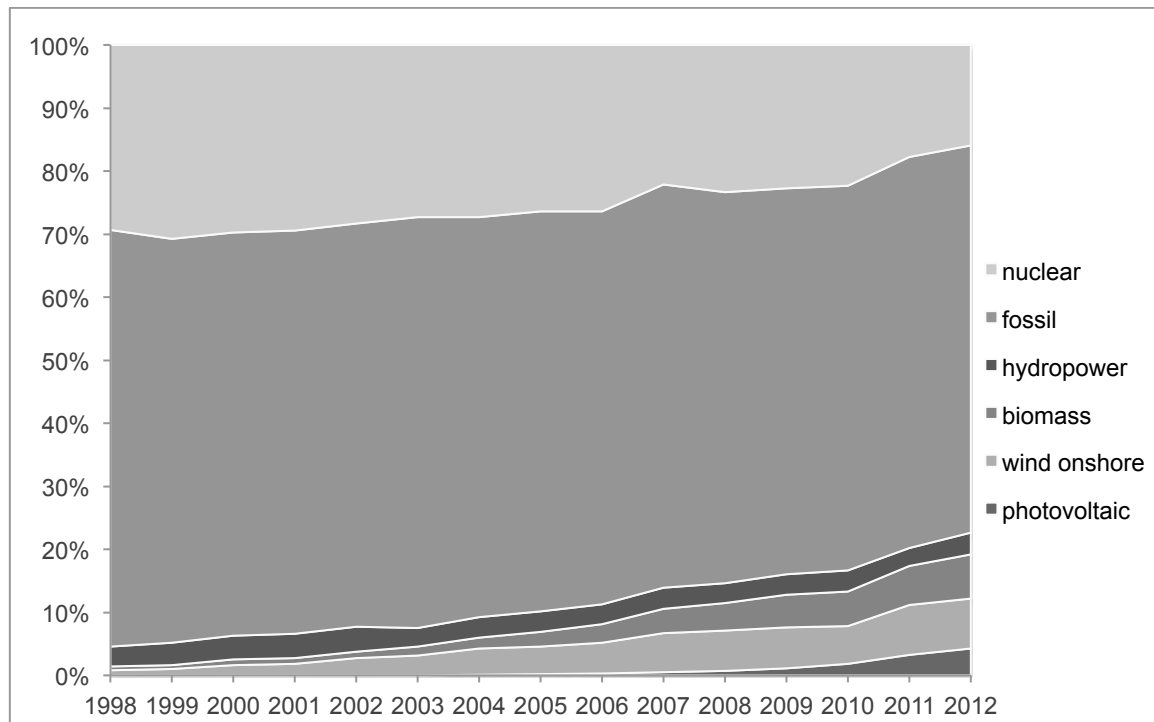


2. The Energy Transformation in Germany

2.1 What is the *Energiewende*?

In the aftermath of the 2011 Fukushima nuclear meltdown, the German Chancellor Angela Merkel has advanced the reversal of her nuclear policy under the label *Energiewende*, which “refers to the move towards the age of renewables and energy efficiency. The German government decided that Germany's energy supply should be generated primarily from renewables by 2050. This requires our energy supply system to be fundamentally restructured, presenting Germany with economic and technological challenges”, as the environmental ministry describes the government’s ambitions (BMU, 2013c). Although the German government only lately began to officially coin its historic plan as *Energiewende*, the transition towards renewables in fact has been long underway beforehand, as *figure 1* shows. The spectacular nuclear turn in the wake of the Fukushima disaster only set the final seal on a new policy course.

Fig. 1: Electricity Mix (1991-2012)



Notes: Geothermal energy and offshore wind power are omitted due to small quantities. Imports not indicated. Sources: BMU, 2013b, p. 18; BMWF, 2014a, p. 21.

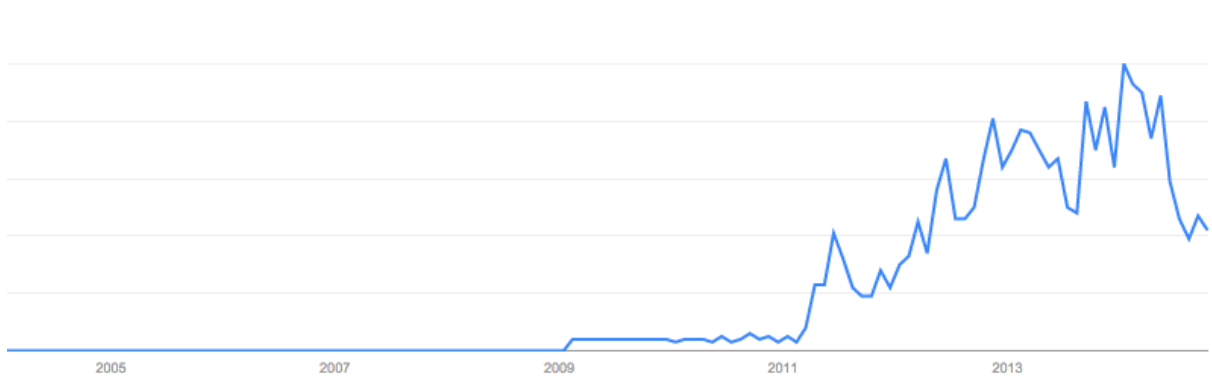
Since then, the label *Energiewende* has swiftly spread far beyond national borders, worming its way into the English language (Hockenos, 2012; 2013). *The Economist* (2012) and the *New York Times* (2014) have introduced the term in their reports and also academic journals began to use the idiom. The adequate translation of “*Energiewende*” is contested, however.

Quite common are “energy transition”, “energy transformation”, “energy turnaround” or also “energy revolution”, while only the latter transports the particular notion the word “Wende” conveys in the German language, stemming from the 1989 revolution in the formerly Communist eastern part of the country.

The origins of the term can be traced back to German nuclear opponents who adopted the vision of a nuclear-free energy supply based on efficiency and renewable energies, inspired by US physicist Amory B. Lovins’ book on “Soft Energy Paths” (1977; 1978). In 1980, the term “Energiewende” first appeared in the title of a book that transferred Lovins’ ideas to the German situation, launched by the alternative Institute of Ecology (Krause, Bossel & Müller-Reißmann, 1980). Over the years, several other books adopted the terminology, including a report by the former research minister Volker Hauff (Hauff, 1986) in the context of the Chernobyl nuclear disaster, and so did anti-nuclear and environmental groups, the Green party, the alternative press and, after 1998, the environmental ministry and left social democrats (Hockenos, 2012; Stefes, 2013, pp. 2-3).

Although the *Energiewende* only lately advanced to the official trademark of German energy politics, the Merkel government neither invented the term nor the concept (Stefes, Energy Transition: Critical Junctures and Path Dependencies Since 1990, 2013, p. 2), nor did it take the leading or pioneering role. Indeed, the Merkel government’s landmark decision in 2011 to accelerate the nuclear exit has had nothing but a catalyzing effect. “It is true, however, that *Energiewende* has entered common parlance only after the Merkel government introduced a legislative package under the same name in 2011 and successively sponsored and extensive public relation campaign” (ibid., pp. 2-3), as the striking development in Google search hits for “*Energiewende*” brings to mind (see *figure 2*).

Fig. 2: Google Search Hits: “Energiewende”



Source: Google Trends, rev. 07.10.2014. No data available prior to 2004.

2.2 Milestones in German Energy and Climate Politics

It is hard to say when exactly the *Energiewende* started, as nuclear energy has been fiercely contested already since the Chernobyl disaster in 1986, while coal and other fossil fuels met scientific warnings against global warming already since the early 1990s when the first reports on climate change gave a wake-up call to prevent threats to ecosystems and human life. However, the conservative/liberal government under Helmut Kohl (1982-1998) has been resistant to change beyond declaratory goals or of incremental magnitude. After German reunification in 1990, economic stagnation and unemployment superseded the environment on the public agenda (Schmidt, 2007, pp. 426-430; Rudzio, 2011, p. 547).

After a long period of stalemate, the government change in 1998 – for the first time involving the Green party – opened a window of opportunity to overcome policy gridlock and enact environmental policy reform (Jänicke, Reiche, & Volkery, 2002). The new government under Gerhard Schröder (SPD) took the landmark decision to leave nuclear power and promote renewable energies, which constituted historical turning points in national energy politics (Schmidt, 2007, pp. 430-443; Rudzio, 2011, p. 547).

The aspired energy transformation changed the priorities in the goal triangle of energy policy, with environmental compatibility gaining in importance. The nuclear exit aimed to eliminate the residual risk of large nuclear accidents and to mitigate the unsolved problem of nuclear waste disposal, whilst bringing about the need to substitute approximately one third of electricity generation capacity and an even a larger part of base-load power plants cheaply to operate. The promotion of renewable energies, as envisaged in the Renewable Energy Sources Act in 2000, aimed at the reduction of greenhouse gas emissions, save costly imports of fossil fuels from politically unstable parts of the world, and create growth and employment in an innovative and sustainable economic branch. On the initiative of the European Union, the Schröder government also introduced a cap and trade regime for the mitigation of greenhouse gases in industry and fossil electricity generation, and liberalized the Energy Market Act, which heretofore had granted regional monopolies to private utilities for electricity and gas, which now have been dissolved. In addition, the introduction of “green taxes” (*Ökosteuern*) on gasoline and electricity, the promotion of combined heat and power generation, tax privileges and quotas for bio-fuels and the subsidization of the energetic renovation of buildings have become further parts of the new energy policy. The following governments under Chancellor Schröder (until 2005) and Angela Merkel (since 2005, with varying junior coalition partners) have kept walking on this path, and laws once created have survived changing political environments, in spite of varying party compositions.

2006/07: “Climate Chancellor” Merkel on the International Stage

In 2006/07, energy and climate politics gained high salience on the national and international agenda, owed to a coincidental series of events (Dagger, 2009, pp. 83-90, 310-311):

- The 2006 Academy Award winning documentary movie *An Inconvenient Truth* released by the former US Vice President Al Gore and which proved successful in movie theatres and made global warming a publicly debated issue. In a 47-country survey, 66% of respondents who had seen the movie stated they afterwards changed their mind about global warming, and 89% stated that they became more aware of the problem (Environmental Change Institute & Nielsen, 2007).
- The *Stern Review on the Economics of Climate Change*, a report authored by former Worldbank chief economist Sir Nicolas Stern (2006) on behalf of the British government, warned against horrendous economic costs of global warming as consequence of ecological threats to drinking water, food production, health, extreme weather conditions and natural disasters. Stern recommended for swift and determined action, also through renewable energies, as the benefits of early action outweighed the costs. The report involved particular significance because it provided the very first specific figures for economic costs associated to global warming.
- The new scientific assessment report on climate change launched in 2007 by the International Panel on Climate Change (IPCC), a scientific body under the auspices of the UN, strongly confirmed previous evidence that global warming is man-made and caused by greenhouse gas emissions from incineration of fossil fuels (IPCC, 2007). The IPCC report attracted as much media attention in Germany as none of the previous reports before (Weingart, Engels & Pansegrau, 2007).

At the same time, by pure coincidence, the German government held both the presidency of the G8 and the EU Council. Chancellor Angela Merkel used this opportunity to push for ambitious climate protection goals on EU and international level and boost her positive public profile as “climate chancellor” (“*Klimakanzlerin*”).

Under her leadership, the G8 Summit held in Heiligendamm on 7 June 2008 adopted a final communiqué on climate protection. For the first time in history, the G8 agreed that climate change is man-made, acknowledged the scientific evidence represented in the IPCC reports and recognized the UN as negotiation platform. Furthermore, they declared to substantially extend the share of renewable energies and to “consider seriously [to strive for] at least a halving of global emissions by 2050” (G8, 2007, p. 14). This concession is to be considered as breakthrough in international climate politics, against earlier resistance of the USA and Russia who have blocked any progress. Environmental organizations such as Germanwatch

(2007) and WWF (2007) appreciated the leading role of industrialized countries and applauded the successful persuasion work by Chancellor Merkel.

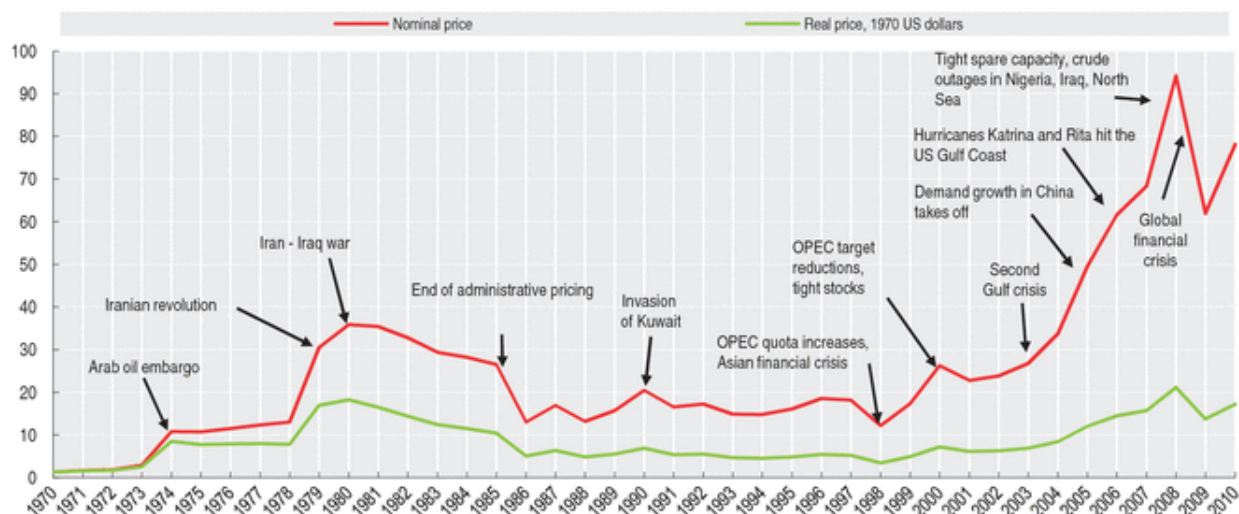
With Merkel's support, also the EU devoted much attention to climate protection and renewable energies in the course of 2007 and 2008 (Dagger, 2009, pp. 90-100). The spring summit of the EU Council on 8/9 March 2007, held under German presidency, approved a new EU energy package and agreed on a joint action plan, including the seminal "20-20-20 targets by 2020": 20% renewables in total EU energy consumption, 20% energy efficiency increase and 20% greenhouse gas reduction (30% if further states follow) (Council of the European Union, 2007). This decision was meant to provide a signal for the upcoming UN climate negotiations in Bali 2007 as well as in response to rising fossil fuel prices.

Climate change at the time has attracted more political and public attention than barely any other issue and than ever before. The Society for German Language picked the term "climate catastrophe" ("*Klimakatastrophe*") as "word of the year" (GfdS, 2007). The international commitment for climate protection advanced to the cornerstone of the legislation period and brought about Merkel's positive public reputation as "climate chancellor" (Schabedoth, 2009, pp. 46-50; Sohre, 2014, p. 367), providing the ground for favorable personal popularity ratings among the public and shielding her against attacks from Green or social-democratic environmentalists. On the other hand, this profile of the Chancellor and the new EU targets also reinforced the *Energiewende* course and undermined political resistance (Hirschl, 2008, p. 395; Dagger, 2009, pp. 108-110).

Debate about Peak in Energy Prices 2008

At the beginning of 2008, oil prices exceeded the symbolic 100 US\$ threshold and climbed to a new record close to 150 US\$ in July 2008, representing an all time high in real oil prices per barrel (OECD, 2012). However, in the aftermath of the worldwide recession, prices declined again in early 2009 and settled between 70 and 80 US\$, which was still a significantly higher level than a few years before (see *figure 5* below). This unexpected shock brought about rising energy costs for industry and private households and attracted broad media attention. The high oil prices enhanced the political support for renewables (Oschmann, 2009, p. 1), since environmental politicians and organizations used the worrying trend in oil prices to advertise the further promotion of renewables. Even though electricity generation is not based upon oil but coal, nuclear and gas, certain interest groups and politicians applied the oil price as rhetorical means to legitimize their preferences with economic reasoning.

Fig. 3: Development of Crude Oil Prices



Source: OECD, 2012.

The 2010 National Energy Concept and the 2011 Nuclear Turnaround

The National Energy Concept, launched in 2010 under the CDU/CSU/FDP Merkel government (2009-2013), reconfirmed and carried on the ambitious goals for the reduction of greenhouse gases, the further expansion of renewable energies and greater priority on energy efficiency (see *table 5* below). The nuclear phase-out, however, was decelerated by a lifetime extension of nuclear plants by 12 years yet not put into question per se and accompanied by the introduction of a nuclear fuel tax. In the wake of the Fukushima nuclear disaster on 11 March 2011, the government revised the nuclear lifetime extension and accelerated again the phase-out, with a timeline similar to the status quo ante under the initial exit roadmap (BMW & BMU, 2012, pp. 18-20). All other features of the National Energy Concept remained in force, unaltered by the nuclear turnaround.

Table 5: Selected Targets in German Energy Policy

	2011	2020	2050		
greenhouse gas emissions (compared with 1990)	-26.4%	-40%	2030 -55%	2040 -70%	2050 -80% to -95%
primary energy consumption (compared with 2008)	-6.0%	-20%	-50%		
gross electricity consumption (compared with 2008)	-2.1%	-10%	-25%		
renewables share (gross electricity use)	20.3%	min. 35%	2030 min. 50%	2040 min. 65%	2050 min. 80%
renewables share (gross end energy use)	12.1%	18%	2030 30%	2040 45%	2050 60%

Source: BMW & BMU, 2012, p. 16.

Table 6: Important Events and Milestones in German Energy Politics

➔	1972	seminal report on the “Limits to Growth” by the Club of Rome
➔	1973/1974	Oil Crisis
➔	1979/1980	Second Oil Crisis
☠	1986	Chernobyl nuclear meltdown
➔	1988-1990	Enquete Commission “Precaution for the Protection of the Earth’s Atmosphere”
☀	1991	Electricity Feed-In Act
➔	1992	UN Framework Convention on Climate Change
➔	1992-1995	Enquete Commission “Protection of the Earth’s Atmosphere”
➔	1996	EU Electricity Single Market Directive
➔	1997	Kyoto Protocol is signed
➔	1998	first federal government participation of the Green Party: SPD/Green government
☀	2000	Renewable Energies Act
☠	2000	nuclear phase out
☀	2001	EU Directive on the promotion of electricity from renewable energy sources
☀	2002	Offshore Wind Strategy of the Federal Government
☀	2004	1st amendment of the Renewable Energies Act
🌐	2005	first trading period of EU Emissions Trading System starts
➔	2005	government change: CDU/CSU/SPD government takes office
➔	2005	National Climate Protection Strategy
➔	2006	“An Inconvenient Truth” documentary, Stern Report and IPCC reports
➔	2007	EU “20-20-20” targets for renewables, climate protection and energy efficiency
➔	2007	Integrated Energy and Climate Program of Federal Government
🌐	2008	second trading period of EU Emissions Trading System starts
➔	2008	strong surge in crude oil prices
☀	2008	heated debate on ecological effects of biofuels
☀	2009	2 nd amendment of the Renewable Energies Act in force
☀	2009	EU Directive on the promotion of the use of energy from renewable sources
CO ₂	2009	CCS Act fails first time
➔	2009	UN Climate Conference in Copenhagen fails
➔	2009	government change: CDU/CSU/FDP government takes office
➔	2010	new National Energy Concept
☀	2010	reform of photovoltaics promotion
CO ₂	2010	CCS Act fails second time
CO ₂	2011	“Non-CCS” Act is introduced
➔	2011	first Green prime minister in history elected in a German state
☠	2010	nuclear lifetime extension; introduction of nuclear fuel tax
☠	2011	Fukushima nuclear accident; accelerated nuclear exit
☀	2012	sharp increase in the renewables levy
☀	2012	amendment of Renewables Energy Sources Act in force
☀	2012	Bundesrat vetoes photovoltaics retrenchments with 2/3 majority
☀	2012	severe cutbacks in photovoltaics promotion
🌐	2013	third trading period of EU Emissions Trading System starts

Source: own compilation.

2.3 Characteristics of the Energy Market

Conventional power plants – i.e. coal, gas or nuclear power plants – have three operating modes. In basic load, they continuously produce electricity around the clock and deliver the bulk of the steady electricity demand. Base load power plants therefore are considered as backbone of energy supply. Due to their low operating costs, still to date lignite-fired power stations carry out this task. Also hydropower plants are suitable. Medium-load power plants run about half of the year and cover times of higher electricity demand. Here, hard coal and natural gas are used. Peak load, which is only needed for a lower number of hours of very high electricity need, has usually been served by gas power plants and pump storage plants, as they can be flexibly regulated within the minute range, whereas coal power plants are not

this easy to control due to technical-physical restrictions. Natural gas power plants, however, are expensive to operate because of high fuel costs. In the wake of the expansion of renewable energies, photovoltaics today provides an important pillar of peak load supply at noon, yet foremost in summer.

Stemming from the times of regional monopolies, there are large over-capacities of power generation in Germany still to date. Today, also large capacities of renewable energies add up to the electricity mix, yet their actual power supply is highly dependent from the fluctuating sources wind and solar; only bio-energy can be technically controlled and brought into accordance with the factual demand. This increases the need for grid stability and grid control measures. Shortage of supply has not become likely thus far; rather, due to temporary high production of solar and wind power, Germany still is net exporter of electricity to neighbor countries. Even after the shutdown of eight nuclear power plants in the aftermath of the Fukushima disaster, imports of nuclear power from foreign countries did not increase and the supply situation has been stable (Bundesnetzagentur, 2011, pp. 16-17).

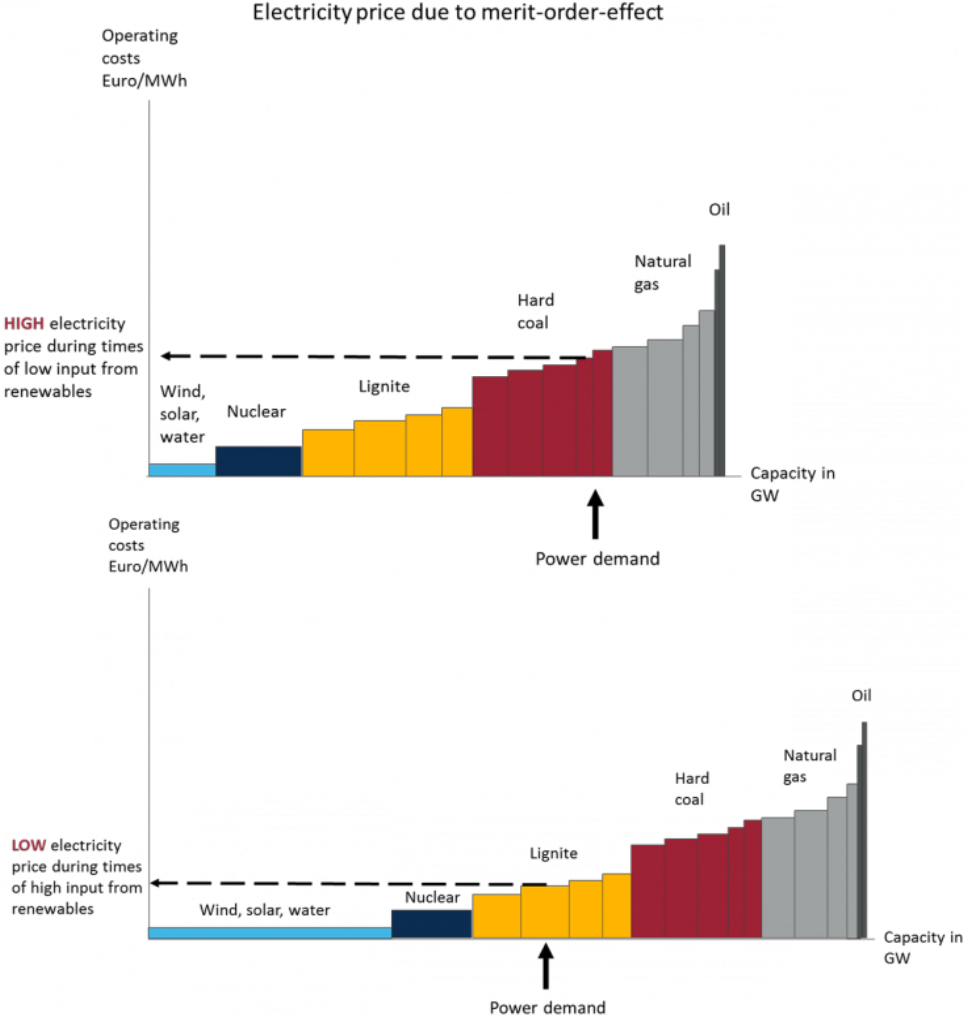
The politically envisaged reduction of greenhouse gas emissions foremost affects energy production, given that 80% of the country's emissions are energy-related (BMW & BMU, 2012, p. 80). Above all, lignite-fired and hard coal power stations are characterized by high greenhouse gas emissions per unit, particularly lignite. Gas has much less emissions, while nuclear power and renewables have zero emissions (if disregarding emissions from resources extraction for plant production). Since nuclear power is faced with declining public acceptance rates due to disposal issues with radioactive waste and the risk of nuclear accidents, the *Energiewende* strives to replace fossil and nuclear fuels by renewables. While the South of Germany benefits from relatively high solar radiation and prioritizes photovoltaics, the Northern part of the country has more wind and thus prioritizes wind power.

After the liberalization of the energy market in the late 1990ies, electricity prices are determined at the stock market following the price formation mechanism of the so-called merit order. This means that the most expensive power plant needed to meet electricity demand at a certain time determines the uniform price of electricity from all power plants, independent from their actual generation costs. In times of higher electricity demand, base-load power stations, thus, can make more profits, enhancing their economic viability.

The merit order comes into trouble in the wake of the expansion of renewable energies in conjunction with over-capacities in conventional power generation. As wind and solar power have marginal costs of close to zero (i.e. no fuel costs and minimal operational costs), and furthermore are legally granted priority feed-in to the grid, they supersede conventional medium- and peak-load power plants and, as a consequence, lowers the average stock market prices ("merit order effect"). As a consequence, gas power plants run to a lesser

extent and become economically unfeasible, even though needed to compensate for fluctuating supply from wind and solar power. Moreover, also other conventional power plants get into trouble, since lower electricity prices also damage their economic viability. In international comparison, electricity prices in Germany are today slightly above European average for large industrial consumers yet high for small and medium industrial consumers and private households (BMW & BMU, 2012, p. 91).

Fig. 4: Electricity Prices and the Merit-Order Curve



Source: www.cleanenergywire.org/factsheets/setting-power-price-merit-order-effect (Rev. 3.5.2015)

3. Theoretical Framework and Methods

3.1 Interest Groups, Lobbying and Advocacy Coalitions

The literature provides numerous definitions for lobbying and interest intermediation. At the core, most definitions conceptualize interest groups bargaining as logic of exchange between political decision-makers and interest groups, trading information and political support for consideration in political decision-making.¹ Most definitions highlight the character of interest intermediation as reciprocal exchange: While the government needs expertise, information, support and legitimation from interest groups, the latter seek recognition of their preferences in policy choice. Hence, interest groups can trade these political goods for access to institutions and consideration in decision-making. Politicians seek contact to interest groups just as much as vice-versa, as both sides of the table are dependent on each other, be it to a lower or higher degree.

Interest intermediation encompasses all attempts of interest representatives that aim to influence policy choice, either directly targeting the political decision-making itself, or indirectly through creating favorable public mood. Lobbyism is part of interest intermediation and means all attempts to influence a specific legislation, aiming to either modify, initiate or obviate, decelerate or accelerate a specific political decision. Every kind of organized interest group – whether business associations, unions, environmental organizations etc. – can employ lobbyism, carried out either by own lobbyists or by third parties such as think tanks, law firms or public affairs agencies (Kolbe, Hönigsberger & Osterberg, 2011b, p. 10; Speth, 2014, p. 6; Koepl, 2001, p. 7; Leif & Speth, 2006a, p. 12; Vondenhoff & Busch-Janser, 2008, p. 19-22). In this thesis, the term lobbyism does not carry the common negative connotation it has acquired but is used to describe a form of pluralist interest intermediation without normative judgment.

The importance of formal and informal access to decision-making process, particularly in light of the dissolution of neo-corporatism over the last two decades, has been stressed in the *network theory* as introduced by Hecl (1978). “Policy networks are mechanisms of political resource mobilization in situations where the capacity for decision making, program formulation and implementation is widely distributed or dispersed among private and public actors” (Kenis & Schneider, 1991, p. 41). Policy output is best understood, then, as the result of information exchange and negotiations between state and private actors engaged in the policy area at stake, “often made in a highly decentralized and informal manner” (ibid., p. 27). Yet, access to a policy network is not equally open to every actor but shows levels of hierarchy, with an “inner circle” of distinct corporatist actors and a “policy community” of those actors intertwined by a high degree of social interaction and informal consensus. The

inner circle of an issue network can develop into a *subgovernment*, i.e. an autonomous subsystem of close, informal cooperation arrangements amongst of elite lobbyists, high-rank state officials and members of parliament, hence a closed shop sealed off from the public and rather indulging in back-room politics than serving as transparent and fairly open source of information. In that case, “single-industry economic interests” become able “to insulate themselves from the influence of large-scale democratic forces through the creation of relatively independent depoliticized [...] subgovernments” (Baumgartner & Jones, 1991, pp. 1045, 1068). These hegemonic circles are likely to arise in distributive policy areas because a subgovernment can only persist if all involved actors can exploit it somehow (Schneider & Janning, 2006, p. 25). Excluded actors with deviant interests therefore attempt to move decisions to alternative venues or to change current institutional arrangements (Baumgartner & Jones, 1991, pp. 1048, 1052; Richardson, 2000, p. 1011). One can plausibly argue that energy politics has been directed by such as sub-government until the end of the era Kohl in 1998 when the Greens participated in government for the first time and undermined the established network (see Becker, 2011).

An applicable approach for the investigation of interest groups in policy choice must cope with the complexity of reality at a reasonable level of abstraction. We address this challenge building on the *Advocacy Coalitions Framework* by Sabatier and Jenkins-Smith (1988) with later modifications and refinements (Sabatier, 1993; Sabatier & Weible, 2007; Sabatier, Weible & McQueen, 2009), which provides a comprehensive conceptualization of conflict constellations and interactions of private and state actors within a given setting of political institutions, and combines the merits of various theoretical strands, such as the power resources approach and neo-institutionalism theories, into a sophisticated analytical framework (Schneider & Janning, 2006, pp. 194-195) that has been frequently applied in the interest group research, particularly with regard to environmental and energy policy (Sabatier, Weible & McQueen, 2009, p. 125). In this thesis, the Advocacy Coalition Framework serves as a heuristic analytical tool, while I neglect its numerous variations and do not necessarily share all its theoretical claims.

The Advocacy Coalition Framework starts from the pluralist assumption that interest groups compete for influence, while their success depends on their resources endowment relative to opponent groups, constrained by the institutional opportunity structure and interrupted by external conditions. Following the model, the variety of actors can be aggregated into advocacy coalitions: groups of actors that are glued together by the same belief system – that is “a set of basic values, causal assumptions and problem perceptions” (Sabatier 1993, p. 127) –, and seek to translate their common beliefs into policy output, for which they coordinate their activities to a nontrivial extent. At the heart of their belief system sits a stable “deep core” of fundamental normative and ontological axioms, such as socialist or

conservative ideology. In the middle lies the “policy core” of key causal assumptions and problem perceptions, which is key for the assignment of advocacy coalition membership. Those basic positions and strategies, e.g. pro or anti nuclear power, are resistant to modification but can be adjusted in response to serious anomalies in real life experience. At the surface of the belief system are “secondary aspects” located. These rather instrumental considerations, such as the specific number of years of a nuclear power plant lifetime, are more likely to change over time (ibid., pp. 131-135). In the remainder of this work, I will however mainly stick to the terminology “interests” to capture the articulated policy preferences derived from the belief system of actors, while interests may also include idealistic and societal values beyond solely material interests.

The number of advocacy coalitions is usually very limited (ibid., p. 128), most likely ending up in a competition of only two coalitions (Sabatier, Weible & McQueen 2009, pp. 131-132.). A literature review² suggests analyzing energy politics as battle between an “economy-first coalition” (all actors against environmental policy interventions) and an “environment-first coalition” (all actors in favor of environmental policy interventions). This aggregation serves as heuristic approximation to investigate primary cleavages in a complex society and should by no means lead to the misunderstanding of coalitions as monolithic blocks. For instance, “opponents” might generally welcome renewables growth but favor different paths, paces and instruments, while “environmental” actors might act out of economic rather than environmental motivation. Albeit the line-up of allies and opponents is generally stable over time, permanent homogeneity of members should not be assumed and defection of members can occur in the aftermath of external shocks. Moreover, coalitions facing internal conflicts may split up into sub-coalitions, which are still glued together by a part of their policy core beliefs against a common rival but internally quarreling about other parts of their beliefs (Sabatier, 1993, pp. 126-137; Sabatier, Weible & McQueen, 2009, pp. 128-130). The economic coalition, for instance, might be divided between the manufacturing industry demanding cheap electricity and the energy industry wishing for electricity rate increases.

3.2 Types and Modes of Policy Change

Radical policy change does not necessarily appear radical – it can also take place in slow pace and insidious manner but is still comprehensive if put together, i.e. occur in incremental steps that accumulate over time and result into profound change. In his conceptual framework of policy change, Friedbert Rüb (2013) suggests to distinguish four types of policy change depending on its pace (slow – fast) and extent (partial – comprehensive): incremental policy variation, comprehensive policy change, fast policy turnaround and rapid policy

transition. Incremental policy variation describes slow policy change that only affects secondary aspects of policies instead of the policy core as a whole. In contrast, comprehensive policy change takes place over a longer period but implies a fundamental modification of a policy belief – although through various successive smaller reform steps instead of one big coup. This type is closely related to the concept of “layering” as Kathleen Thelen prominently described the process of slow yet steady and profound transformation of an old system by gradual addition of new elements (1999; 2003; 2004; Streeck & Thelen, 2005; Mahoney & Thelen, 2010).³ The third type features fast policy turnaround, defined as a quickly completed policy change yet concerning secondary aspects only. On the contrary, a rapid policy transition requires a policy change that both takes place fast and implies deeper changes of a policy belief. As all these four types of policy change are to be understood as ideal types, empirical cases usually represent a mix of two or more types.

As *figure 6* below illustrates, the *Energiewende* reforms can be mainly characterized as comprehensive policy change. The large number of adjustments without huge shocks made the Renewables Energy Sources Act (EEG) almost a prime example. Only the severe cuts in solar tariffs in 2012 appear at odds, when the government swiftly enacted a fundamental reform of a policy, however without giving up the goal of solar energy growth as such. Also the stepwise introduction of emissions trading presents an example of slow but profound policy change. The CCS Act, in contrast, can also be regarded as rapid policy transition, bearing in mind that the government changed its policy goals from the open promotion to the restrictive regulation of CCS projects, within a very short period of time.

The reforms in nuclear policy show more variation. The original nuclear consensus initiated a slowly paced yet steady phase-out of nuclear energy – i.e. a paradigmatic shift –, and can therefore best be labeled as comprehensive policy change. The nuclear lifetime extension in 2010 did not revoke the paradigmatic shift but only decelerated the pace of the nuclear exit and, at the same time, introduced a nuclear fuel tax. As the lifetime extension only affected subordinate elements and a mixed balance of pro- and anti-nuclear aspects, it can be described as incremental policy variation. The re-acceleration of the phase-out after the Fukushima accident only cut the lifetimes again, i.e. also affected only the pace of reform but not the entire policy core, and it occurred swiftly.

Fig. 6: Types of Policy Change

incremental policy variation	comprehensive policy change
Nuclear Lifetime Extension 2010	Renewables Promotion (EEG)
PV Act 2012	Emissions Trading
Post-Fukushima Nuclear-Phase-Out	Nuclear Consensus 2000
fast policy turnaround	rapid policy transition
CCS Act	

Source: own chart, using the typology proposed by Rüb (2013), translation according to Stefes (2013, p. 21).

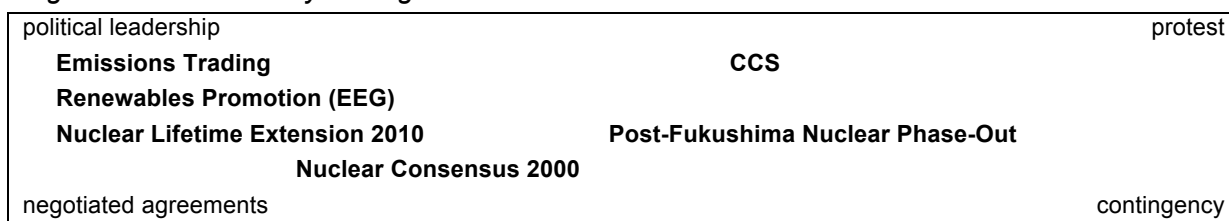
A second differentiation concerns the “how” or the mode of policy change. Following Rüb, policy changes of any of the above types can occur in four different modes, depending on the intentionality of change (high – low) and the actors constellation (top down – bottom up/external factors): political leadership, protest, negotiation or contingency, or a mix of two or more of these modes.

Political leadership implies an explicit and intentional political process initiated by a political entrepreneur who consciously aims to create or/and exploit a window of opportunity in order to assert his policy preferences. For instance, political entrepreneurs in the EU Commission or a convinced circle of environmental politicians, respectively, put forward emissions trading and renewables promotion. In contrast, when protests from citizens put political leaders under pressure, politicians enact policy changes out of vote-seeking or other reasons without being actually convinced regarding the contents. This can be observed looking at the CCS Act, which was originally initiated by elite circles but then profoundly shaped by vigorous local protests, thus a mix of protest and political leadership.

A third mode features “negotiated agreements” (Sabatier & Weible, 2007, pp. 205-207): In conflict-intensive interest constellations, actors must negotiate compromises to overcome hurting stalemates – such as the nuclear consensus agreement in 2000 between government and nuclear power plant operators. However, the nuclear consensus took place in the light of an active anti-nuclear movement, thus a combination of negotiation and protest.

A fourth mode is driven by contingency – for instance a nuclear catastrophe, of which neither time nor place can be known before it eventually materializes. Facing massive anti-nuclear protests in the aftermath of the Fukushima disaster, Chancellor Merkel assumed the role of a political entrepreneur and initiated policy change, i.e. a hybrid with elements of protest, contingency, and political leadership.

Fig. 7: Modes of Policy Change



Source: own chart, using the typology proposed by Rüb (2013), translation by the author.

3.3 Resources of Interest Groups

The terrain of politics is not a level playing field. In sharp contrast to the pluralist supposition of balanced policy equilibrium as result of eye-level bargaining amongst numerous interest groups, theoretical strands of conflict theory, network theory and new political economy break with the pluralistic premise that the entire spectrum of societal interests can equally organize and can employ equal resource to influence policy choice. Instead, they highlight structural differences of interests in terms of their capacity for organization and conflict as decisive conditions for their assertiveness. The literature suggests a wide number of all possible factors of resources of an interest group, which are briefly discussed further below. In order to avoid conceptual overstretching, this paper limits itself to the core of power resources approaches of conflict theory (seminal: Offe 2006 [1969]; Offe 1984), which emphasize organizational capacity and conflict capacity. Policy choice, then, is expected to be determined by resources distribution among interest groups: The more resources an interest group can employ, the higher is its assertiveness.

Organizational Capacity

The concept of organizational capacity refers to the ability of a societal interest “to mobilize motivational and material resources to a sufficient extent to establish an association or a similar means of interest representation” (Offe 2006 [1969]; see also: id., 2003, [1972], pp. 21-22; id., 1984; Rucht, 2007, pp. 28-29). Only interests that are capable to organize and articulate have the chance to impact policy choice. “Votes count, but organizational resources decide” (Stein Rokkan cited by Offe, 1984, p. 173).

According to the seminal work of Mancur Olson (1965) on the “*logic of collective action*”, it cannot be taken for granted that individuals with shared interests really act collectively to achieve them. Public and common goods,⁴ such as a stable climate, clean air or finite fossil fuels, suffer from a cooperation dilemma: The incentive for the individual to protect the environment is low, because nobody can be excluded from its use. If I pay membership fees to Greenpeace, spend my weekends at protests or give up cheap flights to go on holidays, all in pursue to alleviate the pollution of the earth’s atmosphere, does not pay off for myself as everyone else can just go on polluting the atmosphere and not take any sacrifices, whereas they still benefit from my contribution to keep the environment healthy without doing anything themselves. Even worse, the contribution of a single individual is too small to make a difference, which is why the individual has no incentive to contribute (*trivial contribution problem*). Nobody has an incentive to act if there is no guarantee that everyone else also

acts. If individuals maximize their self-interest to rational ends, they seek to impose the costs of environmental protection to third parties, but still take advantage from the use of the public good (*free-rider problem*). Large, heterogeneous and latent groups are hence disadvantaged not although but *because* they pursue common public interests. The largest groups in society, be it taxpayers or consumers, will become “forgotten groups” with no chance against big private corporations; they “are at least as numerous as any other group in society, but they have no organization to countervail the power of organized or monopolistic producers” (Olson, 1965, p. 166). Small, homogenous groups can organize most effectively – such as specialized industry branch associations and unions who can lobby for their own clientele and do not have to care for the overall economic development, unlike large associations with heterogeneous membership structure. Public interests such as saving the environment feature weak organizational capacity, whereas private interests such as jobs or capital remuneration feature strong organizational capacity.

These theoretical approach contributes to the understanding of the inclination of politicians to burden non-organized parts of population at large, while at the same time providing exception rules for better-organized private interest groups, particularly in the case of high market concentration in branches such as energy supply, coal mining and chemical industry (Böckem, 1999, pp. 36-27, 51-52.). It therefore appears plausible that industries have a strong say in corporatist decision-making, whereas energy consumers and taxpayers lack an effective representation (Salhofer, Hofreither & Sinabell, 2000).

The logic of collective action is further reinforced by the preference of the present inherent to party competition, which fosters short-term thinking and inhibits future-oriented policy. The past is, so to say, always better organized than the future. The threat of climate change or shortage of fossil fuels is loaded with uncertainties, is an ambivalent risk that will only materialize someday in the future, and is thus not sufficiently acute yet to rise in rank against the vital economic concerns of today – and future generations who would suffer from environmental destruction cannot vote today (Tremmel, 2006). By the same token, non-existing jobs that could possibly be created in new industry sectors such as clean technology cannot organize, whereas existing jobs in present industries are well organized in unions and business associations. Economic expansion and environmental protection are therefore matter of structural conflict (Deutsche Bank Research, 2007, pp. 5-6). Indeed, the human mindset feels current losses weightier than (potential) future gains, which is why losers of a political reform will mobilize stronger resistance than (potential) winners could do. Moreover, losers of policy reform are easier to identify and organize than potential winners (Heyen, 2011, pp. 151-152).

Latent groups, however, will not always fail (seminal: Hardin, 1982), as collective action can also arise from extra-rational motives outside of material self-interest. Indeed, idealistic

interest groups in fields of “weak” interests have emerged and lobby for their cause, with the strength of environmental organizations with their large membership as instructive example (Roose, 2003; 2006; Take, 2007; von Winter, 2007). Moreover, modern online communication tools radically enhanced the organizational capacity of diffuse interests in civil society, as access to information and communication is made feasible in real time, from any place and with virtually zero transaction costs (for a literature overview, see Alpar & Blasche, 2008). Inferior actors can lean on online communication to create public attention for an issue and to organize protests (Richardson, 2000).

Conflict Capacity

Conflict Capacity describes the ability of a particular organized interest to exert political pressure by the credible threat to withdraw economic resources of systematic importance, including job losses, relocation of industrial sites to other countries, refusal of investments, or the organization of strikes. Threats are credible if the addressee perceives their realization as likely (seminal: Offe, 2003 [1972], p. 67; 2006 [1969], p. 224; see also Schmidt, 2007, p. 116; Rudzio, 2011, pp. 90-91, Speth, 2014, p. 9). “Not least their economic power is a decisive factor how efficient interest representatives can shape their lobby activities and to which extent they can gain influence on policy-making. Less powerful interests can easily lose out” (Papier, 2010, p. 22). Thus, an essential lobbying skill is to provide convincing threat scenarios even if their realization is unlikely, and, in combination, to hold out prospects of great problem solutions and gains for the common good if their preferences are met (Kolbe, Hönigsberger & Osterberg, 2011b, pp. 21-22).

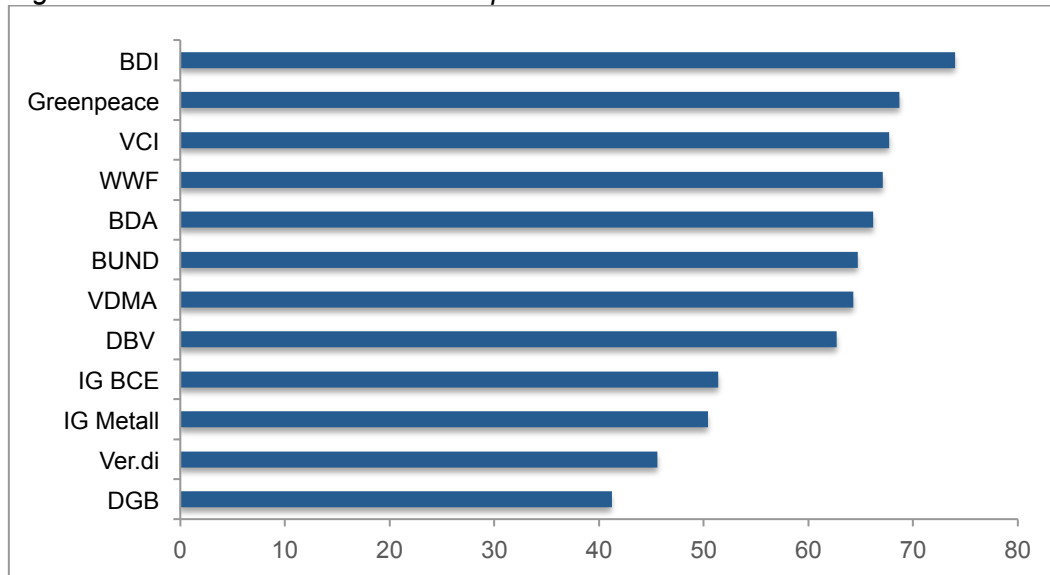
The economic threat potential varies considerably among organized interests. Groups outside of the production process (children, unemployed, elderly in need of care, patients etc.) or idealistic interests groups (the environment, human rights etc.) usually have only negligible economic power and are therefore structurally disadvantaged – a pattern that was early referred to as the “privileged position of business” (Lindblom, 1977). Though some diffuse interest groups might generally be able to engage in economic conflicts, such as consumer boycott against corporations (such as the Shell boycott in 1996), they normally are not able to translate this potential into group mobilization and action; without organizational capacity, conflict capacity is neutralized. To the very contrary, corporations and business associations can invest substantially more financial and personnel resources in lobbying and are able to establish credible threats such as job losses or relocation of factories to foreign countries (Böckem, 1999, pp. 52-54; Leif & Speth, 2006a, p. 13).

Economic power goes hand in hand with financial means that allow interest groups to recruit professional, well-trained lobbyists, commission scientific studies or launch media campaigns. However, money cannot buy political decisions, financial resources determine the capacity of an interest group to afford professional staff, fund favorable scientific research, carry out media campaigns, and establish and maintain contacts to decision-makers – and “buy” access to political decision-makers (sometimes even literally). Large business associations and corporations can pay extensive lobbying activities out of the “petty cash” (Bülow, 2010a, pp. 181-182.), whereas environmental groups rely on state funding and donations. Successful lobbying pays out for companies in hard cash, whereas NGOs can only achieve idealistic goals with no personal gains. Moreover, business associations are in most cases better staffed than NGOs (Bülow, 2010a, pp. 165-169).

Asymmetry of Power?

Power resources are unevenly distributed amongst different kinds of interest groups. A large body of literature⁵ suggests that *private interest groups* with strong, i.e. economic interests, such as industry associations, corporations and unions, should be more powerful than *public interest groups* with weak, i.e. idealistic or common-good interests, such as environmental, consumers or human rights issue groups, due to a structural asymmetry in distribution of organizational and conflict capacity. Due to this asymmetry, interest groups that put on the brakes in climate protection are expected to be able to exert greater influence on political decision-makers. On the other, when looking at their self-assessment, business associations do not feel that they would be very influential in politics (Haacke 2006, pp. 164-165; Högrefe, 2008). Surveys among association executives (Baethge & Hübner, 2004, p. 19) reveal that they perceive the success of Greenpeace to be about par with the largest industry association, and WWF rubbing shoulder with the chemical industry (see *figure 7* on the next page). Environmental NGOs are seen as important players that must not be underestimated and that can well match industry associations in terms of effectiveness (Vondenhoff & Busch-Janser, 2008, p. 107). At least in the eyes of lobbyists, the asymmetry of power appears more ambiguous and multifaceted – which calls for closer scholarly attention, since there must be other factors at work that repair this power imbalance.

Fig. 7: Success Rate of Interest Groups in the View of Association Executives



Note: Overall success rate of selected interest groups on a scale from 0 (“not successful at all”) to 100 (“very successful”) according to a survey amongst 501 association executives, in 2004. Source: Forum & DQG cited in Baethge & Hübner, 2004, p. 19.

Discussion: Other Resources

The literature discusses a multitude of further resources held to be significant for the assertiveness of interest groups. Sabatier (1993, p. 131) suggests money, expertise and the number of allies. Take (2007, pp. 198-201) proposes knowledge, public acceptance, membership, donations, access to negotiation forums and decision-makers as well as alliance partners. Von Winter (2007, p. 220) distinguishes material resources (inter alia: money, rights, conflict capacity, public reputation, exclusive knowledge, size of membership, organizational degree) and social resources (ideological proximity to and interconnections with political parties, alliance partners, integration into inter-organizational networks). Rucht (2007) adds resonance capacity, i.e. the conduct of the (however mainly passive) audience towards certain interest groups. Heffernan (2011, p. 178) proposes visibility, resources – i.e. financial endowment, quantity and quality of staff and expertise –, size of membership and legitimacy. Zohlnhöfer (1999, p. 51) defines information and persuasiveness of arguments as key determining factors for influence, besides financial power and conflict capacity. Corbach (2007) uses conflict capacity and the access on decision-makers as explanatory variables for assertiveness. A good deal of literature stresses the importance of “access goods” (Bouwen, 2002a; 2002b) that interest groups can trade for political influence, relying on pluralist and corporatist theory strands (see also: Zohlnhöfe, 1999, p. 51; von Winter & Willems, 2007, p. 227; Wehlau, 2009, pp. 57-59; Rudzio, 2006, pp. 98-99). These access goods can include expertise, intermediation, support/cooperation and legitimation. In his seminal “Theory of Access”, Bouwen (2002a; 2002b) holds that “actors who can provide the highest quantity and

quality of the critical access good in the most efficient way will enjoy the highest degree of access” (2002a, p. 17). In his concept, access goods consist of “expert knowledge”, that is “the expertise and technical know-how required from the private sector”, and the “aggregated needs and interests of a sector” required by politicians to design and implement sound legislation (Bouwen, 2002a, p. 8; 2002b, pp. 369-370). Certainly, information and expertise can help to access decision-makers, however, I argue that information may open doors but is not the decisive factor for factual consideration in policy choice, in spite of the struggle to find valid indicators to account for expertise. In addition, also indirect influence through media and public pressure can impact politicians, while the knowledge of experts might be ignored.⁶

3.4 Trust: The forgotten Power Resource

Power resources theories have drawn great attention to organizational and conflict capacity of interest groups yet gravely neglected the importance of trust for assertiveness. As discussed above, many scholars mention factors such as public acceptance, public reputation, legitimacy, persuasiveness of arguments or resonance capacity, which all relate somehow to trust, yet they under-theorize the underlying mechanisms.

The negligence of trust might still have been justified in the old Bonn Republic with closed corporatist circles of decision-making, when large utilities and industry have served as the only recognized interest groups, whereas environmentalists and renewables supporters have been regarded to be unsound or irrelevant in political circles and relatively large parts in society, so the political system was closed for input for new actors outside of the corporatist boundaries (Kitschelt, 1986). This institutional barrier, however, was gradually overcome with the overall trend towards more pluralist patterns, and – as the decisive turning point – the entrance of the Greens into government in 1998, whereupon experts from the environmental scene gained recognition and participated in commissions and state authorities. At the same time, energy politics advanced to the top of the public agenda and new actors such as renewables associations organized and entered the political stage, which triggered the collapse of the old fossil-nuclear corporatist “subgovernment” (Baumgartner & Jones, 1991, pp. 1050, 1071). With this realignment in the institutional settings, politicians had to deliberately pick from a broader range of organized and recognized interest groups. Now, trust came in as a key factor that allows politicians to decide which interest groups they are willing to attend to and which to decline.

Trust can be conceptualized as the recognition of an interest group as legitimate, credible and reliable – i.e.: trustworthy – partner in the eyes of political decision-makers and the general public. Trust is the key resource for an interest group’s assertiveness as soon as a

policy issue is placed on the public agenda and has escaped closed corporatist circles. An interest group that lacks trust will be unable to influence policy choice. This is owed to three partially interplaying mechanisms (as already outlined in chapter 1):

(1) For politicians, it is important that they can judge which interest groups will offer them usable and accurate information on how to reach their own political goals and which compromises are acceptable for the branch. If politicians feel that they cannot trust the advice of an interest group, as the information is likely to be false or misleading, the interest group will lose its say as policy advisor. An interest group may still gain short-term benefits by tricking politicians into the desired policy choice but then will significantly lose out all the more serious at future policy decisions.

(2) As politicians are seeking for (re-) election, they are sensitive to the public image of interest groups. Any meeting, negotiation or other form of collaboration with an interest group that suffers from bad public reputation could reflect on the politician's image – entirely irrespective of the actual content or significance of the collaboration. Politicians therefore will cautiously pick which interest groups they are willing to recognize. Media coverage and opinion polls but also the opinion of citizens in the electoral district and of party fellows constitute reference points for politicians to evaluate if an interest group is trustworthy in the eyes of the general public.

(3) Politicians need to present any reform as in the interest of the common good, although the reform in fact might be targeted at satisfying a particular group and harm others. Therefore interests must be considered legitimate by overall public opinion, as otherwise politicians will hesitate to follow these interests to avoid blame and electoral punishment. Both interest groups and supportive politicians will thus attempt to frame their interests and preferences as serving the common good, the “national interest” or overall accepted values.

Even if a certain interest is able to organize and capable for conflict, it does not necessarily rely on trust – and thus will fail to impact policy choice. The nuclear branch, for instance, enjoys both great organizational capacity (with a small, homogenous group of four big corporations with very specific and clear common interests) and conflict capacity (holding large parts of electricity generation, jobs and financial means), but the nuclear industry ceased to have sufficient trust: the legitimacy of the plant operators' interests does not hold in the eyes of the broad public anymore, and their credibility is tarnished due to their pretentious appearance and intransparent communication in the past.

Politicians can still disregard the public image of an interest group as long as the salience of the issue on the public agenda is low or a countervailing power is missing, which makes competing options seem to be absent. But as soon as a competitor organizes and shifts the debate to the public arena, trust as ideational factor comes in. This activation of public

opinion occurs either as consequence of a strong opponent party (such as the Greens) or a focusing event (such as a nuclear catastrophe) (Howard, 2010, pp. 745-746). When public opinion is still passive, limited to some private beliefs or abstract ideas, politicians can close their eyes to the public image of interest groups. But as soon as the issue gains salience on the public agenda, professional lobbyists can only maintain their influence if they can rely on trust. As soon as an issue is on the public agenda, public opinion overpowers elite lobbyist bargaining. High public visibility strengthens those interest groups whose interests overlap with public opinion – as a general rule, those organizations with high public reputation, for instance environmental associations –, whereas it weakens those interest groups whose interest are opposite to public opinion – usually those actors with low public reputation, such as the old energy corporations.

Conflict capacity is favorable, yet when an issue is on the public agenda, public reputation becomes more important than “big money”. The old energy utilities have lost their trust due to false estimations and debatable lobbying activities in the past, and fell from a recognized political partner to a necessary evil that politicians only concede the survival but no political influence anymore – regardless of their still dominant position in energy supply. The old energy corporations now struggle for any political say. Only in May 2014, for instance, they failed with a proposal for a reform of the financing of nuclear power plants dismantling even before they officially announced it – the proposal was immediately objected across all parties, as no one wanted to find himself allied with them (BT, 2014, doc. 18/1959; Der Spiegel, 13.5.2014). Regardless of their economic power, this inferior situation will not change unless they can solve their trust crisis.

Trust can even remain important if polls indicate only low salience in overall public awareness. Politicians have developed an early warning system for delicate issues that might impact their own reputation and lead to electoral damages, and will hesitate to make unpopular decisions if they fear to be blamed – no matter if the majority of voters actually does not care (yet); a minority of voters is sufficient if they are well-organized and threaten to activate public opinion, particularly with upcoming elections and high party competition. If national legislation aspires to promote infrastructure projects – such as power plants or power lines –, the lack of public acceptance only in the area affected by the construction project is likely to lead to the overall failure of legislation at national level, even though the population in other, non-affected areas does not even care. Through local members of the parliament and through state governments in the Bundesrat, as well as various informal intra-party channels, regional resistance breaks through to the national level. The fierce conflicts over the seemingly unsuspecting train station project Stuttgart 21 present a remarkable case of how a local project can suddenly gain national attention and impair the re-election of a

state government. Also the failure of the CCS legislation due to local resistance in Schleswig-Holstein and the latest debate on gas fracking are illustrative examples.

Scholarship has thus far under-theorized the role of trust, whereas lobbyists are very aware of the paramount role of trust for assertiveness. A practical handbook for professional lobbyists advises: "Reputation and success of a lobbyist stand and fall with his trustworthiness. A good lobbyist will be in demand advisor and assistant of policy. Whoever makes contradictory statements or even spreads untruths will swiftly gamble away her good reputation. [...] Integrity is one of the assets of a lobbyist. Only trustworthy and authentic appearance enable sustainable and particularly successful interest representation" (Vondenhoff & Busch-Janser, 2008, pp. 172-173). Lobbyists are aware that a certain argument or threat – like the threat to cut back on jobs, relocate their production sites abroad, or initiate legal proceedings against a certain legislation – can become discredited if used negligently and discounted as pure lobbyist exaggeration. Interest representatives who bet on threats must have a clear picture of these undesired consequences (ibid., pp. 27-28).

Interest groups with low trust levels might still be able to convince politicians to give in to their demands, but if they push too much or provide misleading information, they will entirely lose their recognition as trustworthy partners and suffer even greater setbacks at future political decisions. This mechanism works like a pendulum: When they stretch the pendulum too much, it will swing back with even more force. An illustrative example is the nuclear lifetime extension in 2010, when nuclear lobbyists pushed the new government, inter alia with a controversial advertising campaign, following their economic interests by jeopardizing the political consensus, which unleashed anew the anti-nuclear movement and made the governing parties look like collaborators of a shady business. After Fukushima, the government saw no other choice but to withdraw the lifetime extension to avoid electoral risk, and entirely excluded the nuclear industry from policy consultation. If the nuclear industry would not have pushed the government in the first place and not revoked the consensus agreement, the lifetime extension would have been enacted anyways – as being in line with of the manifestos of both newly incumbent parties – but the nuclear industry would have fostered her public image as reliable partner who stands with its contracts and promises – and the phase-out after Fukushima would have turned out less merciless.

The role of trust involves effects on advocacy coalition building. Business lobbyists believe that they have less (!) political influence than their counterparts from civil society, i.e. allegedly weak interests, because the general public and media were out to strangle them at every step and turn, as if their lobby activities were illegitimate or illegal, whereas environmental organizations could engage in intense and delicate lobby activities without evoking any public criticism (Kolbe, Hönigsberger & Osterberg, 2011, pp. 12-13; Hogrefe, 2008, pp. 6-7; Gräf, 2012, p. 1). As politicians prefer interest groups that can frame their

interests as being in line with the national interest or the common good, economic power alone or privileged ties to political office holders are not sufficient for assertiveness. Interest groups will be the most assertive if they can link high trust with high economic threat potential. Often, this will be an alliance between idealistic and economic interest groups, as the former rely on trust and moral authority while the latter rely on economic power (see also Vondenhoff & Busch-Janser, 2008, p. 29). This linkage enables them to argue with jobs and other economic gains as well as with the common good beyond sheer particularistic interests – and thus are best capable to convince policymakers. Vice versa, when interest groups fail to establish a partnership between both spheres, they are unlikely to succeed. As a striking example, a broad and heterogeneous yet quite loose coalition of local residents, farmers, environmental associations, renewables industry and water suppliers in the state of Schleswig-Holstein was able to build up enough resistance against the underground storage of carbon dioxide to such an extent that politicians withdrew their political support for the project – as the big energy corporations had jeopardized their trust by their pretentious attitude.

3.5 Veto Points and Veto Players

Veto approaches provide a theoretical framework that has demonstrated great explanatory power, also in environmental politics (Immergut & Orłowski, 2013). Their focal point is the power of certain legislative actors to stop bills, arguing that the number and features of these veto opportunities establish specific “rules of the game for politicians and interest groups” and create “distinct logics of decision-making that set the parameters both for executive action and interest group influence” (Immergut, 1992, pp. 58-59), which may structurally “privilege some interests at the expense of others” (Immergut, 1998, pp. 25-26).

In one of the most cited elaborations of this approach, Ellen M. Immergut (1990; 1992; 1998), in her seminal *veto points* concept, looks at the constitutional features and the political majorities of political arenas where a proposal can be brought to fall: “institutional veto points are the political arenas in which government proposals may be blocked. In order to determine whether or not a political arena is or is not a veto point, one must consider the formal constitutional right of the arena to veto, the political majority in the arena, and the extent of party discipline” (Immergut & Abou-Chadi, 2010, p. 8), which includes chambers of parliament, courts and referenda. However, not every veto point can always become active: Considering party majority constellations, a veto point is closed when the government can rely on a sufficient majority. The more open veto points exist, the more difficult will be (radical) policy change. In the German parliamentary democracy, the government can rely on

majorities in the parliament (closed veto point), whereas it is often confronted with incongruent party majorities in the Bundesrat as second chamber of parliament, whose consent is mandatory for the largest part of legislation (open veto point in the case of incongruent party majorities and mandatory consent). Additionally, the strong constitutional court presents the chance for inferior actors to attack policy change in the court (open veto point). Referenda do not exist in Germany on the federal level.

In a prominent variation of veto points approach, the concept of *veto players* by George Tsebelis (1995; 2002) focuses on “individual or collective actors whose agreement is required for policy decision” (1995, p. 293) to account for policy change and stability. Tsebelis differentiates two kinds of veto players: *institutional veto players*, which are formal political institutions basically equal to the veto points (i.e. federal government, two chambers of parliament, constitutional court), and *partisan veto players*, which are the political parties in government.⁷ The success of a legislative proposal depends from shared positions of the veto players involved. That is, every veto player adopts an “ideal position” for policy choice within a zone of indifference. Within the “win set” of overlapping zones shared by different players, agreement is achievable and status quo can be changed. The smaller the win set, the more likely is policy stability (ibid., pp. 293-296; id. 2002, p. 21). “The potential for policy change decreases with the number of veto players, the lack of congruence (dissimilarity of policy positions among veto players) and the cohesion (similarity of policy positions among the constituent units of each veto player)” (Tsebelis, 1995, p. 289). Vice versa, policy stability increases when more veto players must approve reforms, when the ideological distance between them is greater, and when they are more cohesive. In the case of congruent party majorities, a veto player is “absorbed”, due to identical policy positions assumed.

All this suggests that the German political-institutional environment – with its high number of veto players and veto points as well as the need for coalitional engineering within government and between the two chambers of parliament – is hostile to large-scale policy change. Indeed, quantitative cross-country analyses found a significant negative correlation between the number of veto players and the environmental policy output in 18 OECD countries: the more veto players, the lower the number of policies adopted (Knill, Debus & Heichel, 2010, pp. 306, 328).

The institutional setting also has interaction effects on interest intermediation. The influence of interest groups depends on the extent they can utilize veto points or veto players for their cause. “Interest groups [...] need to influence the positions of veto players by endangering the achievement of their programmatic or electoral goals in order to influence policies” (Zohlnhöfer, 2009, p. 103). The more veto players or veto points exist, the larger is the scope of interest groups to influence legislation. As veto players or veto points can block reforms and thus preserve the status quo, interest groups with a preference for keeping the status

quo benefit from a high number of veto opportunities: They need only *one* veto player to block a reform, whereas interest groups with a preference for policy change must convince *every* veto player to pass it. This mechanism strengthens the influence of established interest groups and weakens new interest groups outside of the traditional corporatist bargaining system. However, as will be elaborated at more length later on, this institutional preference for the status quo is not completely immune to change.

When taking a closer look at the government, the features of its internal structure influences its behavior: When forming a joint position, coalition parties tend to agree on the mean of their programmatic objectives in relation to the share of seats in parliament (Cusack, 2001). Moreover, the distribution of ministerial responsibility among coalition partners follows distinct patterns: The junior coalition partner seeks to obtain ministries for those policy areas of highest programmatic salience and suitable to counterbalance the larger coalition partner in areas of ideological conflict (Green & Jensen, 2014). For instance, a green party will attempt to obtain the environmental ministry as it corresponds with the party's programmatic profile and can be used to wall off anti-environmental initiatives advanced by the coalition partner. However, other authors found no significant influence of an environmental minister's party affiliation to the number of environmental policies adopted (Knill, Debus & Heichel, 2010, pp. 305-306, 324-328), although the quality of the policy output might differ.

The German Bundesrat as second chamber of parliament and institutional representation of the governments of the federal states (*Länder*) constitutes an effective veto point. Veto theories assume that the conflict potential of the federal government with the Bundesrat increases in times of incongruent party majorities (see also the seminal work by Lehmruch, 2000), which is why Fritz W. Scharpf (1985) famously coined the notion of a "joint decision trap" to capture the hurdles for policy reform that the bicameral system creates. Vice versa, when both chambers of parliament are by congruent party majorities, significant policy change should be more likely (Haverland & Stiller, 2010). However, the Bundesrat does not follow pure party politics. Rather than forming a partisan single block, the delegations of state governments represented in the Bundesrat take specific interests of their regional background into account, regardless of their party affiliation – such as the advocacy role of state governments for the protection of companies with strong regional roots (Vondenhoff & Busch-Janser, 2008, pp. 92-94).

Also the internal decision-making structure of veto points or institutional veto players has impact in the policy outcome. Political arenas carry a decision bias, which means that the venue where a political decision is taken plays a decisive role for the expected outcome ("arena effect"). As Baumgartner et al. (1993) have demonstrated for the US Congress, both the consultation process and the results concerning issues such as nuclear energy, toxic substances or smoking significantly differ depending whether the debate takes place in the

Economic, Environmental, Financial or Health Committee. The same effect holds for the committees in the German parliament and for the respective ministries in charge, as will be elaborated later: It makes a difference if the economics ministry or the environmental ministry writes the law proposal. Political actors are aware of this decision bias and strategically attempt to shift the competence for the policy issue in question to a venue that is likely to lean towards their interests (ibid., p. 1051).

The impact of the internal structure of institutions brings challenges for classic veto theories. It is not “the” government and not even the parties within the government that form a position but the responsible ministries in interaction with the party constellation. When the environmental ministry has the leading responsibility for a government bill, the policy output is likely to be different than when the economics ministry enjoys leading responsibility. Moreover, also party positions are not as homogeneous as veto theories imply – be it with respect to non-partisan regional interests of state governments in the Bundesrat or regional groups of parliamentarians in the Bundestag, or be it intra-party conflicts between the environmental wing and the economic wing of a party. Variations in intra-party power constellations owed to institutional factors, external shocks or simply contingency, lead to changes of positioning. The conceptualizing of veto points and veto players thus comes not without pitfalls, which are under-emphasized in literature to date (see section on “Rethinking the Veto” in chapter 1).

3.6 Electoral Pressure

Political parties can be conceptualized as both policy seeking and vote seeking: they attempt to accomplish their programmatic objectives but also need to serve their electoral interests as to gain office in the first place. Recent works on party competition have singled out various mechanisms of electoral considerations in party competition (for an overview, see Adams, 2012). Following rational choice models of voting (seminal: Downs, 1957), political parties accept to deviate from their programmatic objectives if they fear electoral losses (*policy sacrifice ratio*), particularly if they fear losing office in the approaching elections. Vice versa, they will follow their programmatic objectives if expected electoral losses do not entail a loss of office. Political parties therefore adjust their positions to shifts in public opinion and electoral results (Sommer-Topcu, 2009; Adams, Clark, Ezrow & Glasgow, 2004), in particular if challenged by a new political opponent such as a Green party (Howard, 2010). In any case, parties seek to assert their programmatic objectives once they gained office (Klingemann, Hofferbert & Budge, 1994). For instance, the number of environmental policies adopted in OECD countries correlates with the number of parties in government that stress the

requirement of environmental protection, whereas their overall left- or right-wing orientation is less relevant (Knill, Debus & Heichel, 2010, pp. 304-305, 324-328).

To begin with, a rational politician will try not to turn from the median voter's position in order to maximize his votes, a fortiori under conditions of intense party competition. This is why it makes sense for parties to moderate their positions, so they can address larger parts of the electorate and enhance their electoral chances (Adams, Merrill, & Grofman, 2005; Adams & Somer-Topcu, 2009; Ezrow, 2008). However, for small and niche parties – such as the Greens – , the logic is different: Since they do not look after the median voter but a peculiar segment deviant from the overall electorate, they will take more extreme positions that mobilize their target group (Wagner, 2012). By the same token, as mainstream parties address a broader electorate, they have more leeway to change their positions and address varying issues on the agenda, whereas niche parties are less flexible in repositioning, as they are tied to a limited segment of the electorate (Green-Pedersen & Mortensen, 2014). Different parties not only pursue different positions but also emphasize different issues. Parties regarded as more competent on an issue, such as green parties for environmental protection or left parties for social justice, have an incentive to put more emphasis on this issue as they benefit from electoral gains when the issue salience increases (Budge & Farlie, 1983; Carmines, 1991). As green parties are issue owners of environmental issues, their electoral success gives mainstream parties an incentive to decrease the emphasis on the environment, aiming to keep the issue off the agenda and rein in the new competitor (Abou-Chadi, 2014; see also Green-Pedersen, 2012). Other authors, however, argue that mainstream parties also might put more emphasis on environmental issues to respond to the pressure of green parties and hence “steal” their issues and shift their positions to hinder the competitors from dragging votes from them (Dalton, 2010; de Vries & Hobolt, 2012; Spoon, Hobolt & de Vries, 2014). Depending on how a mainstream party perceives its prospects to gain or lose from the polarization of an issue, they will apply a corresponding strategy of endorsement or avoidance.

Also the organizational tradition matters: Parties dominated by a strong leadership – such as the CDU in Germany – are more likely to adapt to the median voter's preference, whereas parties dominated by the (usually more extreme) activists – such as the Greens – are more sensitive to shifts in mean party supporter position (Schumacher, de Vries & Vis, 2013). Nor should it be ignored that parties are exposed to conflicts between rival intra-party factions – such as the “solar wing” and the “coal wing” among the German social democrats –, which creates the need for continuous compromise building within the party and prevents radical shifts into one policy direction (Budge, Ezrow & McDonald, 2010).

Moreover, the electoral system – majoritarian or proportional – in combination with the economic characteristics of the electoral districts shape the interests of politicians across

parties (Mian, Sufi & Trebbi, 2010).⁸ In electoral districts with majority vote, as partially in Germany with the personalized first vote (*Erststimme*), candidates are bound to their constituency's local interests, regardless of the party position (Vondenhoff & Busch-Janser, 2008, p. 85). If coal mining is an important economic factor in an electoral district, politicians are more likely to be favorably disposed towards a coal-friendly policy (e.g. in the German Ruhr area). In contrast, politicians from an electoral district with lots of renewable energy firms and private individuals who run small renewable energy plants are more likely to advocate for better renewables promotion (e.g. the "solar valley" in East Germany). Furthermore, the direct vote increases candidates' independence from party support since they do not necessarily require votes outside of their own electoral district. In a purely proportional election system, in contrast, interests are aggregated and thus less dependent from local interests.

As politicians fear electoral punishment, they hesitate to intervene in vested rights and to cut social benefits or other payments with similar redistributive effect (Kitschelt, 2001), unless they can manage to form a formal or also informal grand coalition – the latter by cross-party collaboration between both major center parties –, to mitigate their electoral costs (Hering, 2008; Haverland & Stiller, 2010), or if they can shift the blame to others ("blame avoidance"), whether the coalition partner, the EU or others (Weaver, 1986; 2010). In pluralist systems, however, unions or other concerned interest groups are relatively weak and often not able to mobilize electoral pressure, put politicians under pressure and avoid social welfare retrenchments or similar reforms. In corporatist systems, by contrast, unions are stronger and therefore better capable to mobilize electoral pressure, discipline politicians and block reforms. Electoral vulnerability, thus, depends on the role of organized interest groups in a political system (Immergut & Abou-Chadi, 2010). Interest groups thus work as "intermediaries that communicate the record of politicians and the meanings of policies to voters. Further, these intermediaries can make strategic use of electoral pressure to wrest concessions from policy-makers in policy negotiations" (Immergut, Abou-Chadi & Orłowski, 2014, forthcoming). Electoral pressure is not constant over time but fluctuates depending "upon a number of factors, such as the closeness of elections, the willingness of voters to punish politicians they do not like, and the degree to which this punishment will painfully affect parliamentary majorities and the resulting distribution of 'office'" (Immergut, Abou-Chadi & Orłowski, 2014, forthcoming; see also Immergut & Abou-Chadi, 2010). In other words: The greater the impact of last election on parliamentary majority and government composition, and the greater the perceived voter volatility, the greater is the electoral vulnerability of politicians.

In my conceptualization of electoral pressure,⁹ I rely on a narrative analysis complemented by voter transition analysis, voting differences and further quantitative data. The framework conditions of political party competition over the research period are outlined in chapter 4.2.

3.7 How to Lobby: Strategies, Channels and Instruments of Lobbying

Interest groups apply various strategies, channels and instruments to exert influence (Alemann & Eckert, 2006; Haacke, 2006, pp. 175-181; for a practice handbook, see Vondenhoff & Busch-Janser, 2008; for accounts of a former lobbyist, see Kitz, 2013). The key tool is “continuous keeping in touch with political decision-makers” to maintain a relationship of trust and integrity. Part of this strategy is political landscape management, such as party donations or visits of politicians at production sites. Second, “proximity of political stakeholders” is advantageous; hence many interest groups and companies opened representative offices in the capital (Sühlsen & Hisschemöller, 2014, pp. 3-4, 6).

Lobbying targets actors and institutions that are able to initiate, change or avoid political decisions: the governmental administration, the parliament, state governments and – in a wider sense – media and public opinion (Alemann & Eckert, 2006, p. 5; Schmidt, 2007, p. 126; Sebaldt & Straßner, 2004, pp. 152-159). The government is the primary recipient of lobbying (Speth, 2006), since the great share of law proposals is initiated and drafted by the ministerial administration. Lobbyists seek to establish privileged contacts to ministers, state secretaries and working level in the ministries, aiming to influence legislation at an early stage when the page is still blank. The parliament is the second target, although not every member of parliament is of equal relevance: As the specialized spokespersons of incumbent parliamentary groups inform the parliamentarian majority’s position, they are the focal target audience. Furthermore, parliamentaries from certain electoral districts with particular relevance, e.g. because the interest group’s seat or firm is located there, are accessed as hoped-for advocates. Relevant state governments make up a third target group as they can impede a law in the second chamber of parliament or intra-party channels. Media and public opinion constitute the fourth target area; as public pressure impacts political decision-makers, lobbyists attempt to promote favorable media and public debate.

From a normative consideration, lobbying activities can be classified into a white, black and grey sector (Alemann & Eckert, 2006, pp. 6-9): All clearly legal activities such as classic public relations, participation at official hearings, letters to politicians etc. belong to the white sector. The black sector includes all clearly illegal activities such as blackmailing or bribery; these activities are unusual in Germany and subject to criminal prosecution. The sensitive grey zone between the two poles comprises the entire range of legally accepted yet publicly controversial means, such as revolving-door careers, party donations or intransparent public relations, and is subject to normative criticism (Müller, 2007; Lobbycontrol, 2011; Kolbe, Hönigsberger & Osterberg, 2011b). Following Wehlau (2009, pp. 48-57), five categories of lobbying activities can be distinguished: institutionalized relations, informal relations, staff relations, financial relations, and public relations.

Institutionalized Relations

Institutionalized relations comprise the formal involvement of interest groups in decision-making, whether in the form of state-organized roundtables and commissions, ministerial and parliamentary hearings, submission of position papers etc., regulated in the rules of procedure of parliament and ministerial bureaucracy.¹⁰ Due to the ritualized character and the tedious procedures of formal hearings, with a large number of participants and scarce time, institutionalized interest intermediation is considered being of negligible importance for the exertion of influence (Rudzio, 2006, pp. 93, 212; Ismayr, 2013, pp. 274-275; Haacke, 2006, p. 179) and rather serve procedural legitimation (Winter & Willems, 2007, pp. 228-229). Nevertheless, those invitations are relevant for the reputation of interest groups as belonging to the “chosen few” (Sebaldt & Straßner, 2004, p. 144) and enable informal side meetings between lobbyists, state officials and members of parliament.

On the other hand, also interest groups strive to keep regular contacts to decision-makers and invite politicians to informative events in the form of “parliamentary breakfasts” or “parliamentary evenings” (Leif & Speth, 2006a, p. 26; Haacke, 2006, p. 179), conferences and roundtables, as well as receptions and festivities. At these events, also food and drinks are served and the atmosphere is pleasant; often, they are also accessible to interests members of the public. This provides the opportunity to engage in informal conversations and get to know each other on a personal level, which can help to create trust.

Informal Relations

Informal relations between politicians and lobbyists encompass all (quasi-)unofficial, mainly intransparent personal contacts of lobbyists to administration and politics, based on friendship, ideological consensus or overlapping financial benefits, sometimes at the brink of cronyism. Informal relations create opportunities for bargaining off the record, semi-secret understandings and trusted source of information. Individual background meetings between political decision-makers and lobbyists are viewed as the most effective lobbying instrument. If a politician is undetermined about his point of view, offers to provide background information can influence his opinion (for a deep insight into the occupational image and informal working methods of lobbyists, see Vondenhoff & Busch-Janser, 2008; Kitz, 2013)

A traditional means of maintaining informal relations is political landscape management. Mainly business associations extensively invest in “feel-good lobbyism” (ibid., pp. 155, 166), such as festive receptions, attractive presents or exclusive invitations to cultural or sports events, in order to prepare the ground for goodwill and obtain a time slot with politicians. In

recent years, this form of political landscape management has attracted more attention and criticism, and is used more cautiously to avoid the impression of corruption. Mostly business lobbyists seek bilateral meetings with parliamentarians (ibid., pp. 165-169; Schwabe, 2010, interview). Informal cooperation also comprises the unofficial sharing of internal information, including confidential documents such as law drafts or scientific studies; parliamentarians forward these documents to interest groups, and vice versa (Bülow, 2010a, pp. 164-167).

As a newly emerging feature, online social media channels such as Facebook and Twitter as well as specialized platforms (such as *Abgeordnetenwatch*) provide the opportunity for single citizens for direct communication with politicians: climate activists can personally interact with parliamentarians. In this sense, online communication is strengthening the access of low-budget and diffuse interest groups on politics (Vondenhoff & Busch-Janser, 2008, 235-239) while the actual effects are still discussed in the literature.¹¹

Financial Relations

Interest groups contribute to party financing to influence the recipient. A large body of experimental literature has demonstrated that gifts stimulate cooperation, and not for nothing, gift giving has been held responsible for the promotion of particularistic interests and pork-barrel politics (for an overview, see Malmendier & Schmidt, 2012). However, the literature primarily deals with economic relations, such as between doctors and pharmacy corporations, neglecting the different logic of incentives in the political arena, where a politician needs to maintain his trust and is constantly watched by the political competitor, press and voters for untrustworthy behavior. In the political sphere, gifts can backfire and provoke the quite contrary effect, for being perceived as an attempt of bribery and harming the trust of the donating interest group (Fehr & Falk, 2002; Sühlsen & Hisschemöller, 2014, p. 4; Vondenhoff & Busch-Janser, 20008, p. 77). Lobby influence purely based on economic incentives directed to buy a political decision is therefore everything but plausible, particularly since party donations and sponsoring have meanwhile become subject to tight regulation and disclosure rules that limit the scope for financial influence anyways,¹² quite apart from the fact that interest groups would have to spend a lot of money for gifts on a larger scale required to bribe enough politicians at every possible veto point, which would simply overburden any lobbyist budget (Kitz, 2013, p. 115-117).

On the other hand, interest groups can provide financial support for election campaigns or sponsor party events, and therewith expect *access* to political decision-makers – which does not necessarily translate into *influence*, however. Rather, interest groups use this opportunity

to present themselves in a positive light and enhance their image among a politically relevant audience. Only if they indeed succeed to foster trust, this can translate into political influence. For the USA, Jenner et al. (2013) demonstrate that financial contributions from interest groups favor the preferred political camp: Conventional energy interest groups contributed more to the Republicans whereas renewable energy interest groups donated more to the Democrats. This means, donations do not influence the course of a party but rather support the pre-existent political ally. Data indicate that this logic also holds for Germany: Analyses confirm that renewable energy companies donate more to the Green Party, while Bavarian companies donate to the CSU, i.e. the CDU's Bavarian sister party (Höpner, 2006, p. 299). A review of party donations of the 100 largest companies in Germany from 1984 to 2005 has revealed two donation strategies: Either they sponsor the center-right parties, or they spread donations across the political spectrum as mean of political landscape management, while the latter has gained in importance over time (Höpner, 2006; 2009).

With regard to the energy sector, party donations have in the past mostly benefited the respective parties in government, whereas nowadays they are more evenly spread among all parties, since coalitions change more frequently. The solar industry has advanced to a major sponsor over the last decade (Sühlsen & Hisschemöller, 2014, p. 4). The solar company IBC Solar, for instance, has become the 12th largest donor in 2012 with contributions to CDU, CSU, SPD and Greens, paying an amount of 90,500 € – double as much as the chemical industry paid (Abgeordnetenwatch, 2014). In contrast, some companies from the fossil-nuclear branch such as RWE (2005, p. 17) have implemented restrictive compliance rules that ban party donations from their set of lobbying tools. RWE contributed her last donation in 2009 (to the SPD) and since then refrained from donations. E.ON donated the last time in 2009 to CDU, CSU, SPD and FDP (Tillack, 2015, p. 227). This development indicates that the renewables branch has caught up with the fossil-nuclear branch in terms of financial capabilities, whereas only the latter has become increasingly nervous regarding negative impacts on its public image that large party contributions might involve.

Staff Relations

Staff relations aim to establish an inner circle of privileged contacts of interest groups to government bureaucracy and parliament, bound together by staff exchange, whether through recruiting former politicians, placing own employees in ministries, keeping financial ties to active parliamentarians, or outsourcing of lawmaking to external law firms.

Interest groups seek to recruit former politicians for well-paid and high-ranked jobs to take advantage from their intimate knowledge of internal operating procedures and their personal

contacts to the administrative and political apparatus. This common practice has attracted criticism for being suspected to serve as reward for previous supportive behavior in office (Klein & Höntzsch, 2007; Kolbe, Hönigsberger & Osterberg, 2011b, pp. 27-34). One striking example is E.ON's acquisition of Ruhrgas in 2004, which was initially declined by the cartel office but later allowed by a special ministerial permission issued by the two top politicians in charge who shortly thereafter were hired for prestigious positions in the related company – an incidence that evoked fierce public criticism (Becker, 2006).¹³

Second, interest groups attempt to directly place their current or former employees in ministries and parliament, so that well-disposed state officials or “external staff” (*Leihbeamte*) can directly contribute to law drafting, (Katzemich & Müller, 2009; Otto & Adamek, 2008; Kolbe, Hönigsberger & Osterberg, 2011b, pp. 30-34). Most pronounced, the economics ministry's “revolving door for representatives of the utilities is notorious” (Stefes, 2013, p. 9), but also the environmental ministry recruits staff from environmental organizations. In the US, some 80% of lobbyists have worked either for Congress or government beforehand (Holyoke, 2014). Similar patterns seem plausible for Germany as well.

Third, a number of parliamentarians exercise paid side jobs or hold offices in associations, and serve as “built-in” lobbyists or “henchmen” (Bülow, 2010a, p. 107) who open channels for privileged influence from certain interest groups.

Lastly, the outsourcing of lawmaking to external law firms (*“Kanzleigesetze”*) has been problematized in the literature for potential influences from the law firms themselves (Kolbe, Hönigsberger & Osterberg, 2011b, pp. 24-36; Kloepfer, 2011).

Spectacular instances on the brink to corruption, however, misrepresent the actual situation (Leif & Speth, 2006a, pp. 23, 27; Haacke, 2006, pp. 179-180). In fact, revolving door careers and large secondary incomes tend to be the exception rather than the rule. The number of former government members in business positions is limited to a low two-digit figure.¹⁴ Similarly, external staff in the administration is negligible in quantitative terms and by no matter of tight regulation.¹⁵ And only a minority of parliamentarians receives a secondary income at a noteworthy level; some three quarters do not have a secondary income at all.¹⁶ Hardly any parliamentarian has a paid side job in the energy sector while in office.¹⁷

The critical problem is not the high quantity but rather the asymmetry between interest groups that can afford to hire (active or former) high-rank politicians and to place their staff in relevant institutions, and those interest groups that cannot afford to do so. An analysis of current or previous paid (side) jobs in the energy sector finds that the established energy industry has a by far denser network of financial ties to parliamentarians than the renewables industry (Baloge et al., 2009) – however, these connections only bear the potential for privileged influence, without necessarily impacting political decisions.

Public Relations

Interest groups are aware of the exposure of politicians to shifts in public mood and seek to shape favorable media reporting and public discourse (Vondenhoff & Busch-Janser, 2008, pp. 31, 43-61), in order to frame their interests as vital and legitimate in the eyes of the general public. Interest groups therefore increasingly attempt to generate public support for their positions through public relations (Rucht, 2007, pp. 21-25; see also Rüb, 2006, pp. 350-352), striving to cultivate an overall positive public image and seed a favorable mood in the discursive environment, through supporting favorable research and elite dialogue (so-called “deep lobbying”, see Clemons, 2003).

While “loud” PR uses conventional instruments such as press releases, ads in newspapers, billboard campaigns etc., where the sender of the information is revealed, “silent” PR sets up apparently independent think tanks or fake citizens’ initiatives, where the sender of the information is intentionally unrevealed. Mainly business organizations apply this so-called “astroturfing” to imitate civil society campaigns, in the attempt to exploit the trust advantage that civil society organizations enjoy in the public. A well-researched example for astroturfing is the Initiative New Social Market Economy (*Initiative Neue Soziale Marktwirtschaft*, INSM), set up by metal and electric industries and tasked to influence political debates (Nicoll, 2008; Leif & Speth, 2006b), including a campaign against renewables promotion. Another example is the Information Center on Climate (*Informationszentrum Klima*), funded inter alia by the coal industry to promote the CCS technology, e.g. by sponsoring teaching material on climate protection and CCS (Berkel, 2011). In response to public criticism, both institutions have lately made their funding more transparent.¹⁸

Mostly interest groups that can rely on a favorable mood in public opinion use PR campaigns to activate public opinion. This primarily applies to public interest groups, for instance environmental organizations. By contrast, economic interest groups with poor public image might achieve the contrary effect with a PR campaign: They disqualify themselves as serious negotiation partner and provoke resistance of politicians. Headlines like “Minister X does not support the energy corporation Y” do not bear the potential to blame politicians in the public (Kitz, 2013, p. 172).

3.8 The European Union: National Politics as Multi-Level Game

Multi-level decision-making has drawn a good deal of academic attention, which can hardly be recapitulated in the scope of this paper. For the work at hand, EU law is taken as given without scrutinizing their genesis. Nonetheless, an analysis of national energy politics would be incomplete without taking the international context into account. Notwithstanding the fact that energy politics has remained a terrain of national policy making, particularly the EU has continuously gained in importance since the 1990ies (Illing, 2012, p. 17; Hirschl, 2008; Lobo, 2010, pp. 79-157). EU directives obliged member states to liberalize their electricity market (1996 and subsequent amendments), promote renewable energies in the electricity sector (2001 onwards), to establish an emissions trading scheme (2003), and to provide a legal framework for the CCS technology (2009). However, despite increasing EU regulation, member states have retained large leeway for national energy policies, including the energy mix, which lies outside the competence of the EU. The EU Commission has developed into a powerful actor, assuming authority to control and sanction national compliance with EU regulation (Moravcsik, 1993, p. 475; Cram, 1999; Steuwer, 2007; Greenwood, 2007, pp. 30-35), also relevant to energy politics (Wurster, 2010, p. 306).

International relations can be considered as a “*two-level game*”, as Robert Putnam (1988) prominently elaborated: “At the national level, domestic interest groups pursue their interests by pressuring the government to adopt favorable policies, and politicians seek power by constructing coalitions among these groups. At the international level, national governments seek to maximize their own ability to satisfy domestic pressure, while minimizing the adverse consequences of foreign developments” (ibid, p. 434). Andrew Moravcsik (1993) stressed that this multi-level game does not necessarily result in loss of power for national governments to the benefit of supra-/international or sub-national actors. Quite the contrary, national executives can strategically shield themselves against resistance of societal or legislative actors by shifting controversial decisions to the EU level in order to neutralize domestic resistance by passing the blame to the EU (“Brussels forced us to do this!”) (ibid., pp. 514-517).

Just as governments, also interest groups find themselves embedded in a multi-level process of interest intermediation (Greenwood, 2007; Eising & Kohler-Koch, 2005; Eising, 2004; Tenbrücken, 2002; Charrad, 2005; Michalowitz, 2004). Domestic interest groups can push the national government to advocate for their interests on EU level, or influence EU institutions to adopt (or: stop) regulation that entails binding effects for national legislation – i.e. attempt to shift the level of decision-making to a favorable arena (*venue shopping*).

If EU institutions structurally favor business or other interests is matter of intense scholarly debate. In fact, environmentalists and consumers could frequently assert their interests in EU politics (Pollack, 1997). The Commission has repeatedly proved as “entrepreneurial ally of diffuse interest groups”, while the European Parliament has similarly presented itself as very attentive to diffuse interests, and the Court of Justice defended “the nationally disenfranchised” (ibid., pp. 579, 581).

International organizations beyond the EU only play a minor role in energy politics (Hirschl, 2008, pp. 415-554). An exception makes the path-breaking Kyoto Protocol (1997) that set fixed targets for CO₂ reduction and raised political pressure to implement CO₂ mitigation policies. After the Kyoto Protocol expired in 2012, no subsequent agreement has been passed yet. Other binding treaties of similar weight in energy politics do not exist, apart from the loose “renewables process” (since 2004) and technical agencies (International Atomic Energy Agency founded in 1957, International Renewable Energy Agency founded in 2009).

3.9 Path Dependence and Focusing Events

The status quo creates path dependence and unfolds inertia, due to the costs of policy change (stranded investments, compensation claims, loss of credibility, and so forth), the resistance of losers of policy change who are better to identify and to organize than potential winners, and the veto opportunities in the political system that structurally enhance the chances of opponents to stop policy change. The status quo is not only privileged by a high number of veto players – which makes change difficult –, but also defended by entrenched interests groups – which makes change undesirable. A third condition that makes an existing policy inherently resilient to change is path dependence: a decision taken in the past shapes and restrains subsequent menus of policy options by privileging some choices over others, eventually stabilizing the trajectory once chosen (seminal: Pierson, 1993; Lehmbruch, 1995). Lack of change, in this theoretical strand, is natural and equals a sort of inertia where old policies continue to persist only because they have already been there, reassured over and over again by positive feedback loops, jammed in self-reinforcing lock-in.

Looking at 98 policy fields in the US, Baumgartner et al. (2009) find that interest groups with preference for the status quo “usually win”, not necessarily due to their greater resources endowment but just because their preferences are closer to the status quo – they simply benefit from “the power of the status quo”. This is because politicians have to be convinced of a new solution, while it is easier to raise concerns about potential losses and pitfalls of a policy change (ibid., pp. 248-250). The dynamics of politics can hence be understood as a series of periods with “punctuated equilibrium”, where only incremental policy variations take

place, interrupted by short periods of radical change driven by exogenous shocks (Baumgartner & Jones, 1993, p. 18).

The concept of path dependence is of instructive value for energy politics. Once an energy system is constructed, it cannot be simply abandoned and replaced overnight, which makes a large-scale change in energy policy unlikely. The historical design of a fossil-nuclear energy system has set a systemic trajectory in motion (Sabatier, 1993, p. 124): Gigantic multi-billion investments in power plants had to pay off and then had to provide sufficient margins. Moreover, existing grid and base-load power plants are too inflexible to adjust to a volatile electricity production from decentralized sources. The fossil-nuclear trajectory has created vested interests and liabilities, which is why the conventional energy companies opposed the emergence of a new renewables branch (Hirschl, 2008, pp. 578-579). In his historical analysis of energy market regulation, Becker (2011) explains the failure of electricity market liberalization by the historically developed oligopoly of conventional electricity companies resulting from the path dependence of a centralized energy system and their simultaneously evolved dense ties to state actors. These findings are consistent with policy termination literature that stresses the monetary costs of policy change (including compensation claims etc.) and the need to overcome resistance of potential losers, since losers are easier to identify and to organize than (potential) winners (Heyen, 2011, p. 151-152). Losers of policy change will fight back every political attack on their vested rights, while potential winners – such as unemployed who might find a job in solar handicrafts, or future generations who presumably favor clean, infinite energies – are hardly capable to mobilize, if even clearly to identify. “Never change a running system” – because it costs a lot of money, you don’t know if it works, and many people in fear of losing their job are against it. Path dependence privileges the proponents of the status quo: traditionally the conventional energy corporations and the energy-intensive industry.

While offering an appealing explanation of policy stability, path dependence is much less able to account for policy change, as observed in German energy politics. However, change is still consistent with path dependence theory and, although rare, can come in two ways: either minor and incremental, or unleashed by exogenous shocks (Pierson 1991; 2004).

In the first mode of piecemeal change, small gradual reforms may accumulate over time and finally constitute profound change and start new path dependence, even though the original policy path has appeared stable. In her seminal work on incremental institutional change, Thelen (1999; 2003; 2004; Streeck & Thelen, 2005; Mahoney & Thelen, 2010) has introduced the concept of “*layering*” to account for transformation through a process of small yet continual changes that add new elements onto existing institutions and, gradually yet profoundly, change them – not replacing the old but superseding and superimposing it.¹⁹

Albeit this concept attracted fairly much academic attention, the concept of incremental transformation still appears underemphasized in scholarship (van der Heijden, 2013).²⁰

The second mode of change occurs in the aftermath of a sudden exogenous shock. Once the equilibrium is unsettled, the previous era of policy gridlock is replaced by a period of rapid, drastic and non-incremental change (Baumgartner & Jones, 1993, p. 18). One of the most prominent variations of exogenous shocks is Birkland's work on "focusing events", defined as "an event that is sudden; relatively uncommon; can be reasonably defined as harmful or revealing that possibility of potentially greater future harms; has harms that are concentrated in a particular geographical area or community of interest; and is known to policy makers and the public simultaneously" (Birkland, 1998, p. 54). Such an event – a nuclear disaster, political scandal, etc. – can move an issue to the top of the agenda, redistribute resources amongst interest groups, change the interests or cost/benefit ratios of actors, or rock public opinion and mobilize electoral pressure. In this moment of a critical juncture, inferior actors find a policy window opened up to attack the dominating coalition and alter the enduring trajectory of policy development (see also: Immergut, 1998, pp. 17-18, 23-25; Sabatier, 1993, pp. 125-126; Baumgartner & Jones, 1993).

Related to the concept of exogenous shock, the seminal multiple streams approach by Kingdon (1995) offers a heuristic explanatory framework for policy change. Kingdon suggests that policy change occurs if three independent "streams" accidentally meet: problems, policies, and politics. Problems consist of scientific research that indicates a problem, or media coverage that equips an issue with attention; policies comprise a menu of solutions hammered out by specialists in the respective policy community (but are typically produced for the "garbage can"); the politics stream looks at the national mood, interest group pressure, and varying party majorities in legislative bodies. As these forces run largely separated from each other, only a focusing event or a similar incident of compelling problem pressure couples them together and, for a brief moment, opens the "opportunity for advocates of proposals to push their pet solutions, or to push attentions to their special problems" (ibid., p. 165). Such a "window of opportunity" never determines change, but must be actively exploited by political entrepreneurs, such as interest groups or politicians, i.e. only provides a necessary but not a sufficient condition for policy change

Once slightly turned away from the old path and embarked on another path, positive feedback loops trigger self-lock in effects and create new path dependence, and initiate a new self-referential reform cycle: Reforms tend to produce further reforms (Brunsson, 2005), as redistributive effects of reforms influence actors' preferences and might create new actors and constituencies, changing the constellation of winners and losers (Häusermann, 2010, p. 15).²¹ The story of the renewables legislation in Germany represents an instructive case for such a self-reinforcing reform cycle, given the ever-shorter time of legislative reviews and the

ever-growing complexity of rules, hand in hand with the creation of numerous beneficiaries of subsidization that backed the new status quo. The collapse of the old path encourages politicians to dismiss entrenched interest groups and collaborate with new actors (Richardson, 2000, pp. 1011-1013) – as Angela Merkel did after Fukushima, treating her old allies from the nuclear industry as very opponents one should not even talk to (Teysen, 2012a). Only a seemingly small policy change can initiate new path dependence by redistributing resources and nourishing newly organizing electoral segments and organized interest groups that eventually become strong enough to challenge established interest groups and trigger consecutive, more far-reaching reforms, reinforcing new path dependence (Aklin & Urpelainen, 2013). The German Renewable Energy Sources Act presents a striking example, as it started with a modest expansion goal but created new constituencies who benefit from renewables promotion and now defend the new status quo against regress.

3.10 Methodological Approach: Qualitative Multi-Case Study

This thesis carries out a qualitative policy analysis of electricity policy in Germany. Case studies allow for the in-depth investigation of the mechanisms of interest groups bargaining and retracing actor behavior and interactions, serving as explorative instrument to generate fresh empirical evidence, substantiate and enrich existing theoretical concepts, and deliver fruitful contributions to theory building (Schneider & Janning, 2006, pp. 32-42). Instead of merely testing theories, this thesis falls with the category of “extroverted case studies with generic concepts [...] that make it possible to derive generalizations that can be tested elsewhere” (Rose & Mackenzie, 1991, p. 454). Qualitative case studies are considered best suitable to draw a realistic picture of lobbying (Leif & Speth, 2006a, p. 32; Lösche, 2006; see also Baumgartner et al., 2009, pp. 250-254).

The application of deductive statistical tests bears the risk of tailoring the empirical reality into hypotheses that appear plausible but might be wrong in fact. Instead of just looking to a set of black boxes and hypothesize by their shape how their inner life is working, this thesis opens the “black box” of politics (Easton 1965) and looks what is happening in the interior.

I prefer this qualitative approach over statistical large-N analysis due to insufficient valid data for the measurement of state activity and aiming to uncover qualitative patterns of lobbying and the functioning of the inside of politics. Most existing large-N studies on environmental policy change use performance data such as pollutant emissions as proxy for policy output. However, this conceptualization, usually motivated by easier data availability, involves severe validity concerns. Indirect indicators capture the supposed effects of a policy instead of actual policy contents, contrary to a precise understanding of policy change (Knill, Schulze & Tosun,

2010; 2011). For instance, actual clean air state regulation has been found to be *not* in consistent linkage with emission levels (ibid., 2011), and therefore call into question the validity of performance indicators for the study of determinants of policy change.

The greatest pitfall certainly is the search for a valid and reliable proxy indicator. Recent studies that attempt to retrieve evidence for drivers of energy politics in US federal states or the EU find contradictory results, depending on which proxies they use (for a literature review, see Jenner et al., 2012). To give an example, Jenner et al. (2012) run regression tests on renewable energy support schemes in the EU27 and found significant link between the presence of a solar energy association and the probability of a state to adopt regulation, whereas the existence of a nuclear or fossil industry association shows no interfering effects. That is a surprising finding, indeed: Why should a tiny solar energy group acquire such a great say to push governments to comply with their demands, whereas the established energy industry apparently has no chance to uphold solar activists? One can hardly assume that the mere existence of any little organization leads to the recognition of its demands. The authors also find that high solar radiation increases the probability of renewables regulation. Why, then, did Germany pass the very first solid feed-in law even though the country is not blessed with sunshine – and why is the achieved share of solar electricity in the grid in Germany higher than in other countries with more sunshine? As average sun intensity never changes, how does then policy change occur? And why do the authors find this significant correlation only for solar energy but cannot retrieve evidence for similar relationships for wind? Besides these shortcomings, the study does not ask *how* states support renewable energies: effective and ineffective laws are thrown in the same basket. If one wants to research the de-facto influence of interest groups, the plain existence of legal regulation seems not to be the most suitable dependent variable.

Statistical tests require sound understanding of underlying processes to avoid spurious correlations and false conclusions. Moreover, their findings can never be applied to an individual case but can only serve as approximation across a larger number of selected cases, i.e. at high abstraction level, due to basic methodological restrictions. In particular, outliers such as the German *Energiewende* are worth a closer look.

On the contrary, most case studies only cover particular aspects of politics, whether only certain actors or/and only single cases, which might deliver distorted findings due to flaws in research design. By comparison across time and cases, and by looking at the entire range of actors as well at institutional settings, this thesis seeks to tackle these shortcomings.

As empirical research of lobbying in Germany is quite an uncharted scholarly territory (see chapter 1), a qualitative approach appears most promising to explore and uncover underlying mechanisms of political decision-making. I investigate four major legislation projects with 15 observations across four legislation periods (15 years). According to Sabatier (1993, p. 119),

the explanation of policy change requires a time span of at least one decade. This requirement is met. By comparison over time and cases, risks of flawed case selection and poor generalization are addressed, and stable factors and mechanisms can be identified.

As analytical tool, *process tracing* is applied, which features “the most frequently used approach to measuring interest group influence” (Dür, 2008, p. 562). I analyze the legislative process, actors’ positions and behavior, and interactions between interest groups, political institutions, electoral pressure and external factors, aiming to identify structural patterns and causal links (George & Bennett, 2005, p. 206). To identify “losers” and “winners”, I elaborate which actors could make their articulated preferences recognized in the policy decisions, and to which extent. Their preferences are identified a content analysis of official position papers. The influence of an interest group is measured in the form of a win set that compares the aggregated main preferences of advocacy coalitions with the final policy output. This approach to measure the *degree of preference attainment* is an established tool in interest group research. I combine this approach with the *attributed influence* approach, i.e. interviews with partaking office holders and interest representatives on the self-assessment of the own influence and the assessment of the other groups’ influence (Dür, 2008, pp. 565-569). This “methodological triangulation” (ibid., p. 569) seems to provide the best way to tackle pitfalls in qualitative policy research. For additionally strengthening my arguments, I employ *counterfactual reasoning* to test my claims by explicit consideration what would probably or certainly have happened if one of the factors was different (Fearon, 1991).

This paper explicitly comes without normative considerations of policy choice, i.e. does not ask who or what was “right” or “wrong”, “good” or “bad”. It is rather confined to the question why and how these policies came into being. It also confers no negative connotation of “lobbyism” but analyzes the very processes of lobbyist influence in a developed democracy.

Sources

The most important source for the illumination of the arcane sphere is the knowledge of involved experts. Therefore, I conducted 40 exploratory and semi-structured in-depth expert interviews with leading officials, politicians and lobbyists (see section 10.3 in the appendix), which gave me a special insight into the “black box” of policymaking.

I am aware of the potential drawback that interviewees might pursue a hidden agenda or – consciously or unconsciously – may give inaccurate responses that fail to adequately reflect the actual situation, or are informed by ideological beliefs or biased memory instead of true and observable facts (Dür, 2008, pp. 563-564). To tackle this pitfall, a broad spectrum of

actors is included so that wrong or misleading descriptions can be revealed, and their answers were compared against written statements. On request, anonymity is ensured to the interviewees to protect the source of potentially sensitive information and to realize a maximum of honest and complete answers. Indeed, interviewees have been surprisingly consistent in their answers on the political process despite diverging normative ideas concerning the contents.

In addition, I evaluated the usual primary material (autobiographies of politicians, position papers, press releases, statistical reports, minutes of meetings, laws, etc.), and secondary material (case studies and further relevant scholarship). Besides, investigative journalism is an important source of information for the research of lobbyism (Speth, 2014, p. 7) and used supplementary. I particularly achieved to gain access to undisclosed documents (confidential notes and reports, minutes of internal meetings, correspondence etc.) to validate internal and external communication. Other documents came to public disclosure through whistleblowers and could also be used in this paper. For the description of day-to-day events, I referred to press reports and popular scientific publications. Moreover, I attended numerous political and lobbyist events to gather background information in informal personal communication.²²

Case Selection and Operationalization

The study deals with the electricity market because it has undergone the most tremendous and astonishing reforms in comparison to the heat and fuels market. As research objects, I selected four of the most important legislation projects with a total of 15 major reforms over a time span of 15 years across four legislation periods, which have been most controversial and witnessed several drastic policy changes, sometimes moving forth and back and forth:

1. *nuclear power*: revision of the Nuclear Energy Act in 2000/2002 establishing the nuclear phase-out, the extension of lifetimes in 2010 and the accelerated phase-out in 2011;
2. *renewable energies*: the Renewable Energy Sources Act in 2000, its revisions in 2004, 2009, and 2012, as well as special Photovoltaics Acts in 2010 and 2012;
3. “*Clean Coal*” (CCS): the failure of the Carbon Capture and Storage (CCS) Act in 2009, the second advance in 2011, and the final “non-CCS-Act” in 2012;
4. *emissions trading*: the national implementation of the EU Emissions Trading Scheme by the Greenhouse Gases Emissions Trading Act, the National Allocation Plans and related legislation, for the three separate trading periods (2005-2007, 2008-2012, 2013-2020).

As dependent variable serves the policy *output* in terms of actual legislation, not the *outcome* in terms of CO₂ emissions, renewables shares or other performance indicators (Schmidt,

2007, p. 282). Hereby I focus on policy choice, that is: which policy option was chosen among the range of alternatives suggested by interest coalitions.

The paper is based on a narrative analysis, supplemented by quantitative indicators. For resources of interest groups, organizational capacity is measured as follows in line with literature on logics of collective action: Economic interests (vs. idealistic interests) are ascribed with high (vs. low) organizational capacity. Existent identifiable losers (vs. future potential winners) of a certain policy choice are ascribed with high (vs. low) organizational capacity. For conflict capacity, market share, number of jobs and ability to carry out strikes (dummy) serve as proxies. The number and features of veto players and veto points is defined following Schulze & Jochem (2006) and supplemented by new data by Bundestag and the Federal Returning Officer. Electoral pressure is accounted for by narrative analysis relying on statements made by experts and complemented by voter transition analysis, voting differences and other quantitative data.

Discussion: Alternative Explanations

Overall economic conditions (crude oil prices, electricity generation costs, electricity costs, GDP growth, unemployment rates etc.), environmental problem pressure (distance to climate targets, air pollution, etc.) and technological possibilities (feasibility of alternative energies) shape the general circumstances of policymaking, yet effects are unclear. The impact of economic growth, for instance, is ambiguous: It might bring about an increase in environmental problems through higher pollution associated with industrial production, yet also might enhance financial, technological and administrative resources to implement environmental regulation and foster post-material values in society. Indeed, a positive correlation between GDP and the number of environmental policies adopted in OECD countries can be found (Knill, Debus & Heichel, 2010, pp. 308-309, 328). The effect of unemployment is ambiguous, as the creation of jobs in new economic sectors such as renewables or energy efficiency can mitigate unemployment, whereas, on the other hand, environmental regulation is often held to be unaffordable in times of high unemployment.

High prices of crude oil, natural gas and coal should positively influence the search for alternative energies, as observable in the oil crises in the 1970ies in 1980ies; however, the prices of fossil fuels are not necessarily connected to electricity prices which are more influenced by complex price formation mechanisms at the stock market. Moreover, the world market price of uranium should not have any effect on nuclear policy, as uranium can be easily stored in sufficient quantity. While fossil fuel prices may be justified as proxy in large-N

studies, the qualitative approach of this paper allows for a more precise tracing of the underlying political decision-making processes.

As another possible factor, policy diffusion comes into question, i.e. policy learning from other countries and convergence towards an international trend. This factor, though, can be ruled out in the case of the *Energiewende*, since Germany played a pioneering role in renewables promotion and nuclear phase-out, while emissions trading and CCS legislation have been the result of EU regulation.

Another contingent confounder is the goodness of fit of an instrument with the regulatory tradition in a country. Some authors (e.g. Skjærseth & Wettestad, 2008) argue that the goodness of fit determines the quality of national implementation of EU regulation. Although I do not necessarily object this line of reasoning, it can be noted that specific EU regulation has been absent both for renewables and nuclear policy, i.e. this argument is not applicable here. For CCS legislation, EU regulation has been present but left very wide scope for member states, i.e. also here this argument was not applicable. Only for emissions trading, a more challenging EU framework has been existing, yet an earlier comparative analysis on the implementation of the EU Emissions Trading Directive in Germany, the Netherlands and the UK found different patterns of implementation regardless of the degree of institutional fit (Gründinger, 2012, pp. 35-45), confirming earlier similar findings (Haverland, 2000).

A further possible determinant might be problem pressure, i.e. the gap between the magnitude of the problem and existing regulation, for instance with respect to climate protection target anchored in the Kyoto Protocol compared to the likelihood of achievement. This argument can be rejected, in the face of large variation on EU and international level regarding the distance of nation states to their national Kyoto targets in comparison with their actual climate policy (Burck, Martens & Bals, 2014; Gründinger, 2012, pp. 44-45). Knill et al. (2010, pp. 316-317, 324) find even negative correlation for ecological problem pressure, measured by energy use per capita and population density, with the number of environmental policies adopted.

A last possible factor often mentioned in the context of the German nuclear phase-out is a sort of specific ideological technophobia deeply entrenched in German culture. The so-called “German Angst” is held liable for the nuclear exit as well as the refusal of CCS and other large-scale technologies. However, neither international polls nor historical accounts can find a particular hostility towards technology or progress amongst the German population, hence “German Angst” can be ruled out as determinant of environmental politics (see sector on public opinion in chapter 5.6 for details).

Remarks

¹ Lehbruch, 1979; Lehbruch, 1986, pp. 273, 288; Charrad, 2005, pp. 7-10; Bouwen, 2002b; 2002a; Schneider, 2000, p. 257; Wehrmann, 2007, p. 39; Benz, 1994, p. 59; Heyen, 2011, p. 150.

² Corbach 2007, 49-50; Dagger 2009, 47-68; Lorenz 2010, 34-37; Reiche 2004, 139-150; Hirschl (2008, 563-565) similarly differentiates two coalitions in support or opposition to the substantial market increase renewable energies; a similar concept is used by Gmelin 2012 and also proposed by Altegör (2014). Sabatier himself (1993, 128-129) suggests, in the field of the US clean air policy, a dichotomy of an “economic feasibility coalition” vs. a “clean air coalition”.

³ Thelen herself uses different definitions of what she calls “layering”: “layering [...] involves the partial renegotiation of some elements of a given set of institutions while leaving others in place” (Thelen, 2003, p. 225); “layering [...] involves the crafting of new elements onto an otherwise stable institutional framework” (Thelen, 2004, p. 32); “layering involves active sponsorship of amendments, additions, or revisions to an existing set of institutions” (Streeck & Thelen, 2005, p. 24); “Layering occurs when new rules are attached to existing ones, thereby changing the ways in which the original rules structure behavior” (Mahoney & Thelen, 2010, p. 16).

⁴ Public goods are defined as non-excludable and non-rivalrous, i.e. if A uses it, B can still use it (such as clean air, stable climate, sun radiation). Common goods, or common-pool resources, are also non-excludable but rivalrous, i.e. if A uses it, B cannot use it anymore (e.g. community pastures, fish stocks, fossil fuels). Club goods are also non-excludable, but non-rivalrous, i.e. A and B could use it, but B can be excluded from using it (such as a golf court accessible only for golf club members). A private good is both excludable and rivalrous, i.e. if A uses it, B cannot use it anymore and is also excluded from the use (such as food or clothes). “To describe situations in which people withdraw resources to secure short-term gains without regard for the long-term consequences, the term tragedy of the commons was coined. For example, overfishing leads to a reduction of overall fish stocks which eventually results in diminishing yields to be withdrawn periodically.” (see Hardin, Ostrom)

⁵ Leif & Speth, 2006a, p. 13; Bülow, pp. 155-157, 182; Böckem, 1999, p. 54; Papier, 2010, p. 21-22; Offe 1972; Roose, 2006, pp. 272, 275; Kolbe, Hönigsberger & Osterberg, 2011b, pp. 19-21; Speth, 2014, pp. 9, 27. However, this supposition did not remain uncontested; see e.g. Willems, 2005; Roose, 2003.

⁶ An instructive example from a different policy field is the “pension package” in 2014, which was rejected by entire business and almost the entire scientific community – thus, expertise cannot be the decisive factor, as politicians just deliberately decided to ignore what experts said and follow their own beliefs.

⁷ Tsebelis stresses that additional veto players such as interest groups, referendums or individuals in sensitive positions should be taken into account (Tsebelis, 2002, pp. 306-307). However, this paper does not count interest groups amongst veto players as they do not have formal veto power, and to avoid the risk of conceptual diluting. Interest groups rather strive to influence veto players while the latter decide.

⁸ An examination of the vote of representatives in US Congress on the billions-worth recovery packages in the aftermath of the mortgage default crisis revealed that representatives were more likely to support the Foreclosure Prevention Act if their constituencies had been hit by a sharp increase in mortgage defaults, while their support was even more sensitive to defaults of their own-party voters and in competitive districts. At the same time, their support for expensive bank rescue operations increased, the more jobs banks and other financial services employed in their constituency (Mian, Sufi & Trebbi, 2010).

⁹ Immergut and Abou-Chadi (2010) suggest three variables: (1) willingness of voters to alter their votes in order to punish politicians (volatility); (2) insulation of government against changes of parliamentary composition, defined by the government majority in parliament and its majority relative to the number of parties in parliament; (3) institutional efficacy of translation of voter mobility into parliamentary majorities. Although this concept has proven fruitful in the explanation of social politics, it has been designed for the comparison of many cases over a long time period, not for the in-depth investigation of a single country

¹⁰ §§41-38 GO Bundesregierung; §10 GGO Bundesministerien; §70 GO Bundestag

¹¹ for a literature overview, see Alpar & Blaschke, 2008; for an instructive case study on the role of Twitter in agenda setting, see Mache, 2012; for a discussion of the role and impact of the platform Abgeordnetenwatch, see Albrecht & Trenel, 2010.

¹² The sponsoring of federal authorities, e.g. for summer receptions, is regulated in the General Administrative Regulation on the Financial Support of the Federal Government by Third Parties – *Allgemeine Verwaltungsvorschrift zur Förderung von Tätigkeiten des Bundes durch Leistungen Privater (Sponsoring, Spenden und sonstige Schenkungen)* as of 11/07/2003. The Federal Ministry of the Interior regularly issues reports that document all benefits.

¹³ Werner Müller, Minister for Economics, retrated from the E.on/Ruhrgas fusion decision in 2004 against the background of his past job as VEBA manager, an E.on predecessor. He transferred the decision to his state secretary Alfred Tacke (SPD) who then issued the ministerial permission. Later, Tacke was hired as CEO of the E.on-owned energy company Steag, while Müller has been entrusted with the position of the director of the E.ON-owned coal corporation RAG. Hearings and oral proceedings at the cartel senate of the Higher Regional Court (OLG) Düsseldorf revealed that E.ON herself had drafted the conditions for the ministerial permission (Becker, 2006, pp. 48-49)

¹⁴ In an analysis of the SPD/Green government 2002-2005, only 22 out of 63 office holders (including ministers and state secretaries) exercised lobby positions after resigning from office (Klein & Höntzsch, 2007).

¹⁵ *Allgemeine Verwaltungsvorschrift zum Einsatz von außerhalb des öffentlichen Dienstes Beschäftigten (externen Personen) in der Bundesverwaltung*, as of 17/07/2008; see also the regular reports of the Federal Audit Office, e.g.: Bundesrechnungshof: *Mitarbeit von Beschäftigten aus Verbänden und Unternehmen in obersten Bundesbehörden*, Deutscher Bundestag, Committee Printed Matter 16/4211, as of 25/03/2008

¹⁶ Analyses for the legislative terms 2005-2009, 2009-2013 as well as 2013-2017 show that only a quarter of parliamentarians have a secondary income at all, which is furthermore mostly an issue of the CDU/CSU fraction (Mause, 2009; Hönigsberger, 2014).

¹⁷ An analysis of the paid side jobs is only available for the legislative term 2009-2013, revealing links as follows: MVV Energie AG (1 MP, CDU/CSU), RAG (2 MPs: CDU/CSU and SPD), RWE (1 MP, CDU/CSU), SMA Solar Technology AG (1 MP, SPD), Wirsol Solar AG (1 MP, CDU/CSU) (Hönigsberger, 2013, pp. 36-38)

¹⁸ Further examples of astroturfing include “Citizens for Technology” (strong links to the nuclear industry), “Waste Watchers” (initiative for waste incineration funded by a packaging company) and the “Society for Environmentally Compatible Street and Traffic Planning” (initiative for road construction funded by the asphalt and construction industry) (Schmid, 2011).

¹⁹ Thelen herself uses different definitions of what she calls “layering”: “layering [...] involves the partial renegotiation of some elements of a given set of institutions while leaving others in place” (Thelen, 2003, p. 225); “layering [...] involves the crafting of new elements onto an otherwise stable institutional framework” (Thelen, 2004, p. 32); “layering involves active sponsorship of amendments, additions, or revisions to an existing set of institutions” (Streeck & Thelen, 2005, p. 24); “Layering occurs when new rules are attached to existing ones, thereby changing the ways in which the original rules structure behavior” (Mahoney & Thelen, 2010, p. 16).

Besides layering, Thelen also proposed further modi of gradual change: “drift”, “displacement”, “conversion” and “exhaustion”. Drift occurs when an institution remains in place but ceases to work in the same way as in the past and therewith loses its function. Displacement, by contrast, occurs when “new models emerge and diffuse which call into question existing, previously taken-for-granted organizational forms and practices” (Streeck & Thelen, 2005, p. 19), i.e. when the existing institution is actively destroyed and replaced by new alternatives (Mahoney & Thelen, 2010, p. 15). Conversion is defined by “redeployment of old institutions to new purposes” (Streeck & Thelen, 2005b, p. 31), without an actual change to the institutions themselves but a change of their function. Exhaustion is described as “process in which behaviors invoked or allowed under existing rules operate to undermine these”, leading to “institutional breakdown rather than change” (Streeck & Thelen, 2005, p. 29).

²⁰ In an overview of current literature on Thelen’s concept of layering, van der Heijden (2013) notes that the process that in fact is investigated in the large part of literature „is not so much institutional change, but institutional reproduction – or even more, institutional reinforcement“.

²¹ Second, the effects of reforms again require adjustments of the legislation framework, or, while mitigating one problem, they create new problems or unintended effects that need to be tackled. Furthermore, attempts to translate concepts from their attractive drawing board version into reality are characterized by high complexity bearing inconsistencies, conflicts, and implementation deficits (Brunsson, 2005, pp. 19-21).

²² These events inter alia included confidential conferences of the “Dialogue Energiewende” under the auspices of the Humboldt Viadrina Governance Platform, meetings of the SPD fraction and of SPD networks, panel discussions at the RWE headquarter – including a panel discussion between the author of this paper and RWE CEO Peter Terium –, a week-long seminar on energy politics by RWE in Gelsenkirchen, climate summits of EnBW and BP, Parliamentary Evenings e.g. of the chemical association VCI and the electrical engineering association ZVEI, conferences of renewables branch associations and environmental associations, the renewable energy companies juwi, Ostwind and EWS Schönau, as well as anti-nuclear demonstrations in Berlin and Wendland. Furthermore, I have worked for several years as freelance editor for the Renewable Energies Agency and, in this capacity, gained profound insights into the internal communication processes and attended numerous events such as press conferences and receptions. Besides, I have served as member of the Youth Committee of the environmental ministry and participated in regular meetings with officials, and have been involved in the inner circles of the Youth Alliance for Future Energy.