervention on climate policies.

For the shift in 2006, the Fogh Rasmussen cabinet changes the way in which they viewed green technology. This can be argued to be a change in secondary beliefs. The change did not occur because Fogh Rasmussen had a revelation that climate change were an issue that needed to be

dealt with by government officials and the means to combat climate change is through government expenditure on climate friendly policies such as feed-in schemes on RE. Rather, the change occurred in secondary beliefs, and that belief was that Danish businesses could benefit from a higher level of feed-in schemes in order to develop technologies that are desired abroad and therefore can function as a large export market. A change in secondary beliefs can also explain why the second shift happen, because it is more likely that a change in secondary belief happened than in core beliefs.

Policy expansion and policy reduction (policy intensity and policy density)

Has the policy change in Denmark been changes in intensity and density? According to Knill and Tosun (2012: 261) there are two ways in which changes in policy density can be assessed: “the number of policy targets and the number of policy instruments that are applied in a given policy field or subfield”. For this study it is relevant to look at the number of renewable energy sources being included in feed-in schemes.

However, can one argue that the policy changes in 1999 and 2001 were not a decrease in policy density? Rather, it was changes in policy intensity, which is the level of the feed-in schemes. An explanation to this, is that renewable energy were mostly connected with wind power and no technology on renewable energy sources such as solar and biomass. The policy density can be argued to have increased after the policy shift in 2006 leading up to the agreements in 2008 and 2012. In the 2012 agreement biomass as a renewable energy source were included in the Danish feed-in scheme.

For the policy intensity concept, the policy change can be measured by the price level of the feed-in schemes. Since 1999, the chosen instrument has been either feed-in tariff or feed-in premium, determined by the renewable energy source. However, it is the intensity of the policy instrument that has been the subject of change. The level of the feed-in scheme were substantially lowered first in 1999 and subsequently increased in the second phase.

How has the changes in density and/or intensity affected the direction of the policy change? From 1999 to 2008 the policy change in Denmark on feed-in schemes can be described as policy reduction as the level of feed-in schemes were lowered. Subsequently, for the second shift from 2006 to 2012, the policy change can be described as policy expansion, as the level

on feed-in schemes were increased. As seen in level of offshore wind turbine developments, it got substantially lower after 2002, and the policy change that occurred in 2002 can subsequently be described as a policy reduction.

Summary

Can the changes from 1999 to 2005 be described as a derailment? I will argue that the policy changes between 1999 and 2005 can best be described as a policy reduction, rather than a policy derailment. This is because the changes are in the intensity of the policy instrument. Also, the policy changes are in secondary beliefs, rather than core beliefs. For there to be a derailment, there should be changes in instrument and completion of the liberalization of the energy market.

In line with the reasoning of Knill and Tosun (2012), I expected to see policy expansion, rather than policy reduction. Whereas the results imply that there has been a policy reduction on feed-in schemes in Denmark from 1999 to 2005, the results also imply that there has been a policy expansion in feed-in schemes from 2006 to 2012. The energy agreements in 2008 and 2012 included more renewable sources, such as biomass and also increased the feed-in schemes. This is both an increase in policy density and policy intensity.

6.2 How can the policy changes be explained through the path dependency perspective?

The theoretical expectations from the path dependency perspective are: **TE1**= a policy that has been reinforced over a long period of time is difficult to change, and **TE2**= a policy outcome is a reaction to a previous event, and thus policy changes can be viewed as a reaction to previous events. In this subchapter, the findings from the data material presented in chapter five will be compared with the theoretical expectations.

According to the path dependency perspective, I expected to find that a policy is difficult to fundamentally change when it has previously been reinforced for a long time. Up until 1999, the Danish renewable energy policy has been consistent since early the 1980s. Nonetheless, changes occurred that deviated from the previous policy in 1999 until 2006. The previous path advocating for maintaining a feed-in scheme and political goals on renewable energy that encourage the industry to develop renewable energy.

In accordance with the reinforcing logic a break in the path can be explained by a shock, from exogenous or endogenous challenges to the technology. Neoliberal governance ideas diffusing in Europe have been argued to be an important backdrop for the policy changes from 1999 to 2005 (Eikeland and Inderberg, 2015). Also, the Danish targets for emission reduction from the Kyoto protocol has been pointed out as important backdrop for the policy change (Andersen and Nielsen, 2017). Even though both the neoliberal governance ideas diffusing and the Danish targets from the Kyoto protocol can be argued to have an impact on the policy change, they cannot be argued to constitute as a shock.

How can the policy changes from 1999 to 2005 be understood through the reinforcing sequence logic? The policy changes can be argued to be a policy reduction rather than policy derailment. Hence, the policy changes in the time period of 1999 to 2006 were not breaking from the path. Feed-in schemes were still the preferred instrument and were still present in legislation, but at a lower level. Also the changes were in secondary beliefs, not a path breaking from core beliefs. Nonetheless, the policy changes were significant, and the reinforcing sequence logic does not explain well why the policy changes from 1999 to 2005.

The fact that the first policy shift did not become a permanent path in Denmark, can be explained by reinforcement logic. The opposition of the VK cabinets were consequently against the lowering of feed-in schemes, as they have been since the 1980s. Hence, they continued to argue for increase in feed-in schemes (interview, former parliamentarian from the Socialist People's Party, 30.11.17). The opposition kept their position on feed-in scheme, despite the efforts from the Fogh Rasmussen cabinets to decrease public spending on renewable energy.

On the other hand, the policy shift in 1999 can be viewed as a reaction to a previous event. According to the reactive sequence logic events are triggered by earlier events and the chain of events are formed by reactions and counteractions. The policy changes that started in 1999, can be viewed both in terms of a reaction to neoliberal governance ideas diffusing in Europe and also as a counteraction against the perceived to high and costly climate policy lead by the cabinets in the 1990s (Eikeland and Inderberg, 2015; Andersen and Nielsen, 2017). Hence, the actions of establishing the PSO charge and lowering the feed-in schemes can be viewed in terms of a reaction to the previous events. One of the reasons why Fogh Rasmussen and his cabinet

wished to decrease the price level of the feed-in schemes, were that they believed that the previous cabinet lead by the Social Democrats had spent too much money. For this reason, the first policy shift can be viewed as an outcome of the actions of previous cabinets who have over time increased the feed-in schemes in Denmark.

The shift that happened after 2006 can be viewed as a reaction to previous events. It can be viewed in terms of a reaction to the changes that occurred between 1999 and 2006, but also as action in a larger chain of reactions, that is the policies on renewable energy since the early 1980s. The VK cabinet reacted in 2006 after pressure from Danish companies, whom argued that it was beneficial for Danish export to have a higher level on feed-in schemes in order to invest and develop renewable energy (Andersen and Nielsen, 2017).

Summary

So how can the policy changes be explained through the path dependency perspective? The reinforcement logic works well in explaining policy stability. The outcome of the 2012 agreement is in line with the path lead before the policy changes started in 1999. However, it does not explain well the policy changes that occurred after 1999 to the second policy shift in 2006. This is because the explanations for the policy shift (i.e. neoliberal governance ideas diffusing and the perceived too high emission reductions targets after the Kyoto protocol) can't be described as a shock.

On the other hand, the reactive sequence logic is useful in explaining the policy changes leading up to the 2012 energy agreement. The outcome of the 2012 agreement can be explained through actions and counteractions from 1999 to 2012. That is, the VK cabinet viewed the previous policy as too costly and therefore reacted with lowering the feed-in scheme. Also, the second shift after 2006 can be explained as a counteraction to the lowering of the feed-in scheme between 1999 and until 2005.

6.3 How can the policy changes be explained through the political field perspective?

The theoretical expectations from the political field perspective are: **T3**: in case of the political competition logic, I expect to find that legislature governing mechanism is dominating and **T4**:

in case of the garbage can logic, I expect to find that the random decision making mechanism is dominating. In this subchapter, the findings from the data material presented in chapter five will be compared with the theoretical expectations.

If the political competition logic is dominating, I expect to find that the elements from the legislature governing mechanism will be present. The Social Democratic cabinet can be argued to positioning themselves in relation to other politicians, for the policy changes that occurred in 1999. Minister for Environment and Energy Svend Auken lowered the feed-in scheme and established the PSO-charge after pressure from the current opposition. The opposition has an advantage of bringing up the issue, because of their ideological affiliation with neoliberal governance ideas, they seek to win the votes of the electorate on lowering state activities and spending.

If the issue is of high salience, I expect to find that formal power is distributed and the issue is being discussed and subject for political competition. Information from the interviews, argue that Fogh Rasmussen was especially invested in reducing the level of the feed-in scheme. Hence, the issue can be argued to be of high salience as the politicians were highly involved in the decision making. Also, the formal power can be argued to distributed, as Denmark has a long tradition of the so-called “broad agreements”. The VK cabinets were dependent on the majority of the opposition to take part in the negotiations, which they at times prolonged. As described in chapter five, the opposition participated actively in the negotiations with alternative proposals and more (interview, former parliamentarian from the Socialist People's Party, 30.11.17). The involvement of the opposition in the negotiations illustrates that the issue was of high salience for the opposition.

However, it is peculiar that the issue were under political competition. According to Boasson (2015) politicians engage in competition over an issue if they believe engaging will enhance their chances of getting elected or re-elected. For the first phase, the choice of decreasing the feed-in scheme was in order to lower the public spending. An interview participants, also argue that Fogh Rasmussen lowered the feed-in scheme as a counteraction against the previous cabinet, as they believed they had spent too much money (interview, former parliamentarian from the Socialist People's Party, 30.11.17). Thus, it can be argued that the lowering of the feed-schemes were done in order to be elected.

For the policy changes in the second phase (2001-2005), the political competition logic seems less dominant. The cabinet did not devote energy to the issue, and the issue were placed in a new Ministry together with four other ministerial issues. However, for the third phase (2006-2008), the Fogh Rasmussen cabinet brought up the issue, as they saw an advantage of doing it. However, they did not position themselves in relation to other politicians, and presented themselves as normatively superior. The cabinet devote more attention to the issue. This is seen through the establishment of the Ministry of Environment and Energy, the announcement of the fully metamorphosed energy and environment agenda on three different events, and Denmark being host for the COP 15 (Eikeland and Inderberg, 2015; Andersen and Nielsen, 2017).

To sum up, the political competition logic and legislature governing mechanism are more dominant in the first phase than the second phase. Also, this theoretical expectation does not explain well with the event that occurred in the third phase, because the political competition logic is not dominating, but the politicians had well-defined preferences.

If the garbage can logic is dominating, I expect to find that the elements from the random decision mechanism will be present. The random decision making mechanism is dominating when the issue is regarded as low salience, the structural power being ill-defined and very few politicians are involved in the policy making. For this issue, one might argue that the subject under discussion, the feed-in scheme, is a highly technical issue, and therefore only specially motivated and interested will participate in the negotiations over energy agreements. On the other hand, the involved politicians were politicians such as Prime Minister Fogh Rasmussen and former Minister of Environment for the Social Democrats, Svend Auken. Therefore, there are more data arguing for that the issue were of high salience, than of low.

When the garbage can logic dominates, the politicians will not have a comprehensive understanding of the technology or the functioning of the policy. This can be argued to be the case for both the first phase and the second phase, before the Fogh Rasmussen announced the fully metamorphosed energy and environment agenda. Meaning, he did not have an understanding that a high level of feed-in scheme were necessary in order to spur investments in renewable energy amongst Danish businesses. Thus, it can be argued that the second phase

was dominated by the garbage can policy. The first phase also have elements of the garbage can logic, as Fogh Rasmussen can be argued to not have an understanding of the technology or the functioning of the policy. On the other hand, the political positioning with the incumbent Social Democratic cabinet suggest that the political competition logic was dominant in the first phase (Andersen and Nielsen, 2017).

For the garbage can logic to be dominant, the politicians have ill-defined preferences at the beginning of the political process. During the phase, the announcement made by Fogh Rasmussen on three different occasions in 2006, suggest that he had gained defined preferences on climate policy and renewable energy development, and the necessity of the feed-in scheme (Eikeland and Inderberg, 2015). Hence, the garbage can logic did not dominate this phase. This can also argued for the fourth phase, as the policy changes in the third phase paved way for the outcome of the 2012 energy agreement.

To sum up, the first and second phase have elements of the garbage can logic as Fogh Rasmussen had ill-defined preferences and did not have a comprehensive understanding of the technology or the functioning of the policy. However, the third phase did not have elements of the garbage can logic, as the Fogh Rasmussen cabinet had well-defined preferences.

Summary

How can the policy changes be explained through the political field perspective? I have argued that the policy changes in the first phase can be explained as having both elements of the political competition logic and the garbage can logic. This is because the politicians positioned themselves in relation to other politicians, brought up the issue because they viewed it as advantages, but also having ill-defined preferences and not a comprehensive understanding of the policy and technology. The second phase can be explained through the garbage can logic, as the Fogh Rasmussen cabinet can be argued to not have a comprehensive understanding of the technology or the functioning of the policy.

For the third phase, the political field perspective is less helpful in explaining the policy changes. This is because, the third phase the politicians did not position themselves in relation to one another, nor present themselves as normatively superior, that is the phases was not

dominated by the political competition logic. Also, the garbage can logic did not dominate, as the Fogh Rasmussen cabinet had well-defined preferences.

6.4 How can the outcome of the 2012 energy agreement be explained?

How can the outcome of the 2012 energy agreement be explained? In order to answer this research question, I have in this chapter discussed the empirical findings with theoretical expectations on three sub-questions asked in the introduction. The questions were: 1) Can the political changes between 1999 and 2008 be described as a derailment? 2) How can the political shifts in 1999 and in 2002 be explained? 3) How can the political shift in 2008 be explained?

In this chapter I have argued that the policy changes that occurred in Denmark on the feed-in schemes for renewable energy are better described as policy reduction than policy derailment. This is because the changes have not changed the preferred instrument, which was planned (i.e. green certificates). And there was only a change in the intensity of the policy.

I have argued that the policy changes in 1999 and 2002 can be explained through a path dependency perspective, as the political changes can be viewed as contingency. The changes that occurred in first phase (1999-2000) and the second phase (2001-2005) are best explained by the reactive sequence logic, as the reinforcing logic does not explain well the policy changes when there hasn't been a shock to explain the changes.

The policy changes in the first phase (1999-2000) have been argued to have elements of both the political competition logic and the garbage can logic. The politicians positioned themselves in relation to each other, brought up the issue because they viewed it as advantages, and positioned themselves as normatively superior (i.e. the political competition logic). At the same time, the Fogh Rasmussen cabinet had ill-defined preferences and not a clear understanding of the functioning of the policy and technology.

The policy changes in the second phase (2001-2005) have been argued to be dominated by the garbage can logic. It is not surprising that an issue does not continue to be dominated by the political competition logic, because this logic and the legislature governing mechanism requires time, energy and attention for a long period of time. According to Boasson (2012), will politicians be able to invest time, energy and attention to an issue only in a short period of time.

The policy changes in the third (2006-2008) and fourth phase (2009-2012), have been argued to not be dominated by either the political competition logic or the garbage can logic.

So how can the outcome of the 2012 agreement be explained? I hold that the path-dependency perspective and political field perspective complement each other. The outcome can be explained in terms of path dependence, but it can also be viewed in the context of political competition logic and the garbage can logic.

The outcome of the 2012 political agreement can be explained through the reinforcing logic in the path dependency perspective, as the policy were reinforced for several years before the policy changes occurred from 1999 to 2005. Hence, the fact that the changes did not become permanent suggests that the early reinforcement of the policy prior to 1999, made it difficult for political actors to change. On the other hand, this do not describe why the political changes occurred in 1999 to 2005, as the findings of this thesis suggest that there were no shock during this time that can explain the policy changes. From the reactive sequence logic in the path dependency perspective, the outcome of the 2012 agreement can be explained as reactions to previous events. In 1999 Fogh Rasmussen reacted to the current cabinets' large public spending on renewable energy, and followed to increase public spending when the Fogh Rasmussen cabinet were elected in 2001. The policy changes in 2006 can be explained as a reaction to the realization that decreasing the feed-in scheme was followed by a drop in investments, and that there were several international and national concerns arguing for more renewable energy. These concerns were the geopolitical issues with Russia and Danish businesses having a large export market on renewable energy technology, and needed the feed-in scheme in order to be competitive on the energy market.

In addition, the outcome of the 2012 energy agreement can be explained through the political field perspective and the political competition logic and garbage can logic. The policy changes on renewable energy policy in between 1999 and 2012 can be explained as competition amongst politicians seeking to enhance their ideology and get re-elected. The outcome can be explained through that the Fogh Rasmussen cabinets' initially having ill-defined preference and not having and understanding of the functioning of the feed-in scheme. Nonetheless, the political field perspective is best at explaining the phase one and two, and not the events that took place after 2006. Rather, the outcome can be explained as the Fogh Rasmussen cabinet having well-

defined preferences after 2006, and there were also less political competition because the political parties in parliament mostly agreed up on the level of the feed-in scheme after 2006.

7. Conclusion and final remarks

In this thesis, I have process traced the dynamics behind the policies on the state support mechanism in Denmark. The research question for this thesis is how the outcome of the 2012 energy agreement can be explained. In this thesis, I have described the political process, and tried to get an understanding of the underlying political discussion on feed-in schemes. There have been some challenges in regards to limited data material, but the use of data triangulation have helped to reduce the risk of measurement errors. The findings in this thesis suggests that the outcome of the 2012 agreement can be explained as path dependent, as the early reinforcement of the policy prior to 1999 made it difficult for political actors to challenge. Also, the policy process leading up to the 2012 agreement can be explained by the Fogh Rasmussen cabinet reacting to the perceived high level of public spending prior to 1999. And subsequently reacting to the low level of investments in renewable energy and the influence this had on Danish export and Danish energy security.

In addition, the findings in thesis suggest that the outcome of the 2012 energy agreement can be explained through the political field perspective. According to the political field perspective, the outcome of the 2012 agreement can be explained as politicians gaining well-defined preferences and also agreeing upon the level of the feed-in scheme after 2006. The period from 1999 to 2005, is explained as politicians positioning themselves to each other and that the Fogh Rasmussen cabinet has ill-defined preferences and little understanding of the functioning of the policy on feed-in schemes.

This thesis invites to a discussion about future development of the renewable energy policy in Denmark. As of April 2018, when this thesis is written, the Danish politicians are negotiating a new energy agreement. The energy agreement from 2012 ends in 2020. This thesis is important because in order for us as scholars to understand the things that are happening now, we need knowledge about what has happened on the political issue before.

This study is contribution to debate on the policy changes of the Danish renewable subsidy, and subsequently debate on policy change on support for renewable energy as a theoretical and empirical puzzle. This thesis is important because energy policy and climate change is continuously more important to discuss amongst scholars, as global warming is an increasing

threat. Most theories claim that policies are mostly stable over time. Knill and Tosun (2012: 264) argue that in line with the law of state activities by Adolph Wagner, that “as nations progressively industrialize, the share of the public sector in the national economy grows continually”. Can this argument be used on the evolution of renewable energy? Meaning that there seems to be a goal that RE is competitive on the market without support from the state. In addition, Dong Energy claimed in 2017 that they wish to build offshore wind turbine parks without subsidies within the next decade (Hovland, 2017). This is interesting for the new energy policy which is schedule to come soon in Denmark, but also the future of subsidies on RE as the question of whether there should be state subsidies or not on RE is still in development. For future research on support mechanisms in Denmark and in other countries, it will interesting to see if the development of technology surpass the need for governmental support mechanisms.

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Other references and the interview objects

The interviews are referenced in the text in the following manner: (interview, professional title, date of the interview). For example: (interview, former office chief in the Danish Energy Agency, 29.11.17). The interviews were conducted between November 29th and November 30th 2017. The interviews are transcribed. Below is an overview of the interviewees' professional title and the date of the interview.

| Professional title of the interview participant | Date |
|--|--------------------|
| Former office chief in the Danish Energy Agency | November 30th 2017 |
| Chief Consultant in the Ministry of Energy, Supply and Climate | November 29th 2017 |
| Former parliamentarian from the Socialist People's Party | November 30th 2017 |
| Special Consultant at the Danish Energy Agency | November 30th 2017 |

Attachments

Attachment 1: Interview guide

Intervjuguide

Introduksjon

Tusen takk for at du har takket ja til å dele din kunnskap og erfaring om danske fornybar energipolitikk. Som jeg nevnte i e-posten er jeg en statsvitenskapsstudent fra universitet i Oslo og denne studien er en del av min masteroppgave/avhandling.

Jeg ønsker å lære mer om den politiske utviklingen på den statlige støtte mekanismen, feed-in schemes, i Danmark. Sånn jeg har forstått utviklingen skjedde det et politiske skifte i 2001 og et skifte i 2008 som ledet til en ny energilov i 2012. Jeg er interessert i å vite mer om hva som skjedde i denne perioden.

Dine svar vil bli holdt konfidensielle. Dine svar vil bli satt sammen med svarene fra flere andre informanter som jeg vil snakke med for å få et overblikk. I tillegg ser jeg på offisielle dokumenter.

Jeg er interessert i å høre ditt synspunkt på den politiske prosessen, og det er ingen riktige eller feil svar, eller krav om detaljkunnskap. Jeg håper du vil være så oppriktig som mulig.

Jeg vil også minne deg på at deltakelsen i dette prosjektet er fullstendig frivillig og du kan trekke deg på hvilket som helst tidspunkt i forskningsprosessen.

Selv om det ikke er noen umiddelbare fordeler knyttet til å delta i dette forskningsprosjektet, vil resultatene min bidra til en bedre oversikt over fornybar energipolitikk i Danmark.

Dette intervjuet vil ta i underkant av en time. Hvis du har noen spørsmål knyttet til studien er det bare å spørre nå eller kontakte meg senere over mail.

SPØRSMÅLENE

Før vi starter håper jeg du kan fortelle meg litt om din bakgrunn, når og hvordan du var engasjert i støtte mekanismer og særlig da feed-in tariffs for vedvarende energi.

Til og begynne med ønsker jeg at du tenker tilbake til perioden 2001 til 2006-2009, og bare fortelle meg kort hvordan du opplevde den politiske utviklingen på feed-in tariffs på fornybar energi.

2001

Nå ønsker jeg at vi snakker litt om valget i 2001 og regjeringsskifte. Hvordan vil du beskrive politikken på vedvarende energi og statlig støtte/feed-in tariff hos den nye VK-regjeringen?

- Vil du si at reduisering av statlig støtte til vedvarende energi var en viktig sak for den nyvalgte VK-regjering i 2001 sammenlignet med f.eks andre miljø- og energi saker som energieffektivitet?
- Probe om vedvarende energi og statlig støtte var et område hvor regjeringen opplevde å ha støtte fra velgerne eller ikke. Var dette noe dere målte gjennom spørreundersøkelser eller ikke?

Nå har jeg noen spørsmål om sentrale beslutningstakere som Anders Fogh Rasmussen og Bendt Bendtsen

- Hvordan opplevde du det som sentrale beslutningstakere i VK-regjeringen hadde et klart synspunkt på støtte til vedvarende energi i 2001?
- Om de var påvirket av sitt eget parti sitt historisk synspunkt på saken?
- Om de var klar over konsekvensene for investeringer i vedvarende energi.
- Var de spesielt opptatt av støtte til vedvarende energi i 2001, sammenlignet med annen klima og energipolitikk?

Hvordan arbeidet dere i departementet med støttemekanismer på vedvarende energi i denne tiden?

- Hvorfor ble energipolitikk flyttet til ministeriet for økonomi og hvordan påvirket dette arbeidet på vedvarende energi politikk?
- Var det i hovedsak regjeringen som tok beslutningene på statlig støtte eller var det mer overlatt til forvaltningen?

Hvordan vil du beskrive synet på statlig støtte til vedvarende energi var på Folketinget i 2001?

- Var det stor politisk uenighet om feed-in tariffs? Var det noen partier som skilte seg ut?
- I hvor stor grad påvirket partiene i opposisjon regjeringen på feed-in tariffen i 2001?

2006

2006 markerer et skifte i synet på klimapolitikk og vedvarende energipolitikk i Danmark, med Anders Fogh Rasmussen tale på Venstres partimøte.

Vi snakket tidligere om hvordan du ville beskrive politikken på vedvarende energi og feed-in tariffen hos VK-regjeringen i 2001. Hvordan vil du si at denne endret seg opp til 2006?

- Ble politikken på statlige støtte mer eller mindre viktig sammenlignet med andre miljø- og energipolitikk som energieffektivitet?
- Hvor stor grad påvirket partiene i opposisjon regjeringen på feed-in tariffen i 2001? I hvor stor grad påvirket partiene i opposisjon regjeringen på feed-in tariffen i 2006? Probe om vedvarende energi og statlig støtte var et område hvor regjeringen opplevde å ha støtte fra velgerne eller ikke. Var dette noe dere målte gjennom spørreundersøkelser eller ikke?

Nå har jeg noen spørsmål om sentrale beslutningstakere som Anders Fogh Rasmussen og Bendt Bendtsen

- Hvordan opplevde du det som sentrale beslutningstakere i VK-regjeringen hadde et klart synspunkt på støtte til vedvarende energi i 2006? Mer enn 2001?
- Om de var påvirket av sitt eget parti sitt historisk synspunkt på saken?
- Om de var klar over konsekvensene for investeringer i vedvarende energi.
- Var de spesielt opptatt av støtte til vedvarende energi i 2006, sammenlignet med annen klima og energipolitikk? Mer eller mindre enn i 2001?

Hvorfor ble energipolitikk flyttet til Transport og energiministeriet i 2005 og hvordan påvirket dette arbeidet med fornybarenergi?

- Hvordan arbeidet dere i departementet med støttemekanismer på vedvarende energi i denne tiden?
- Var det i hovedsak regjeringen som tok beslutningene på statlig støtte eller var det mer overlatt til forvaltningen? I mer eller mindre grad ra 2001?

Hvordan vil du beskrive synet på statlig støtte til vedvarende energi var på Folketinget i 2006?

- Var det stor politisk uenighet om feed-in tariffs? Var det noen partier som skilte seg ut?
- I hvor stor grad tror du partiene i opposisjon påvirket det politiske skifte vi så i 2006 i talen til Anders Fogh Rasmussen?

2008/2012

Nå vil jeg gå over til å snakke om 2008/2012 da det kom en ny energilov.

Vi snakket tidligere om hvordan du ville beskrive politikken på vedvarende energi og feed-in tariffen hos VK-regjeringen i 2001 og 2006. Hvordan vil du si at denne endret seg opp til 2008?

- Ble politikken på statlige støtte mer eller mindre viktig sammenlignet med andre miljø- og energipolitikk som energieffektivitet?
- Probe om vedvarende energi og statlig støtte var et område hvor regjeringen opplevde å ha støtte fra velgerne eller ikke. Var dette noe dere målte gjennom spørreundersøkelser eller ikke?

Nå har jeg noen spørsmål om sentrale beslutningstakere som Anders Fogh Rasmussen og Bendt Bendtsen

- Hvordan opplevde du det som sentrale beslutningstakere i VK-regjeringen hadde et klart synspunkt på støtte til vedvarende energi i 2008? Mer enn 2001 og 2006?
- Om de var påvirket av sitt eget parti sitt historisk synspunkt på saken?
- Om de var klar over konsekvensene for investeringer i vedvarende energi.
- Var de spesielt opptatt av støtte til vedvarende energi i 2008, sammenlignet med annen klima og energipolitikk? Mer eller mindre enn i 2001 og 2006?

Hvorfor ble energipolitikk flyttet til Klima- og energiministeriet i 2007? og hvordan påvirket dette arbeidet med fornybarenergi?

- Hvordan arbeidet dere i departementet med støttemekanismer på vedvarende energi i denne tiden?
- Var det i hovedsak regjeringen som tok beslutningene på statlig støtte eller var det mer overlatt til forvaltningen? I mer eller mindre grad fra 2001 og 2006?

Hvordan vil du beskrive synet på statlig støtte til vedvarende energi var på Folketinget i 2008/9?

- Var det stor politisk uenighet om feed-in tariffs? Var det noen partier som skilte seg ut?
- I hvor stor grad tror du partiene i opposisjon påvirket energiloven fra 2008/2009?

Runde av intervjuet

Da var det mitt siste spørsmål. Er det noe du har lyst til å legge til som jeg ikke har spurt om? Er det noen av spørsmålene du har en kommentar til?

Er det noen andre personer du kjenner til som jeg burde snakke med?

Takk for at du ville snakke med meg.

Attachment 2: Letter of information

Forespørsel om deltakelse i forskningsprosjekt om dansk fornybar energipolitikk

Kjære [navn på mottaker],

Mitt navn er Kristine Hermanrud og jeg er masterstudent ved Institutt for Statsvitenskap ved Universitet i Oslo. Jeg arbeider for tiden med min masteroppgave med veiledning av førsteamanuensis Elin Lerum Boasson. Oppgavens formål er å fortelle historien om dansk fornybar energipolitikk fra 1999 til 2012, og hvordan prosessen rundt støttemekanismer på fornybar energi har foregått. En slik gjennomgang av historien av dansk fornybar energi politikk med fokus på støttemekanismer er så langt jeg vet ikke undersøkt, og undersøkelsen er således av stor interesse i et nasjonalt perspektiv. Gitt Danmarks fremtredende rolle innenfor fornybar energi vil undersøkelsen også være av stor interesse i et internasjonalt perspektiv.

I den anledning ønsker jeg å gjennomføre intervju med [navn på mottaker]. Intervjuet er antatt å være i en time, og vil dreie seg rundt de ulike lovendringen på fornybar energi, perioden mellom lovforslagene og hvordan disse har endret seg over tid. Etter intervjuet vil notatene lagres på sikkert område på UiO sine servere, for så å slettes ved oppgavens forventede ferdigstilling i desember 2017. På grunn av oppgavens utforming vil de intervjuede kunne identifiseres gjennom sin stilling.

Din deltakelse er frivillig, og du står fritt til å trekke seg fra prosjektet både før, under og etter intervjuet, uten at det trengs å oppgi grunn. Dersom du har mulighet til å delta eller ønsker mer informasjon om prosjektet kan jeg nås på telefon 92014224, eller ved å sende mail til krisbher@student.sv.uio.no. Du kan også nå min veileder på e.l.boasson@stv.uio.no. Intervjuene er tenkt å gjennomføres i løpet av oktober 2017, enten over Skype eller personlig.

Studien er meldt til Personvernombudet for forskning, NSD - Norsk senter for forskningsdata AS.

På forhånd takk, og med vennlig hilsen,

Kristine Hermanrud

Masterstudent,

Institutt for Statsvitenskap, Universitet i Oslo

Attachment 3: Letter of Consent

Samtykke til deltakelse i forskningsprosjekt, høsten 2017

Dette intervjuet gjennomføres i forbindelse med masteroppgaven til Kristine Hermanrud ved Institutt for statsvitenskap, Universitetet i Oslo. Prosjektets formål er å undersøke den politiske utviklingen på den statlige støtte mekanismen, feed-in tariff og feed-in premium, i Danmark, og hvordan den har utviklet seg fra 2001 til 2009. I den publiserte oppgaven vil den(de) intervjuede kunne gjenkjennes gjennom sin stilling.

Jeg (vi) samtykker med dette at svarene som gis under intervjuet kan benyttes i det nevnte prosjektet.

Dato og underskrift