

STATE IDENTITY, ENERGY SECURITY AND FOREIGN POLICY:
A COMPARATIVE ANALYSIS OF GERMANY AND TURKEY

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I certify that this thesis satisfies all the requirements as a thesis for the degree of
Master of Arts / Science



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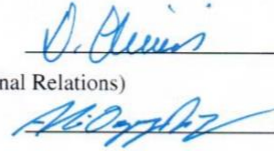
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ORÇUN DEMİR

ABSTRACT

STATE IDENTITY, ENERGY SECURITY AND FOREIGN POLICY: A COMPARATIVE ANALYSIS OF GERMANY AND TURKEY

ORÇUN DEMİR

M.A. / International Relations

Supervisor: Prof. Birgöl DEMİRTAŞ

This thesis aims to examine the interaction between Turkish and German state identities and energy security perceptions, and reflections of this interaction to foreign policy behaviors in the context of social constructivism. In this direction, the two countries' energy policies, market structures and relations with international organizations were examined based on their state identities in the post-Cold War period. The study is based on two basic questions: What is the interaction between state identity and energy security of Turkey and Germany? And what is the interaction between energy policy and foreign policy of these countries? In this thesis, process tracing and critical discourse analysis methods were used. In this context, it was seen that Germany adopted a norm-oriented energy policy within the framework of the state identity and this energy policy was reflected in a similar way on its foreign policy. On the other hand, Turkey's energy policy is shaped around the realist power parameters and in this sense the two countries' energy security perceptions differ. This thesis consists of seven chapters. Following introduction, second chapter will include conceptual and theoretical framework, then methodology will be introduced. Chapter four and five will examine Germany and Turkey in terms of state identity, energy security and foreign policy. In chapter six the two countries will be compared and last chapter will summarize the main findings.

Keywords: Energy Security, Foreign Policy, State Identity, Germany, Turkey,

ÖZ

DEVLET KİMLİĞİ, ENERJİ GÜVENLİĞİ VE DIŞ POLİTİKA: ALMANYA VE TÜRKİYE'NİN KARŞILAŞTIRMALI BİR ANALİZİ

DEMİR, Orçun

Yüksek Lisans, Uluslararası İlişkiler

Tez Danışmanı: Prof. Dr. Birgül DEMİRTAŞ

Bu çalışmanın başlıca amacı, Türkiye ile Almanya'nın devlet kimliği ve enerji güvenliği algıları arasındaki karşılıklı etkileşimi ve bu etkileşimin dış politika davranışlarına yansımalarını sosyal inşacılık bağlamında incelemektir. Bu doğrultuda iki ülkenin Soğuk Savaş sonrası enerji politikaları, piyasa yapıları ve uluslararası örgütlerle ilişkileri devlet kimliği etrafında incelenmiştir. Çalışma iki temel soruyu temel almaktadır: Türkiye ile Almanya'nın devlet kimlikleri ile enerji güvenlikleri arasındaki etkileşim nedir? Ve bu ülkelerin enerji politikaları ve dış politikaları arasında nasıl bir etkileşim vardır? Bu tezde süreç takibi (*process-tracing*) ve eleştirel söylem analizi yöntemleri kullanılmış ve Almanya ile Türkiye karşılaştırmalı olarak tartışılmıştır. Bu bağlamda, Almanya'nın devlet kimliği çerçevesinde norm odaklı bir enerji politikası benimsediği ve bu enerji politikasının dış politikasına benzer bir şekilde yansıdığı görülmüştür. Öte yandan, Türkiye'nin enerji politikası güç parametreleri etrafında şekillendirilmektedir ve bu anlamda iki ülkenin enerji güvenliği algıları farklılık göstermektedir. Bu tez yedi bölümde incelenmiştir. Girişin ardından, ikinci bölüm kavramsal ve teorik çerçeveyi içerecek, daha sonra metodoloji tanıtılacaktır. Dördüncü ve beşinci bölümde Almanya ve Türkiye devlet kimliği, enerji güvenliği ve dış politika açısından incelenecek, altıncı bölümde bu iki ülke karşılaştırılarak ve sonuca geçilecektir.

Anahtar Kelimeler: Enerji Güvenliği, Dış Politika, Devlet Kimliği, Almanya, Türkiye

To my lovely parents
Glten DEMİR and Aziz DEMİR

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ABBREVIATION LIST

AKP	: Justice and Development Party
BMWi	: Bundesministerium für Wirtschaft (Federal Ministry for the Economy)
BOO	: Build-Own-Operate
BOT	: Build-Operate-Transfer
CHP	: The Republican People's Party
EEG	: Erneuerbare Energien Gesetz (Renewable Energy Law)
EPDK	: Energy Market Regulatory Agency
EU	: European Union
FRG	: Federal Republic of Germany
GDR	: German Democratic Republic
GHG	: Greenhouse Gases
HDP	: Peoples' Democratic Party
IEA	: International Energy Agency
IMF	: International Monetary Fund
IR	: International Relations
ISS	: International Security Studies
Ktoe	: Kilotonnes of oil equivalent
LoA	: Logic of appropriateness
LoC	: Logic of consequences
LNG	: Liquide Natural Gas
LULUCF	: Land use, Land-use change, and Forestry
MENR	: Ministry of Energy and Natural Resources
MNCs	: Multi-National Cooperations
NATO	: North Atlantic Treaty Organization
NPP	: Nuclear Power Plant
NPT	: Non-Proliferation Treaty NPT
OECD	: Organisation for Economic Co-operation and Development
PV	: Photovoltaics
RES	: Renewable Energy Sources
StrEG	: <i>Stromeinspeisungsgesetz</i> (Federal Electricity Feed Law)
TAEK	: Turkish Atomic Energy Authority
Twh	: Terawatt-hours
UN	: United Nations
UNDP	: United Nations Development Program
UNFCCC	: United Nations Framework Convention on Climate Change
UNSC	: United Nations Security Council
USSR	: Union of Soviet Socialist Republics
VoC	: Varieties of Capitalism
WWF	: World Wildlife Fund
WWII	: World War II

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CHAPTER I

INTRODUCTION

With the end of the Cold War, the security understanding of states has changed and expanded in parallel with the transformation in the international system. During the twentieth century, the need for energy resources increased significantly in line with the dramatic increase in population, industrialization, and technological developments. Thus, as a result of the increasing interaction between global politics and energy markets, the concept of energy security has become one of the critical issues in the International Relations (IR) discipline as a new security threat.

As a result of technological developments and economic growth, energy has become an essential component of daily life from the energy needs of industrial production to transportation and has begun to affect policy-making processes more. Accordingly, energy security has become a subject that shapes the energy policies of countries, significantly affects their foreign trade and thus plays a decisive role in economic and political processes, with the rapid increase in energy demand in the post-Cold War period (İpek, 225).

During the same period, with the emphasis on issues such as environmental problems and global warming, energy security has started to be discussed in a framework that includes environmental security sensitivities. Hence, the emphasis on the sustainability of development rather than economic growth has increased. For this reason, environmental sensitivity factor is also articulated to energy security perceptions and cheap cost and maximum efficiency goals of the countries. The

environmental security factor enables countries to define their interests in energy policies around norms as well as material factors. Katzenstein defines the norms as “collective expectations of appropriate behavior for actors with a given identity” (Finnemore and Sikkink, 1998: 896). In connection with this definition, states are influenced by norms while defining their interests on energy policies. Accordingly, countries can define their interests in energy policies around not only material factors but also norm-oriented issues such as environment, climate change, and sustainability. These issues are not caused by a single actor alone and/or cannot be solved alone. They are transboundary and their solution is shaped around collective expectations. This is related to how actors define norms around their identities and the definition of energy security differs depending on the states' definition of interests around different identities.

As a result of this difference in the perception and definition of energy security, the factors affecting the energy policies of the countries are not just shaped around the material conditions like economic situation, natural resources, geographical position but also the identities of the states. On the other hand, the differentiation of state identities also affects the reproduction of perception and definition of the concept of energy security. In this sense, there is a mutual interaction between the perception and definition of energy security and the state identity. Accordingly, the definition of energy security has different meanings for each country within the framework of different priorities of countries. This mutual interaction between energy security and state identity also affects foreign policy behaviors of the states. Energy security is seen as a strategic interest issue in terms of foreign policy, and in this respect, different definitions of energy security are shaped

around the subjective interests of countries that have different foreign policy behaviors.

Comparative case analysis will guide the differentiating energy security approaches around the interests of countries. In this context, Turkey and Germany are appropriate cases to show the difference between countries' energy security perceptions in terms of state identity similarities, different levels of development, and capitalist market structures. Besides, they differentiate within the framework of international organizations and climate agreements, especially in EU relations. Moreover, nuclear energy and renewable energy perceptions of two countries evaluate in two opposite directions after the 2011 Fukushima Daiichi disaster and this has been the main trigger of the comparison.

	Turkey / Germany	
Similarities	Same Population Size	
	Both Poor in Oil and Gas Resources	
	Western Worldviews	
	NATO Membership	
	Parties to Kyoto Protocol	
Differences	Turkey	Germany
	Developing	Developed
	Industrializing	Highly Industrialized
	Semi-liberalized Market Structure	Liberalized Market Structure
	Hierarchical Market Economy	Coordinated Market Economy
	EU Candidate	EU Member
	Didn't Ratify Paris Climate Agreement	Ratified Paris Climate Agreement
	Pro-Nuclear Energy After Fukushima Daiichi Disaster in 2011	Against Nuclear Energy After Fukushima Daiichi Disaster in 2011

Table 1. 1. Turkey and Germany Similarities and Differences

At this point, Turkey and Germany, as the cases of this comparative study, differ in energy security definitions and perceptions despite their similarities in terms of energy dependencies, populations, and Western worldviews. While Germany incorporates the environmental factors into the energy security definitions profoundly and is to produce cross-border environmental norms in practice, Turkey comprehends energy security as a national interest and foreign dependency issue. The mutual interaction between these two countries' state identities and energy security is reflected in their foreign policy behaviors differently. All this in mind, this study aims to demonstrate the mutual interaction between Germany and Turkey's energy security and state identities and how this interaction differentiates the foreign policy of these countries. Thereby, the research questions of this thesis are shaped as: *What is the interaction between state identity and energy security in Turkey and Germany? What is the interaction between energy policy and foreign policy in these two countries?*

In this study, first, this differentiation will be put forward, and then it will be questioned whether this differentiation affects the state identity building process and (if so) how this mutual interaction affects foreign policy behaviors.

In the first part, the definition of the "energy security" and "state identity," which are the main concepts of the thesis, and their place in literature will be examined. After that, the importance of the concept of energy security in the literature of IR will be put forward; then, the question of how the concept of energy security is positioned within the scope of the social constructivism will be questioned. In this respect, the place of the thesis in the literature will be presented.

Based on the question of how the concept of energy security has an impact on state identities and foreign policy behaviors, the theoretical framework of the study will be shaped around social constructivism. In this conceptual and theoretical framework, it will be revealed how the study will be operationalized. In the following methodology section, research question, case selection, variables, research design, methods, and hypothesis will be introduced.

After the theoretical and methodological framework is analyzed, German and Turkish cases will be discussed around the historical development of energy policies, the evolution of energy security perceptions and the role of these perceptions and policies in building state identity. The historical constraint of the study will cover the post-Cold War period, due to energy security concept and environmental problems began to come to the agenda more often in the International Relations literature after the Cold War.

The perceptual dimension of the concept of energy security will be associated with three distinct logics conceptualized by Felix Ciută: a logic of war, a logic of subsistence and "total" security logic and Turkey and Germany's place in this classification will be discussed. The effect of Germany's and Turkey's energy security perception and definition on state identities and foreign policy will be measured in the context of development level of countries, the form of capitalist structures and interaction with the EU. In the last chapter, reflections on the foreign policy of mutual interaction between identities and energy security of Germany and Turkey will be discussed comparatively. As a result of this, the hypothesis of the thesis will be tested.

In conclusion, it will be argued that Turkey and Germany have different "energy security identities," and the choices made around these identities cause different reflections in foreign policy behaviors. As the final assessment, it will be interpreted how the energy and foreign policies of the two countries can evolve in the future.



CHAPTER II

THEORETICAL AND CONCEPTUAL FRAMEWORK

In this chapter, the conceptual and theoretical framework of the study will be determined and the disposition of the thesis will be presented. After examining the concept of energy security together with its dimensions, the theoretical framework of the thesis will be handled around social constructivism and the theoretical and conceptual framework of the study will be put forward around these components of the theory.

2. 1. The Concept of Energy Security in the Literature

In this section, after briefly discussing the development and transformation of the International Security Studies (ISS) in International Relations (IR) discipline, the evolution of the energy security concept will be examined in detail. There are many sub-dimensions of energy security, and these sub-dimensions reveal a wide range of literature in terms of studying the concept. The conceptual boundaries of the study will be determined within the framework of the “environmental dimension” of the concept, and a detailed and consistent framework will be established. After that, the theoretical framework of the study will be formed by indicating the position of the concept within the IR theories.

2. 1. a. Evolution and Transformation of International Security Studies

Historically, it is difficult to predict and examine when a situation first becomes a matter of "security." The concept of security is such a profound, historical,

political, philosophical, and sociological concept that has spread to all sub-fields of the social sciences and has been extensively studied. However, focusing on international security studies and addressing in a historical and politically more limited framework will provide a more straightforward window in terms of the scope of the study instead of the broad scope of the concept of security. The reason to mention this concept in this study is to put forward the development of the concept of energy security in the discipline, and therefore briefly focus on the historical development and transformation of the concept epistemologically and methodologically.

ISS has been built based on the history of thought, which refers to human nature. While the realist approach is stretching back to political theorists such as Thucydides, Machiavelli, Clausewitz, and Hobbes, the liberals date back to Kant and Grotius (Karaosmanoğlu, 2007: 162). Based on these origins, it developed in an intertwined process with the International Relations discipline as a sub-field of it. According to Buzan and Hansen, International Security Studies has taken its place in the western focus of International Relations (Buzan and Hansen, 2009, 1). In particular, the central questions of International Relations, "how to prevent war" and "how to maintain peace" are the main issues of security studies itself.

Even though many historical developments have been the subject of international security, ISS are being extensively studied in social sciences after the Second World War (WWII). With the development of the ISS after the end of the WWII, security studies became a discipline and developed systematically.

Baldwin has divided security studies into periods and discussed evolution with specific breakpoints before and after the WWII. According to Baldwin, the issues that the security studies pioneered following the prevailing paradigms and trends in the international environment are differentiated (Baldwin, 1995: 119). While emphasizing the importance of collective security, self-determination, peace, and law in the Interwar Period, the use of armament as a political instrument has been on the agenda of the great powers with the end of the WWII (Baldwin, 1995: 119 – 121).

Between 1940 and 1980, the concept of security was substantially defined as the main component of strategy studies. Thus, security was framed by military problems and power policies at the center of a state-centric perspective (Açıkmeşe, 2014: 242). Under the escalating tension of the Cold War, on the one hand, geopolitical issues were frequently discussed and contested, on the other hand, the work on the nuclear armament and the security dilemma that came with this armament became subjects of international security studies. With the increasing number of studies carried out, a period has started in which the civil academy, apart from the professional military class, has also been heavily involved in security studies and this period has been called the "golden age" of the security studies (Taylor, 2012: 4; Walt, 1991: 214; Baldwin 1995 : 123).

With the period of *détente*, security studies were stuck in the state-centric structure, and issues such as the environment and poverty could not be included in the agenda until the end of the 1970s. In this period, the reduction in the nuclear

threat reduced the public perception of security studies (Nye and Lynn-Jones, 1988: 10).

Since the 1980s, security studies have evolved into a broader frame in consequences of the oil crisis, the Vietnam War and the renewal of the Cold War tension. In company with these issues and developments such as increasing access to data, concentrating on theoretical and comparative studies, security studies have accelerated (Walt, 1991: 220). For example, in his article entitled "Redefining Security," Richard Ullman also argued that "security should expand to include environmental and economic issues" (Ullman, 1983: 132). However, the overemphasis on the state and military power was preserved in the détente period, even if the issues such as environment, energy, and poverty began to come up.

With the end of the Cold War, the security understanding of states has changed and expanded in parallel with the transformation in the international system (İpek, 2012: 225). In this period, the "referent object" of the security studies was discussed. According to Buzan and Hansen, the answer to the question of "what or whom should be referent object of the security studies?" has changed (Buzan and Hansen, 2009: 11). Throughout the Cold War, "national and international security" was shaped by the understanding that the state was the referent object (Buzan and Hansen, 2009: 11).

The ontological view of the state as the main subject of security has expanded; epistemological and methodological precursors were questioned. Ontologically, the state was not the only referent object of the global environment. Many areas from education to health, energy to the environment, food to social security,

became the main issues of the security studies at the individual, state and global levels (Buzan and Hansen, 2009: 10).

Epistemologically, positivism's rationality-oriented perspective was criticized for not being able to clarify the issues and methodologically new perspectives such as critical security studies, constructivist perspective and feminist theory, which offer new contributions from the theoretical point of view, have begun to use alternative methods. Following this, the issues of environment, health, energy, human security have emerged as new referent objects and new security approaches in addition to the security of state, which is the subject of the traditional approach. In this way, the traditional and new security concept is divided into a dual separation, and the studies which have a new understanding of security has been called "wideners" (Açıkmeşe, 2014: 171).

As one of these new referent object, Energy Security has taken its place in new security issues. During the twentieth century, the need for energy resources increased significantly in line with the dramatic increase in population, industrialization, and technological developments. Thus, as a result of the increasing interaction between global politics and energy markets, the concept of energy security has become one of the crucial issues in the International Relations discipline as a new security issue. In this context, the concept of energy security has a significant position in IR literature and examining this literature provides a general framework in terms of where this study stands. In this context, energy security literature will be examined in the next section.

2. 1. b. The Concept of Energy Security

Throughout history, human beings have needed the energy to meet their needs like nutrition, warming, transportation, and protection. Therefore, the concept of energy security can be traced back to the history of fire. The rough definition of energy security in the literature is based on four conceptions known as “four A’s: availability, accessibility, affordability, and acceptability” (Szulecki, 2016: 3). Although the situation in the foreground is differentiated over time and the definition of energy security has evolved in the direction of logistical and social demand, which firstly increased by straw, then by coal and later by oil. In this regard, the conceptual content of energy security did not require a significant change until the 1950s (Valentine, 2011: 4573).

The history of energy studies began systematically and scientifically in the second half of the 1970s (Azzuni and Brayer, 2018: 1). As of this date, studies on the concept of energy security have increased rapidly as a result of the increasingly widespread use of energy resources in terms of international trade and global relations and the challenges that have emerged in this context (Ang et al, 2014: 1078; Yergin, 2006: 69; Vivoda, 2010: 5258). Developments in many areas such as supply and demand-driven crises, economic growth, energy prices, sustainability, and environmental issues have expanded and deepened studies of energy security. According to Yergin, “in the aftermath of the 1973 oil crisis, an energy security system was established in order to encourage cooperation on energy policies in case of interruption of supply and to ensure coordination between industrialized countries” (Yergin, 2006: 75). As a result of this initiative, the International Energy Agency (IEA) was established in Paris in 1974.

In light of this establishment of IEA, almost every study on energy security refers to the IEA's definition of energy security. IEA defines the concept of energy security as “the uninterrupted availability of energy sources at an affordable price” (IEA, 2019). While IEA considers the energy security as a supply-demand balance in the short term, evaluates it in the context of economic development and environmental concerns in the long term (IEA, 2019)¹.

Academic studies focusing on the concept of energy security are examined in a wide range of literature. However, many of these definitions focus on policy and strategy and do not make an effort for the essence of the conceptual framework. (Azzuni and Brayer, 2018: 1-2). Felix Ciută pointed out that energy security is conceptually discussed rarely, and the studies generally stuck in the framework of “pipeline policies” (Ciută, 2010: 124). The studies in the literature push the conceptual and normative dimension of energy security into the background and focus on aspects of energy studies like the pipelines, supply security, and geopolitics. (Ciută, 2010: 123).

According to Ang et al., there are 83 different definitions within the 104 different studies (Ang et al., 2014: 1078). While these definitions define the same concept, they are differentiated and limited in terms of their perspectives and priorities. This situation brings together the definition of the concept in a narrow sense and causes each definition not to reach all the limits of the concept (Winzer, 2011: 37).

¹ See. IEA, Energy Security, <https://www.iea.org/topics/energysecurity/>, Last Access: 05.06.2019

Among these studies, the security-oriented definitions of the concept of energy security dominate the literature. For instance, according to Winzer, energy security denotes low interruption risk to energy supply. Willrich, who made the definition of energy security for the first time in the literature, highlighted the security of supply and defined energy security as "ensuring sufficient energy supply to continue the functioning of the national economy in a politically normal level" (Willrich, 1976: 747). The periodic issues have also affected the energy security definitions in the same period. After the Gulf War in 1990-91, the emphasis on national security came to the fore in definition of energy security (Azzuni and Brayer, 2018: 3). Although Thomas L. Neff pointed out different aspects of the concept of energy security, he drew attention to national and regional security (Neff, 1997: 5). Kalicki also refers to energy security as, "elementarily, assurance of the ability to access the energy resources required for the continuous development of national power" (Kalicki and Goldwyn, 2005: 9).

During the same period, with the emphasis on issues such as environmental problems and global warming, energy security has started to be discussed in a framework that includes environmental security sensitivities. Hence, the emphasis on the sustainability of development rather than economic growth has increased. According to the United Nations Development Programme (UNDP) report, although the production, distribution, and use of energy are essential in terms of affordability and economic growth, the impact on environmental factors is equally essential (UNDP, 2004: 2). In addition, The "Green Paper" on "European Strategy for Sustainable, Competitive and Secure Energy" in 2006, published by the EU

Commission, draws attention to sustainable development and environmental factors (Green Paper, 2006: 4-5).

Definitions are not limited to these issues. In his definition of energy security, Shih emphasizes the importance of economically, environmentally, and safely growing economies and military needs (Shih, 2009: 435). While Daniel Yergin focused on cost and availability issues (Yergin, 2006: 70), Nikola drew attention to “the role of government policies and liberalization of the energy market” (Nikola, 2013: 78). Pinar İpek also draws attention to the foreign policy dimension of energy by defining “energy security is a policy to ensure the availability of countries, industries, and consumers at reasonable prices and with minimum risk” (İpek, 2012: 226). The fact that energy security has gained a foreign policy dimension has made the reliability of suppliers a topic of energy security. Bahgat also states that “reliability is as outstanding as other factors” (Bahgat, 2006:965).

Studies around this broad definitional aspect of the concept of energy security poses a wide and deep interdisciplinary framework. In the next section, the scope of energy security will be introduced and where this study places in this wide scope.

2. 1. c. Widening and Deepening of the Energy Security

After the Cold War, the conceptual definition of energy security has expanded and intersected with many different areas. Energy is a subject of many disciplines. It is not only the subject of security and politics but also the market, geography, environment and urbanism, engineering, law, banking, journalism, and geology. These areas are not as sharp as black and white. Gray lines determine the boundary

between each study. Also, the definition of the concept of energy security can vary according to the international position, market conditions, different perspectives, national productivity, and supply (Ciută, 2010: 128). Environmental concerns can be added to this point of view of Ciută. In addition to this, Yergin emphasizes that “different countries interpret differently what this concept means to them although the simple definition of energy security is considered to be the adequate supply at affordable prices” (Yergin, 2006, 70-71). These hypotheses of Ciută and Yergin are accepted conceptually and correspond with the theoretical framework of the thesis and case choices.

In the context of this literature, many studies have divided the concept of energy security into sub-dimensions. Thus, more consistent and comprehensive studies have been conducted. Azzuni and Brayer underline fifteen sub-dimensions of the energy security including “diversity, cost, technology and efficiency, location, timeframe, resilience, environment, health, culture, literacy, employment, policy, military, and cybersecurity” (Azzuni and Brayer, 2018: 23). In the report entitled “International Energy Security” published by Energy Charter Secretariat² in 2015, these sub-dimensions were handled in seven chapters, including; “diversification, supply expansion, security enhancement, stockpiling, demand control, energy subsidies and energy trade and pricing” (Energy Charter Secretariat, 2015: 4).

² Energy Charter Secretariat is an institutional structure under the International Energy Charter and Energy Charter Treaty signed under the Lisbon Treaty.

Node	Key debate	Story
Focus	Oil (gas)	Energy security means dependable access to cheap oil – and, only recently, gas.
	Energy sector	Includes oil, gas, coal, nuclear power and renewable resources; extraction, distribution; infrastructure, markets.
Availability thesis	Depletion	Oil and gas are running out. Depletion is not compensated by the discovery of new deposits.
	Sufficiency	Existing resources are sufficient; technological innovation will optimize extraction, the discovery of new deposits and the development of alternative sources.
Historical trend	Continuity	An ongoing, accelerating and worsening trend. States cope in familiar ways.
	Radical shift	Demand for energy is growing at an unprecedented rate, which requires radical new measures.
Context	States	Energy affects state capacity and relations between states.
	Global environment	Existing patterns of energy consumption affect negatively the environment and global economic cycles.
Framework	Geopolitics	Energy is vital for state survival and can be used to hurt other states.
	Economics	The politicization of energy leads to suboptimal solutions and worsens scarcity.
Economic logic	Resource nationalism	Scarcity induces resource nationalism.
	Market liberalization	Market failure produces resource scarcity; functioning energy markets attenuate scarcity and vulnerability.
Outcome	Confrontation	Resource scarcity will lead to conflicts over energy sources, transportation corridors and infrastructures.
	Cooperation	Energy problems require cooperative solutions for managing existing resources, discovering new ones and developing alternative sources.
Optimal solution	Independence	Potential disruptions of energy supply create economic, political and security vulnerabilities. Energy independence is the only way to avoid them.
	Interdependence	Energy independence is impossible. Interdependence is the underlying condition of the energy sector: producer–producer, consumer–producer and consumer–consumer.

Table 2. 1. Energy Security – Key Debates (Ciută, 2010: 128)

In Table 2. 1, Ciută classified the key debates on energy security in terms of differences in approaches and their pre-narratives (Ciută, 2010: 128). In this respect, the debate on energy security varies in parallel with the difference in approach. Depending on the node of the concept of energy security, the focus of the discussion changes and consequently energy security could not be explained holistically but in a particular niche (Ciută, 2010: 127). This classification helps

to establish a useful and coherent study by limiting the focus of the argument raised to a specific framework. Does the use and distribution of energy resources affect state relations or the environment? Should the optimal solution in the trade of energy resources be energy independence or interdependence? Are geopolitical or economic factors important? These questions can be duplicated and evolved into a very complex structure. In this respect, classifying and determining the focus of the study will provide a more consistent study.

Also, Ang et al. examine energy security under seven dimension: “Energy availability, infrastructure, energy prices, societal effects, environment, governance, and energy efficiency”. In this context, it would be appropriate to address the “environmental dimension of energy security” in order to understand the place of energy security in Turkish and German foreign policies because the hypothesis of the thesis is that the primary point of differentiation in the energy security discourse and practice of the two countries is due to differentiation in environmental dimensions (Azzuni and Brayer, 2018: 15). It does not mean that other dimensions are considered insignificant. All aspects of energy security have a significant impact, but this limitation has been made so that the study can contribute to the literature as a consistent and comprehensive analysis. In this context, other dimensions will make a broader contribution to the literature in terms of these cases as the subject of other studies.

2. 1. d. Environmental Dimension of the Energy Security

Energy production cannot be separated from environmental factors. Regardless of which source of energy, the production process affects environmental factors -

more or less. According to Von Hippel et al., “one of the most challenging dimensions of traditional energy security studies is the environmental dimension” (Von Hippel et al., 2008: 6712). Environmental problems go beyond a dimension that crosses the state boundaries and gain an international dimension. Environmental disasters and rising environmental pollution in a country create problems not only in that country but also on a regional and even global scale. These problems bring about externalities such as global warming, radiation scattering, water pollution and health problems that threaten plant, animal and human communities. Policies on these externalities are of great importance for foreign policy attitudes. Therefore, an environmental energy security perspective includes not only a national but also an international point of view (Azzuni and Brayer, 2018: 14).

Garret Hardin, in his article named Tragedy of Commons, discussed how the environment is exploited by selfish states (Hardin. 1968: 1245). In addition to this, globalization is another essential process for the environmental aspect of energy security. According to Peter Haas, “globalization does not just bring about the mobilization of the money, people, goods, and information, but also negative environmental externalities which come from energy production and consumption” (Haas, 1999: 103). Greenhouse gases (GHG) emissions, which affect global warming and pollution, bring environmental risks together and using the energy resources affects the emissions directly or indirectly (Ang et al., 2015: 1082). Azzuni and Brayer shape the study of “the environmental dimension” of energy security around five main factors: “Use of the land, extraction methods,

greenhouse gas emission, climate conditions, and energy-water nexus” (Azzuni and Brayer 2018, 14-15).

The first parameter is the use of the land that consists of the exploitation rate of energy production and the “Land use, Land-Use Change and Forestry (LULUCF)³.” The operational process of energy production is a risk for many environmental factors. This destruction can result in irreversible damage, such as pollution, climate change, species overexploitation, habitat loss, and degradation (WWF Living Planet Report, 2016: 21). In addition to these damages, the sustainability of energy security is also in great danger. Fast exploitation of energy resources makes the land unproductive.

These dangers are controversial for renewable resources as well as for conventional fuels. Renewable energy deployment also creates some difficulties for land use and its effects on the environment (IRENA Global Land Outlook, 2017: 29). However, eventual negative influence of the renewable energy deployment on environment and biodiversity are less than fossil resources because most of the renewable energy sources emit zero or near greenhouse gases (Santangeli et al., 2016: 1192).

Secondly, “extraction methods” are also significant and vital for the environment. Harmful materials used in the extraction of energy resources pose a significant threat to nature. Oil spills and radioactive leakage from nuclear waste

³ “Land Use, Land-Use Change, and Forestry (LULUCF)”, that focuses on the impact of “the land use, land-use change and forestry on greenhouse gas emissions”, is one of the most important topics addressed by the United Nations Climate Change Secretariat. For more details, See. <https://unfccc.int/topics/land-use/workstreams/land-use--land-use-change-and-forestry-lulucf> Last Access: 09.07.2019

are the best-known examples. The problems related to oil spills and nuclear wastes indicate the importance of logistics processes (Azzuni and Brayer, 2018: 14). Besides, the chemicals used in the extraction of shale gases also cause irreversible results (Jackson et al., 2014: 329). On the other hand, the methods used in the producing energy from renewable energy sources such as solar and wind are also harmful to fauna and flora. Nevertheless, the damage per unit generated is significantly more severe in coal-fired power plants (Savacool, 2009: 2241).

The third parameter is “the use of energy and the resulting greenhouse gas emissions” (Azzuni and Brayer, 2018: 14). Technological developments, the dramatic growth in population and urbanization have also increased the energy demand. Accelerated carbon dioxide and greenhouse gas emissions cause serious consequences such as climate change and global warming. Although the energy sources demanded in everyday life are important, the energy demand of the heavy industry, which is growing due to the increase in consumption, plays a more prominent role.

Fourth, the factors that affect the environmental dimension of energy security are not solely human-induced, but some natural disasters arise as a result of human activities (Azzuni and Brayer, 2018: 15). As a consequences of global warming, the melting of glaciers, the rise of the ocean level, desertification, and the climate changes associated with them are mostly the result of environmental impacts of human activities, and the use of energy resources has an essential role in these developments. While earthquakes, floods, and tsunamis are natural disasters, there are many catastrophes due to the lack of adequate measures against the predictable

consequences of these disasters. The use of energy resources has a significant impact on global warming and climate change, which are useful in the realization of these disasters.

The fifth and last parameter of Azzuni and Brayer is about “nexus between energy and water resources” (Azzuni and Brayer, 2018: 15). Water resources have a crucial role in different forms of energy security. Water resources are an important factor in energy production and are significantly affected by environmental pollution in terms of clean water resources. In terms of renewable resources, geothermal and hydroelectric are the critical means of production but also play a significant role in nuclear energy production. In this respect, a balance between the use of water in energy production and the access of people to clean water resources is required.

Although the use of water resources as renewable energy sources seems to be positive when considering environmental concerns, the environmental impacts of the methods to be used could be dangerous. The geographic location of hydroelectric power plants and the chemicals used in geothermal power plants bring both the risk of access to clean water and other environmental problems. In this respect, the sustainability of feasibility studies is essential in terms of eliminating environmental risks (IRENA, 2015: 25).

Azzuni and Brayer have a comprehensive understanding of the “environmental dimension” of energy security around these five parameters. However, Azzuni and Brayer's five parameters are incomplete in terms of multilateral environmental contracts and policies. As a sixth parameter, the

articulation of the multilateral environmental contracts section is important to understand international decisions on the “environmental dimension” of energy security and to discuss whether the countries implement these agreements.

Multilateral environmental agreements are essential indicators of the responsibilities and awareness of the states which are accepted as independent units within the international system. The parties have signed many multilateral environmental contracts on issues such as governance, chemicals, biotechnology, waste, water, climate change, and ozone depletion, civil protection, and environmental accidents, etc. Significant steps, such as the Rio Convention, the Kyoto Protocol, and the Paris Agreement, are crucial to the “environmental dimension” of energy security. In this regard, the cases of the study will be discussed, and the implementation of these agreements will be discussed regarding important agreements.

According to Ediger, There are three main reasons for not being successful in climate change. First and foremost is the intensification of energy geopolitics around the world. Secondly, the energy needs of countries and their ability to meet them are of great importance (Ediger, 2017:+5). Even if the energy system of each country is similar in general, it shows significant differences in particular. On the other hand, the possibility of meeting the needs that can be expressed with fossil fuel reserves is quite different from each other. Although the problem is common and global, it seems impossible to combine these conditions at one point. Depending on the level of development, some countries try to meet their basic needs, while others engage in more luxurious needs (Ediger, 2017: 64). Thirdly,

the role of the state and the private sector in practices is not clear enough (Ediger, 2017: 45). The main reason for this is that “due to differences in focal points, adequate alignment between states and the private sector has not been achieved” (Ediger, 2017: 61).

After all, the “environmental dimension” of energy security is the conceptual framework of the study, thanks to its comprehensive content. Around this the conceptual framework, these six parameters will be considered as indicators in the operationalization of the cases. Thus, the “environmental dimension” of the energy security of Germany and Turkey, which will be discussed around six indicators and so, the conceptual framework of the thesis will embody a unique frame. However, before moving on to how these indicators will be handled, it would be useful to understand what is the theoretical position of energy security in IR, and in this respect, to draw the theoretical framework for the study.

2.2. Theoretical Framework

In terms of energy security, each political unit (states, international organizations or other actors) has its own understanding according to their material and social structures. As the concept of energy security varies according to perspectives or narratives, the theories of IR also define energy security in different ways according to their basic parameters. Different perspectives offer explanations of which phenomena are perceived in different time and place (Walt, 1998: 44). In this respect, energy security becomes a subject of IR theories by its different perspectives on foreign policy behavior (Şuhnaz and Sever-Mehmetoğlu, 2016: 108).

Some of these approaches highlight geopolitical interests, while others emphasize the importance of market regulations and interdependence. With the end of the Cold War, there has been an expansion and diversification in terms of international relations theories in parallel with expansion and deepening of the concept of energy security. In this context, in addition to the rationalist point of view, critical studies began to take place in the IR literature in terms of energy security. Among these approaches, social constructivism, which can be considered as an intermediate form, also has an important place in IR literature by emphasizing the place of identity and interests in foreign policy. In this section, this thesis departs from rationalist theories, and regarding the research question of the study, the theoretical framework of the thesis will be social constructivism.

2. 2. a. Social Constructivism

As a reflection of the changes in the global system since the late 1980s, a methodological debate has also begun in the discipline of international relations. Social constructivism has created a synthesis by utilizing from the discussion between rationalism and reflectivism (Demirtaş, 2014: 111). According to Wendt, constructivism benefits from the epistemology of positivism and the ontology of postmodernism (Wendt, 1992: 394).

In this epistemic and ontological framework, constructivist thinkers argue that it is not enough to explain actors' foreign policies only by material factors. There is a semantic mechanism that organizes material factors, instrumentalizes them, and shapes the foreign policy-making process. International policy is not shaped only by the material factors but is constructed by identities based upon these

material factors. The interests of actors in international politics are also defined around these identities. In this sense, the role of identities and interests is one of the underlying assumptions of social constructivism.

2. 2. b. Identities and Interests

One of the basic arguments of social constructivism is that, besides the observable material factors, socially constructed identities play a decisive role as well as interests. According to Marc Lynch "In the decision-making process, identities, culture, and norms have a significant role, and there is a mutual interaction between identities and foreign policy behaviors (Adler, 2002: 103). According to the constructivist theory, norms are defined as collective perceptions and expectations shaped around a given identity (Katzenstein, 1996: 11). In this sense, Wendt emphasizes that as well as the exogenous factors that rationalism tries to measure, socially constructed intersubjective endogenous factors are decisive in the policy-making process (Wendt, 1992: 394). Accordingly, constructivism does not try to explain but understand the nature of international relations (Rumelili, 2014: 163).

The rationalist theories read most of the variance in international outcomes through three concepts: power, security, and wealth. They claim that interests depend on material conditions, power struggle or institutions. However, according to Wendt, ideas are emphasized as a fourth factor apart from all other material factors (Wendt, 1999: 92). While rationalist theories accept ideas as null or given variable, Wendt places these two concepts at the center of the causal mechanism

(Wendt, 1999: 93). According to him, "identities refer to who or what actors are; and interests refer to what actors want" (Wendt, 1999: 231).

In a way, identities are a form of self-definition of countries and an important factor in determining their interests. Identities are subjective in this aspect and are shaped by the way the actors perceive themselves. In another aspect, they are also intersubjective due to the *sui generis* and mutually shared processes built by the relationships with other actors (Harriman, 2009: 12). In this regard, the constructivist theory departs from the rationalist theory, which accepts states as monotype.

According to the constructive thinkers, an intersubjective semantic structure occurs between states with different identities and states build their interests within the framework of this intersubjective knowledge. Intersubjective knowledge also has an important place in this case study. Knox-Hayes et al. claim that intersubjective structures between actors are important for understanding energy security as it is not defined objectively but politically (Knox-Hayes et al., 2013: 612). In terms of energy policies, states establish an intersubjective relationship with their interlocutors in line with their identities. Thus, the foreign policies of countries on energy security differs (Proskuryakova, 2018: 207).

The state identity, which states form or tries to construct, affects the energy policies, while the energy policies play a decisive role in determining identities of the states. According to Bouzarovski and Bassin, state-level actors create visions of national identity along with their energy infrastructure. They argue that although the scope of researches on energy and identity has implicitly existed, it

has not been theorized utilizing conceptual connection (Bouzarovski and Bassin, 2011: 784).

However, when explaining the link between identity and energy, Bouzarovski and Bassin deal with Russia as a case. The interaction between identities and energy security creates unique conditions and variables for each specific case. In this respect, a comparative analysis of this mutual relationship will reveal that countries produce *sui generis* policies around their unique identities and conditions. When energy policies and state identity are considered, it will be more useful to study cases that are expected to have different conditions.

In this context, there is a mutual interaction between Turkey's and Germany's state identities and energy policies which construct each other continually but in the opposite manner. Germany keeps environmental concerns in the forefront and moves with a value-driven renewable energy transition goal. Turkey sees energy security as a matter of national security and acts with geopolitical concerns.

Besides, energy policies, which are shaped around the state identities, also determine the interests given priority in foreign policy implementations. In other words, energy policies, which are shaped around the identity of states, also affect their interests in foreign policy. Constructivism makes it possible to test how the mutual interaction between state identity and energy policy effects of the subjective and intersubjective factors on foreign policies Turkey and Germany.

2. 2. c. Agent and Structure

Another important assumption of constructivism is the relationship between agent and structure. While foreign policy analysis studies only show an agent-oriented

approach, holistic studies such as neorealism and world system theory focus on the effectiveness of the structure. Social constructivism positions itself in the middle of this focus. There is a mutual interaction between the agent and the structure, and as a result of this interaction, the construction process continues progressively (Demirtaş, 2014: 112).

	Materialism	idealism
<i>Holism</i>	World System Theory Neo-Gramscian Marxism	English School World Society Feminist IR Postmodern IR
<i>Individualism</i>	Neorealism Classical Realism Neoliberalism	Liberalism

Constructivism

Table 2. 2. Wendt’s Agent-Structure Assumption (Wendt, 1999: 32)⁴

This assumption is also essential to examine the mutual interaction of Turkey and Germany with the structure one by one. Although the interactions of the energy security policies of the two countries with the global structure are meaningful, there is another very significant structure on a regional scale: the European Union. The mutual interaction of the two countries with the EU is also important in terms of energy security policies, and it is worth examining in this respect. Norms and rules are also part of the interaction with the EU. These norms

⁴ The positions of neoliberalism and neorealism might be surprising but Wendt locates them according to their ontological perspectives. Both have the same ontological structure as they accept the identities and interests given.

and rules are significant parameters of the identity building of states (Onuf, 1989; Katzenstein, 1996; Wendt, 1999; Farrell, 2002). Both Germany and Turkey's relations with the EU show a norm and rule-oriented process.

In addition to this, political actors act not only interest-oriented but also in the framework of appropriateness. The constructivist theory divides the decision-making logic into two: the logic of consequences (LoC) and logic of appropriateness (LoA) (Barnett, 2014: 159). In the framework of logics, states act in a rationalist logic and focus on profit-loss analysis. Yet, in the logic of appropriateness, states act according to their identities and norms they believe in. At this point, states give importance to the policies that correspond to their values rather than their gains. In the next section, this distinction made by social constructivism in the decision-making mechanism will be related to energy policies.

2. 2. d. Decision-Making Logics

In the context of social constructivism, actors act not only in the focus of profit/loss analysis, but also in the framework of the logic of appropriateness. March and Olsen define the LoA as the actors make a decision and develop a policy as part of their ethos and norms. According to them, rules are the main factors of the decision-making process. The actors pursue rules because they recognize as the natural, rightful, and legitimate. Actions of the actors are based upon the preference rather than necessities (March and Olsen, 1989: 161-162). March and Olsen define the LoC as the opposite of the LoA. Within the scope of LoC, rational actors prioritize their interests in decision making. According to Barnett,

these two logics are not necessarily opposite of each other (Barnett, 2014: 159). The decisive factor varies according to what the actors define as legal and appropriate.

In connection with this decision-making logic, Felix Ciută considers energy security within three different logics: "a logic of war," "a logic of subsistence" and a "total" security logic (Ciută, 2010: 123). The logic of war refers to the geopolitics dimension of energy. In this sense, the struggle for energy resources is a regular competition in terms of power, market, and survival patterns (Ciută, 2010: 130). In the logic of war, energy is the one of most important components of the state survival.

On the other hand, the logic of subsistence fundamentally focuses on meeting the need for energy and related sectoral developments (Ciută, 2010: 133). In this logic, "subsistence" replaces the "survival" pattern (Ciută, 2010: 135). Thus, energy is the one of most important components of the economic development. The third logic, total energy security, reflects a perspective that puts energy security ahead of everything. This logic reveals an understanding that energy affects every particle of life (Ciută, 2010: 136). In this sense, while the logic war is one of the most crucial components of the state survival, in the total energy security is the most important component by itself, not one of them. The countries which take part in the "rentier state" discussions can be given as the examples of this concept. In these countries, the survival of the state depends on the income received from the trade of these resources wholly or mostly.

In addition to these, Kacper Szulecki discusses the concept of energy security in the context of the theory of securitization focusing on the material conditions of energy systems and energy security perceptions (Szulecki, 2016). According to Szulecki, there are two different perceptions of energy security. One of these perceptions strictly focuses on the economy in a depoliticized way rather than political parameters. In this case, Szuelcki explained the energy security as an economic “equilibrium” between supply and demand. However, when policies on the use of energy resources are considered, “energy equilibrium” becomes a security issue and define politically as “energy security” (Szulecki, 2016: 22).

In this regard, states' perceptions of the use of energy resources vary according to whether they put the economy or the security forward. Within the framework of the constructivist theory, different logic frameworks contribute to the understanding of how socially constructed energy security understanding of countries is involved in the countries' foreign policy discourse.

2. 2. e. Varieties of Capitalism (VoC)

While there is no direct connection to constructivism, another element that will contribute to the study of energy security is to establish a link between the varieties of capitalism (VoC) and the constructivist theory. According to İpek, the varieties of capitalism are an essential concept in revealing the social causality between energy security and foreign policy (İpek, 2012: 234).

According to the concept of types of capitalism, the choices of the actors, their perception and behavior are affected by the original institutions that emerged as a result of the different types of capitalism that exist at the local level in the states

and the international activities shaped by these institutions. According to Hall and Soskice, there are two types of capitalism: the liberal market economy (LME) and the coordinated market economy (CME) (Hall and Soskice, 2001: 8). The studies, conducted in the context of this dualism, focus on the comparisons between the countries which are accepted as Liberal Market economies such as England, USA, Ireland and Germany, Austria and Scandinavian countries with Coordinated Market Economy.

These two systems differ in terms of financial structures, firm relations, trade union organizations and the role of the state in the economy. Hall and Soskice classified Germany, one of the countries to be analyzed comparatively, as a “coordinated market economy”. The CME is based on a system in which many market actors like suppliers, customers, employees, unions and financiers interact in market relationships and take an active part. This market system, in which every actor is actively involved, prevents the market conditions from being only profit/loss-oriented and protects collective standards (Hall and Soskice, 2001: 27).

On the other hand, Turkey has been classified as “ambiguous position” in the Hall and Soskice’s study (Hall and Soskice, 2001: 21). This poses a significant difficulty in conducting the study around the classification of Hall and Soskice. Therefore, there is also a need for a different kind of analysis that classifies Turkey around the varieties of capitalism. In this respect, Jian Kiran’s study entitled “Expanding the Framework of the Varieties of Capitalism: Turkey as a Hierarchical Market Economy” presents a classification as a contribution to the study of Hall and Soskice (Kiran, 2018: 42). In this study Turkey is defined as a

"hierarchical market economy". According to Kiran, there are four main elements what play a role in classification of Turkey as the hierarchical market economy: "the dominance of the family-owned diversified business groups in the economy", "state-regimented and weak industrial relations", "low skills" and "the influence of Multi-National Corporations" (Kiran, 2018: 43). Comparing Turkey and Germany in term of coordinated market economy and hierarchical market economy creates an appropriate empirical ground to discuss differentiation of energy market structures, identities and interests.

Within the framework of these general assumptions of the constructivist theory, it provides a consolidated theoretical background for comparing the identities of Turkey and Germany and accordingly their interests and policies in terms of energy security. These two cases will be discussed in detail within this theoretical framework after the methodological boundaries of the study have been drawn.

CHAPTER III

METHODOLOGY

In this chapter, the methodological boundaries of the connection between theoretical and empirical sections of the study will be examined in two sections. First of all, the origins of the research question, which is the main catalyst for conducting the study, will be explained. After that, the hypothesis of the study will be provided, and causal link between variables will be analyzed.

Subsequently, the research design, the methods to be used, and operationalization of empirical data will be presented. Thus, it is aimed to address the findings of the study within a valid and reliable methodological framework.

3. 1. Research Question, Hypothesis, and Variables

As can be recalled from the theoretical framework, states perceive energy security differently depending on their identities and the interests they shape around these identities. Germany and Turkey, despite the similarities in many respects, are going in opposite directions on behalf of two prominent examples demonstrate this differentiation. According to Demirtaş, both countries constructed a Western-oriented state identity after the WW II and justified their political and economic interests around this identity (Demirtaş, 2008: 32).

In addition, the two countries have a similar population, but Turkey's EU accession process is advancing in a nonstable process while Germany is one of the catalyst countries of the European Union. Interaction between EU and Germany

proceeds on a linear line. But, the structure of Turkish foreign policy, which emphasizes multiple identities, periodically differentiates in relations with the EU. Although Western identity has a significant place in Turkish state identity, Turkey has tried to assume a different role in foreign policy in parallel with the Syrian Crisis and has changed its foreign policy priorities since 2011. In the same year, after the Fukushima Daiichi disaster, Germany made an important decision in terms of environmental and energy policies.

From an energy perspective, both countries see energy imports as a significant risk and want to reduce their dependence on foreign energy supplies (Şahin, 2018: 5). Likewise, both countries are crucial crossroads in transporting Russian natural gas to Europe. However, when we look at the policies developed by countries to reduce this dependency, it is seen that the path they follow is very different from each other.

Although Turkey shows a marked improvement in the use of renewable energy resources, particularly wind, solar and geothermal energy, the subsidies for the use of fossil fuels by the state continue and even increase (Şahin, 2018: 37). Furthermore, Turkey also sees nuclear energy as an alternative resource to reduce its import dependency. In 2018, the construction of a nuclear power plant project in Mersin-Akkuyu started with the Russian state company ROSATOM, and this project was aimed to be completed in 2023. In addition, there is a contradiction between the Renewable Energy Law No. 5346 and the EU legislation⁵. Considering political implementations on renewable energy, there are

⁵ This contradiction will be examined in detail in the section 5. 4., p. 102

developments that contradict environmental concerns and related regulations (Küçükali and Barış, 2011: 2459). Regarding this, whether environmental or not, Turkey tries to increase domestic production in all kinds of affordable energy resources in order to ensure the security of energy supply and diversity.

In contrast to Turkey, Germany is seen as an "exception" in the areas of renewable energy transformation and nuclear energy phase-out (Jahn and Korolzcuk, 2012: 163). The most important concept to be mentioned at this point is *Energiewende* (Energy Transition)⁶. It is a long-term project that puts the climate change dimension to the initial plan in the renewable energy transition. This comprehensive project adopts phasing out of all nuclear power plants in the country and the use of renewable energy instead of fossil fuels. *Energiewende* is not just an initiative that express Germany's energy transformation, it is also aimed to create a vision of transformation that can be an example for other countries if it is implemented successfully (Beveridge and Kern, 2013: 4).

In this respect, the energy security policies of the two countries are shaped with a different logic in parallel with these differences in identity and energy policies. The research question of the study becomes important in terms of whether there is a differentiation in terms of foreign policy reflections of this interaction. In this context, the research question of the thesis is shaped as follows:

⁶ The concept of *Energiewende* will be discussed in detail on page 51 under section 4.2.a.

What is the interaction between state identity and energy security of Turkey and Germany? And what is the interaction between energy policy and foreign policy of these countries?

According to Wendt, there are two interrelated types of analysis: Constitutive (*how*) and Causal (*why*) (Wendt, 1999: 86-87). In order to present the causal analysis, the question of "how" must first be asked to understand "why." This research question provides the constitutive analysis for "how the state identity and energy security interact with each other's". The answer to the question of "why foreign policy behaviors are affected by energy policies" also provides a basis for causal analysis.

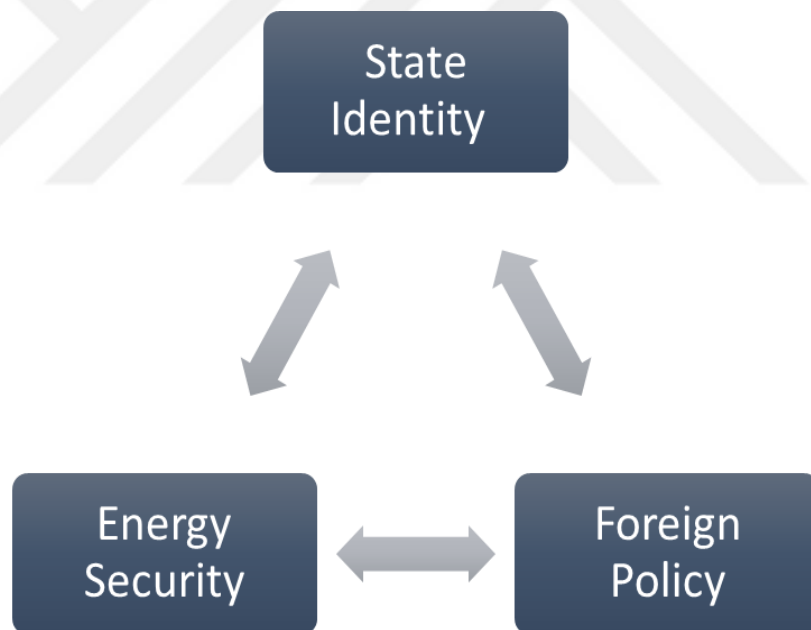
The state identity is the causal mechanism of the hypothesis to be tested within the framework of this research question. According to Demirtaş, state identity is used in two different ways as internal and external. While internal identity develops within the framework of the constituent elements and internal political developments of the state, external identity is shaped around the way of states' self-identification in the international environment and appropriate policies under their identities (Kowert, 1999: 3; via Demirtaş, 2008: 33).

In this thesis, the concept of "state identity" will express as external identity whenever it is used because the main goal of the study is the effect of the interaction between state identity and energy policies on foreign policy behaviors. In this respect, the main hypothesis of the study is proposed as follows:

"The interaction between state identity and energy security of Turkey and Germany leads to different foreign policy implementation of states."

This main hypothesis includes three main variables that affect and construct each other cyclically. In this context, there is not a one-way relationship between variables (expressed as "X → Y" or "ID → DV"), but a cyclic interaction that constructs each other. While state identities are decisive in energy security policy, energy policy mutually plays a role in the construction of state identity. The same interaction exists between energy policies and foreign policy behavior. This relationship is shown more clearly in the following figure:

Figure 3. 1. Relationship between Variables



Under this main hypothesis, six sub-hypotheses were determined around the main elements mentioned in the conceptual and theoretical framework.

Sub-hypothesis 1: Though Turkey and Germany's state identity bear a resemblance with each other, their energy security identities have evolved in different directions in the period after 2011.

Sub-hypothesis 2: Capitalist market structures of states affect the structure of the energy sector, and this is a part of the construction of state identity.

Sub-hypothesis 3: German and Turkish state identities affect the energy policies of the countries, as well as energy policy plays an active role in the process of reconstruction of the state identity.

Sub-hypothesis 4: In terms of the “environmental dimension” of energy security, Turkey and Germany have different structures.

Sub-hypothesis 5: International climate agreements and relations with the EU differentiate the role of energy in the foreign policies of the two countries.

Sub-hypothesis 6: German and Turkish energy security perceptions are shaped in different logical planes.

Relationship and causality between variables will be operationalized within the framework of this sub-hypotheses. In this way, the research design and methods of analysis will be determined.

3. 2. The Research Design and Methods of Analysis

After the research question and hypothesis are presented, delimitation of the thesis will be introduced by drawing theoretical and empirical limits of the study and explaining the methods to be used. According to King, Keohane, and Verba, a research design should involve four main components: “the research question, the theory, the data, and the use of the data” (King et al., 1994: 13). Since the research question is discussed extensively in the previous section, the theoretical, conceptual, empirical limits of the study will be propounded in this section. In addition, the analysis methods to be used in the study will be examined.

The first stage of this restriction should be considered within the framework of the analysis unit and the level of analysis. This study is trying to put out the relationships between state identities and energy policies of Turkey and Germany. As mentioned above, the term of state identity refers to external identity. This attitude does not mean that internal identity is not significant. There is an important link between internal identity and energy security, but the study is limited with the external identity, as the study tries to analyze the impacts of interaction between identity and energy security on foreign policy behaviors. In this respect, the unit of analysis of the study is "state"; the level of analysis was determined as the "states level."

When the methodological tendency of constructivist theory is analyzed, it is seen that a process-centered and discourse-oriented approach is dominant in general (Jung, 2019: 3). In the context of this approach, qualitative analysis methods will be used in the study. In particular, process-tracing for process-

oriented research; discourse analysis methods for discourse-oriented research will form the methodological framework of the study.

According to George and Bannet, process-tracing will help in the understanding of the causal relationship in terms of path dependencies and basic features of historical explanations (George and Bannet, Ch. 10). Process-tracing finds a place in social constructivism (Jung, 2019:3). It is seen as important to understand the construction process between the agent and structure cyclically and the identity building process (Wendt, 1999: 194; Harriman, 2009: 18).

Another method to be used in the study is discourse analysis. With this method, the reflections of the state discourses on foreign policy arising from the interaction between energy policies and state identity will be revealed. In content analysis, it is possible to reach only the elements of discourse, but through discourse analysis, not only the elements of discourse but also the meanings that they produce continuously in a particular context are unveiled (Halperin and Heath 2017: 310).

In this context, the discourse analysis method to be used is a “critical discourse analysis” that is a qualitative analysis method. In particular, critical discourse analysis focuses on the exploration of “language in context” (Halperin and Heath 2017: 311). Therefore, it helps to understand how discourse legitimates and assigns meaning to energy policies and foreign policy behaviors.

According to Gee, the main element in which discourse gains meaning is "recognition." subjective languages, actions, values, and beliefs create an identity

of who you are and create a whole body of meaning that allows you to be "recognized" by others (Gee, 2001: 18). State identity becomes significant in terms of how they define themselves (and thus, how others recognize them) by means of the relationship between Turkish and German energy and foreign policy.

Within this methodological framework, it is necessary to specify which data to be used in the research design. In these study, primary and secondary sources will be utilized to monitor the historical process of the energy policies and foreign policy relations of the two states.

Selection time period is a requirement to determine the time limitation of the study. Especially after the end of the Cold War, the concept of energy security and environmental problems has begun to be discussed in IR and ISS frequently. In this respect, the selected time frame of the study will be the post-Cold War period. Specific breakpoints from this date to the present have a significant impact on the identity-building processes and policies of both states as well as on a historical basis. The legislative and policy decisions in the countries and the energy developments in the world take historical analysis away from a linear line.

By this time, the conceptual, theoretical, and methodological origins of the study have been revealed. With a brief history of energy and foreign policy of the countries, the study design will be shaped under four main headings, which will be discussed within the framework of state identity, energy security and foreign policy behaviors. Within the scope of the research question, first of all, it will be examined the interaction between Turkey and Germany's state identity and energy security. Secondly, it will be focused on relationship between energy policies

affected by state identity and foreign policies of the two countries. In this way, both cases will be handled under the same headings and thus creating an appropriate framework for a comparative study

In the comparison section, the energy security perceptions of the two countries will be determined and the decision-making logic will be compared. In this context, the validity of the six sub-hypotheses identified under the main hypothesis will be tested.

Accordingly, the structure of the study that tries to explain that interaction between energy security and identity of Turkey and Germany and relationship to the state's foreign policy behavior of these interactions will be established. In this context, this thesis will contribute to the IR literature in terms of both “environmental dimension” of the energy security concept and the relationship between energy security and foreign policy of these two countries within the constructivist approach.

After this theoretical and methodological framework, German and Turkish energy policy will be discussed in detail in the context of state identity in the following chapters. In this context, German energy security perception will be examined in the next chapter.

CHAPTER IV

GERMAN STATE IDENTITY AND ENERGY POLICY

In this chapter, the development of German energy security perception will be examined around state identity, energy and foreign policy. In this sense, it will be discussed that how Germany defines and perceives energy security in the post-Cold War period. It will be studied according to Germany's capitalist market structure, environmental priorities and the interaction with the international structure. Then, the reflections of Germany's perception of energy security on foreign policy will be discussed.

4.1. Brief Introduction to Germany's Foreign and Energy Policy

Following the devastating destruction and heavy cost of the WWII, Germany was divided into two as "East Germany", officially the German Democratic Republic (GDR) and "West Germany", officially the Federal Republic of Germany (FRG). This division is not only a geographical division but also an ideological division, and the geographical boundary between the two ideological perceptions of the Cold War was between these two countries. After the WWII, West Germany left its revisionist identity aside in order to be accepted in the new world order and constructed a peaceful identity that was consistent with western values (Erb, 2003: 480). During the Cold War, the division into two as East and West Germany with two different ideologies affected Germany foreign and energy policy significantly.

FRG has adopted a liberal understanding of the economy by integrating into the Western market system. After the WWII, the Federal Republic of Germany,

which aimed to confront its past with the opening of the Eastern Policy (*Ostpolitik*) and to develop bilateral relations with the Union of Soviet Socialist Republics (USSR), has also made progress in the context of energy policies. With the exploration of the Urengoyskoye natural gas field in 1966, the energy relations between Germany and the USSR began to be shaped by bilateral agreements. Both the GDR and FRG constructed energy relations with the USSR through long-term agreements (Victor, 2006: 129). FRG, which has been dependent on OPEC for 96% of its imports, was severely affected by the 1973 and 1979 Oil Crises. In this process, West Germany sought to strengthen its relations with Norway, the Soviet Union, and the United Kingdom by seeking diversity in terms of energy supply security and accelerated the steps taken in nuclear energy (Bösch, 2014:167).

With the reunification of Germany, the East German energy market was redistributed among some companies based in former West Germany, and the energy market was shaped as organized in the West (Gründinger, 2017: 267). More important than this structural transformation is the redefinition of energy security around the state identity as “public welfare” as in all other matters, in order to achieve socio-economic stability with the reunification of Germany (Pourzitakis and Sliwinski, 2018: 487). Therefore, concerns about climate change and nuclear debates which started right after the Chernobyl disaster could not have occupied the agenda of Germany (Gründinger, 2017: 53; Schmidt, 2007: 426).

On September 1998, the first center-left majority coalition established between Social Democratic Party (SPD) and Alliance '90/ The Greens. After the establishment of a coalition including the Green Party, known as “red-green

coalition”, Germany's energy security approach gained a face that internalized environmental concerns. The government under Gerhard Schröder made decisions to reduce nuclear and fossil resources and to promote the use of renewable resources (Gründinger, 2017: 43). Perceptions of energy security have undergone a significant transformation as nuclear power plants have become gradually old and risky, the costs of investments in renewable energy sources have decreased in time, and environmental awareness in society has raised.

At this point, the energy transition strategy of Germany, called *Energiewende*, took a strong place in German energy policy. The coalition government formed in 1998 had decided to nuclear phase-out, but this decision canceled in 2009 by extending the use of nuclear power plants. This process was called “*Ausstieg aus dem Ausstieg* (Phase-out of the - nuclear - phase-out)” (Appunn, 2018).

During Social Democrat & Green coalition, the concept of *Energiewende* was the determinant of official discourse between 1998 and 2005 but disappeared until the Fukushima Daiichi disaster, one of the most crucial turning points in renewable versus nuclear energy (Morris and Jungjohann, 2016: 5). While Germany's energy security is in the process of evolving into a more environmentally friendly structure, the Fukushima Daiichi disaster has accelerated the decisions taken for the energy transition.

A week after the accident, Chancellor Merkel pronounced to all nuclear power plants (NPPs), including eight immediately, will be shut down in 2022⁷. (Morris and

⁷ See. Map 4. 1. : Nuclear Phase-out of Germany

Jungjohann, 2016: 341). After this accelerated and definitive phase-out decision, Energiewende was not only the catalyst of Germany's energy policies but also became a role model to the world by adding a value-oriented foreign policy of Germany to be constructed after the reunification.⁸

Map 4. 1. Nuclear Phase-out of Germany, Clean Energy Wire, <https://www.cleanenergywire.org/galleries/challenges-germanys-nuclear-phase-out-charts>, Last Access: 04.07.2019



⁸ For norm-oriented foreign policy of Germany See. Jonas Wolff, “Democracy Promotion and Civilian Power: The Example of Germany’s ‘Value-Oriented’ Foreign Policy”, *German Politics*, Vol: 22, No.4, December 2013, pp. 477–493

In this context, the interaction between state identity and energy security is essential for understanding how Germany articulates environmentally-friendly energy policies in the logic of norm-oriented foreign policy. After this brief history of the German energy policies, the role of *Energiewende* in Germany's state identity will be examined in detail within the energy market and policy in the post-Cold War era.

4.2. Interaction between State Identity and Energy Security of Germany

The unification process was a complicated issue that Germany faced in the post-Cold War era. Unification does not only mean combining borders, flag and national anthem. It also suggests unification of two ideologically different value systems including production and consumption schemes, sociocultural relations and foreign policy. Demirtaş states that this vital decision raises a series of questions that trigger each other as follows:

"Related to the question of what kind of state the unified Germany would be, came the problem of which identity it would choose to adopt. How would it define itself within the changing dynamics of world politics? How would it perceive its status within the EU? Would it continue to go along the path of European integration? Would it still be exclusively "a civilian power"? Would it try to project its newly gained power onto its partners and neighbors? Would it try to carry out power politics in its foreign relations?" (Demirtaş, 2008: 43)

There were many different perspectives in the debates on how Germany's foreign policy attitudes should be. While pragmatic multilateralists argued that economic interdependence should be the primary determinant, normalization-nationalists emphasized that geopolitical interests should be promoted. On the other hand, pro-Europeans and European-skeptics were discussing Germany's place in

European integration (Hellman, 1996). Demirtaş summarized these complex debates around two main perspectives: “liberalization and normalization”.

Supporters of liberalization argue that Germany should build its foreign policy on two historical lessons - one positive and one negative. The negative lesson was related to Germany's revisionist attitude and its consequences during the two world wars. The positive lesson was related to the EU integration process, in which Germany made significant progress with its neighbors. Within the framework of these two lessons, Germany should continue its foreign policy based on peaceful and economic relations and avoid a security-oriented policy in the international system (Demirtaş, 2008: 42-44).

On the other hand, supporters of normalization supposed that Germany should play an active role in international developments and determine its interests in this direction. It should try to have a say in international organizations such as NATO and the United Nations Security Council (UNSC). Thus, Germany should escape the situation called "forgetting about power" (*Machtvergessenheit*) and take an active role in the international system (Kaiser 1993: 548 via Demirtaş, 2008: 45). In this sense, these two different aspects have a resemblance to March and Olsen's distinction between the “logic of consequences” and the “logic of appropriateness”. In this context, liberalization can be associated with the LoA; while normalization is correlated with the LoC. According to Demirtaş, although Germany has taken steps that could be associated with normalization, it has adopted a foreign policy that is generally prone to liberalization (Demirtaş, 2008: 47). Although Germany has played an active role in some NATO and UN peacekeeping operations, it has justified its

role in the protection of peace and stability. Herewith, Germany's state identity was constructed and protected with the European values and non-military aspect in this process and in this way, it is in harmony with logic of appropriateness.

When the energy pillar of this process is considered, it is seen that the German energy transformation, defined as *Energiewende*, is also shaped with a value-oriented approach. With the *Energiewende*, Germany is regarded as a potential “pioneer or exception”, which has been shown as a model to other countries in many studies (Beveridge and Kern, 2013; Lundberg, 2019; Jahn and Korolczuk, 2012; Şahin, 2018, Steinbacher and Röhrkasten, 2019; Steinbacher and Pahle, 2016; Haas and Sander, 2016; Morris and Jungjohann, 2016; Hager and Stefes, 2016, Quitzow et al., 2016, Weber et al., 2017). The number of studies that considers *Energiewende* as an international and value-oriented concept in the literature shows the effect of the policies that tries to construct on this concept.

Even though there are occasional discontinuities, *Energiewende*, which has been on the agenda for almost fifty years shows that environmental issues are at the forefront in the energy security perception of Germany. Especially after 2011, it became the dominant concept in renewable energy transition of Germany and it has a potential to spread to other countries. In this sense, the development of the concept of *Energiewende* should be addressed in the next section.

4. 2. a. Background of the *Energiewende*

Energiewende linguistically means U-turn in energy in German but a new way with a better rotation (Morris and Jungjohann, 2016: 1). Although it is widely used in the post-2011 process, this is not a new concept. This term was first used by Krause

et al. in 1980 (Krause et al, 1980). According to Strunz, the concept of *Energiewende*, at that time, was a critical idea of the growing use of fossil and nuclear resources. However, it became a state policy after the 2011 Fukushima Daiichi disaster (Strunz, 2014: 150).

Beginning from 1980s, with the establishment of the Green Party,⁹ *Energiewende* came to the agenda much more frequently. However, this did not affect the policy practices and in this process, subsidies for fossil resources rather than renewable energy sources (RES) were increased by government. For example, the economy ministry rejected the proposals by “*Bundesministerium für Bildung und Forschung*” (Federal Ministry for Education and Research) to promote research and development for RES (Stefes, 2016: 69).

In 1986, a nuclear accident (known as Chernobyl) occurred in the Soviet city of Pripyat. Chernobyl nuclear disaster significantly affected perceptions of renewable and nuclear energy in Germany. The Chernobyl accident, along with the ideological polarization of the period, is expressed differently in West and East Germany. While this disaster was seen as a crisis situation in West Germany, state controlled media and experts in East Germany tried to reassure people by underestimating the accident.¹⁰ In this sense, nuclear energy debates have intensified in West Germany and new NPP projects were stopped excluding projects planned before accident (Agora Energiewende, 2015: 11).

⁹ For a brief history of Green Party, See, Rina Goldenberg, “Germany's Green party: How it evolved”, Deutsche Welle, 24.09.2017, <https://www.dw.com/en/germanys-green-party-how-it-evolved/a-40586834-0>, Last Access: 01.07.2019

¹⁰ For more details on how the Chernobyl nuclear disaster was seen in East and West Germany, See. “East, West Germany Dealt Differently With Chernobyl”, dw.com, <https://www.dw.com/en/east-west-germany-dealt-differently-with-chernobyl/a-1981654>, Last Access: 01.06.2019

Since the early 1990s, Germany has experienced a micro-paradigm shift in its energy security approach. “*Stromeinspeisungsgesetz*” (Federal Electricity Feed Law - strEG), was approved in 1990 and entered into force in 1991, which is one of the most important indicators of Germany's shift in energy security perceptions to renewable energy. StrEG, which is the first feed-in tariff program supporting green electricity in the world, was an important step in promoting renewable energy¹¹. Although strEG is a substantial beginning for using RES in electricity grid of Germany, the law did not trigger a significant increase in the use of renewable energy sources due to technological inadequacies and high costs.

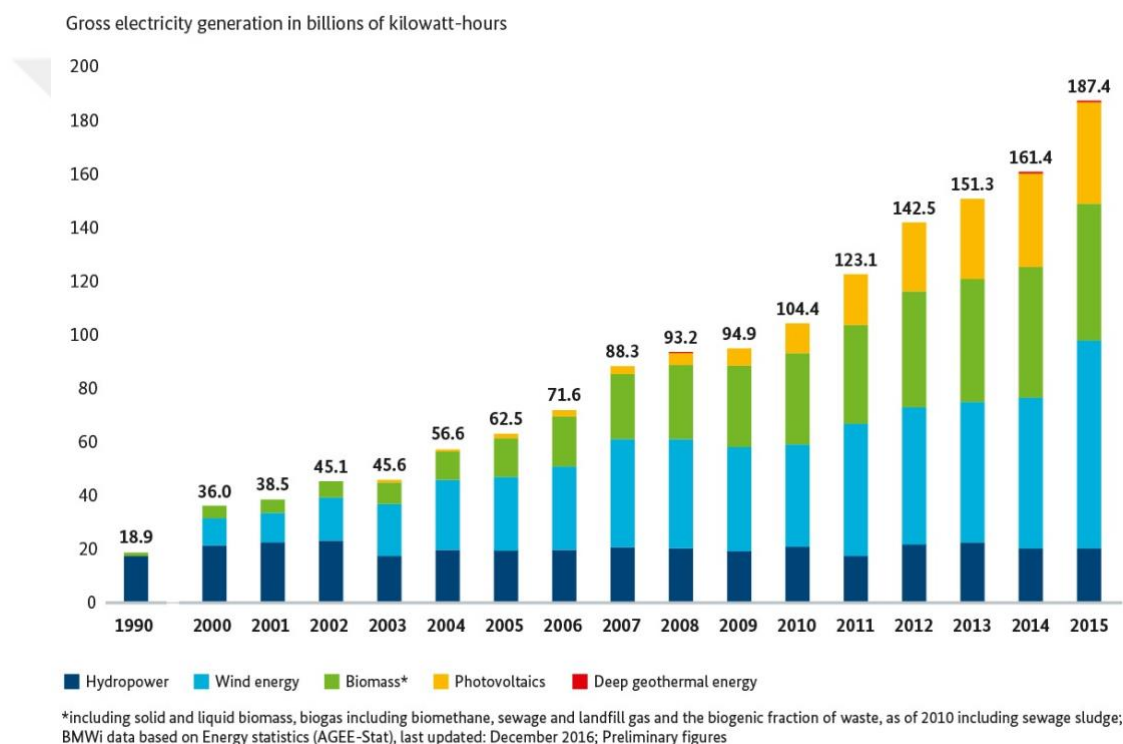
With the establishment of the red-green coalition in 1998, the concept of *Energiewende* came up strongly again and the practices in this direction gained momentum. The enactment of the Renewable Energy Act (EEG) is one of the most important steps of the red-green government (Şahin, 2018: 21). EEG provided a significant incentive for renewable energy transition, especially with its 20-year fixed price guarantee on solar and wind power (BMW, 2012: 30).

Besides, the federal government has agreed with the electricity industry on phasing out nuclear energy in June 2000. Contracting parties decided to limit the production of electricity from nuclear power over time with "Agreement between the Federal Government and the Electricity Supply Companies dated 14th June 2000", known as "Nuclear Consensus" (Haunss, 2013: 6). In addition to the legal incentives and technological developments, environmental and climate concerns deepened in

¹¹ For more details about strEG See. “IEA Electricity Feed-In Law of 1991” (“Stromeinspeisungsgesetz”) <https://www.iea.org/policiesandmeasures/pams/germany/name-21002-en.php>, Last Access: 06.07.2019

the 2000s, and the share of RES in electricity production in Germany gradually increased. While the share of RES in electricity production was 6,7 % in 2001, it reached 20 % in 2011 (BMW, 2012: 30). As shown in Figure 4. 1., the use of RES has increased dramatically.

Figure 4. 1. Gross Electricity Generation in Billions of Kilowatt-hours, BMWi, <https://www.bmwi.de/Redaktion/EN/Infografiken/development-of-electricity-generation-from-renewables-in-germany.html>, Last Access: 24.07.2019



Until 2010, Germany continued and strengthened its renewable energy targets. Stade (2003) and Obrigheim (2005) NPPs were shut down during the ongoing process with Atomic Energy Act (with Amendment by the 11th Act of 2002).¹² In

¹² More details for “Act on the Peaceful Utilization of Atomic Energy and the Protection against its Hazards (Atomic Energy Act)”, See. “Act on the Peaceful Utilization of Atomic Energy and the Protection against its Hazards (Atomic Energy Act)”, <http://extwprlegs1.fao.org/docs/pdf/ger50913E.pdf>, Last Access: 04.06.2019

2010, however, the new right-wing coalition decided to postpone the phasing out of NPPs. For the nuclear power plants built before 1980, an extension of eight years was given, while for those built after 1980, an extension of fourteen years was granted (Jahn and Korolczuk, 2012: 161).

One year after this decision and only four days after the Fukushima Daiichi disaster, the government made a major U-turn and decided to shut down all nuclear power plants by 2022. Moreover, eight nuclear power plants have to be immediately shut down. Subsequently, the Federal Cabinet, the Bundestag, and the Bundesrat passed six comprehensive laws and one ordinance. With these regulations, it was determined how to regulate the technical aspects of the targeted transformation (BMWi, 2012: 6). Accordingly, *Energiewende* has become of primary importance in terms of energy security as a concept that requires much effort in line with the goals set by Germany.

These targets indicate two crucial dates, 2020 and 2050 (see, Figure 3). For these two target dates, Germany's 2020 goals are shutting down all NPPs, reducing GHG emissions by 40% of 1990 levels, increase the level of RES in the energy mix to 18%, and increase the share of these resources in electricity production to 35%. The 2050 targets were attached to *Energiewende* in agreement with “Energy Roadmap 2050” set by the EU commission in 2011 (BMWi, 2012: 48). In line with 2050 goals, in the same phase, the main targets are to reduce greenhouse gas emissions by 80-95%, to increase the level of renewable resources in energy production to 60%, and to increase the share of these resources in electricity production to 80% (BMWi, 2012: 48).

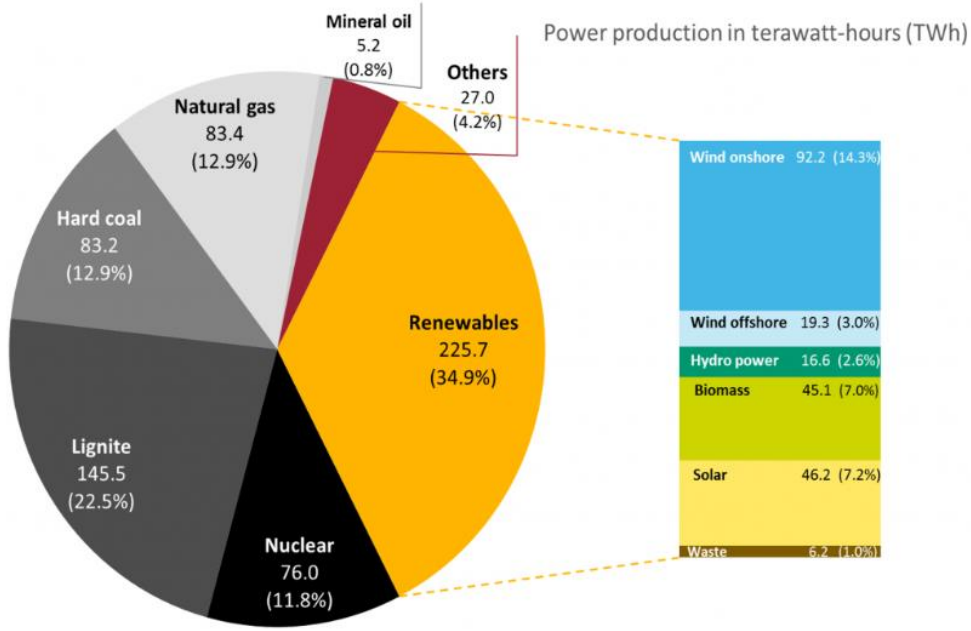
Policy Phase	Status 2017	Target 2020	Target 2050
Emission Reductions (from 1990 levels)	27.5%	- 40%	-80/95%
Nuclear Phase-out	11,8% of primary energy consumption (2018)	Complete phase-out by 2022	-
RES in Energy Mix	15.9%	18%	60%
RES in Electricity Production	36%	35%	80%

Table 4. 1. Current Status of *Energiewende* Targets, www.cleanenergywire.org

Germany's share of renewable energy sources in total power generation increased from 6,7% in 2001 to 20% in 2011 and 34,9% in 2018 (see, Figure 4. 2.). Despite this dramatic increase and the successful process, developments in the coal sector did not meet expectations. The fact that renewable energy sources could not close the gap caused by the phasing out of nuclear power plants increased the electricity production with coal which has a relatively cheap production process.

In this respect, the expected progress towards reducing GHG emissions has not been achieved. Although there are many criticisms based on data on the negative progress of *Energiewende*, it is an indication that Germany focuses on the targets that are already demanding, not in terms of consequences, but in terms of appropriateness. This approach is consistent with the state identity of Germany adopted after the 1990s, and this identity, along with the 2011 Fukushima Daiichi disaster has become not the policy of any political wing but a state policy.

Figure 4. 2. “Share of Energy Sources in Gross German Power Production” (Clean Energy Wire, 2019), <https://www.cleanenergywire.org/factsheets/germanys-energy-consumption->



and-power-mix-charts, Last Access: 10.07.2019

In line with these goals, which have high environmental and climate sensitivity, Germany has not only taken steps for its own energy transition but also for encouraging other actors to take steps in this direction. The argument that relationship between *Energiewende* and state identity, and its international dimension is a value-oriented policy can be better analyzed by looking at discourses.

4. 2. b. *Energiewende* as a Value-Oriented Policy

In 2015, Frank-Walter Steinmeier, former Foreign Minister of Germany, asked the audience from more than 50 countries the following question in the “International Conference on the Energy Transition” in Berlin (Auswärtiges Amt, 2015):

“Do you know what the word for Energiewende is in Indonesian? In Arabic? Or Spanish? I can tell you. It’s Energiewende. Compared to the German words in the international sense, Energiewende is a positive and forward-looking project. Today, Germany produces more than a quarter of its energy production from renewable energy sources. However, progress in Germany alone is not enough. After all, for us, ‘energy transition’ means ‘more international networking’ in order to learn from each other. That’s why I’m so glad that so many of you came to Berlin for this exchange.”

These statements by the Frank-Walter Steinmeier, German Foreign Minister, show that Germany's goal of energy transition is not limited to itself. On the one hand, Germany is trying to make progress in the country's energy transition policies, and on the other hand it uses the *Energiewende* in its international policy discourse frequently. Another example of this is the German Chancellor Angela Merkel being called as ‘*Climate Chancellor*’ (Thalman and Wettengel, 2018). Following her sharp decision after the Fukushima Daiichi disaster and her frequent emphasis on the importance of energy transition in the international engagement for emissions cuts as a conservative party leader, Merkel is known as one of the most influential leaders who concerns climate issues.

The fact that Germany makes climate and energy policies as the main agenda of the G7 leadership process and the reaction of the US to withdraw from the Paris Climate Agreement shows that Merkel attaches great importance to the international dimension of energy transformation (Thalman and Wettengel, 2018). In her speech at the G7 summit, the following anecdote of Angela Merkel was significant in terms of the how she perceives the Fukushima Daiichi disaster and its consequences:

“... the events in Japan teach us ... that the risks which were regarded as totally unlikely were not completely so. And if a highly developed country like Japan, with high safety standards and norms, cannot prevent such consequences for nuclear power after an earthquake and a tsunami, then this has consequences for the whole world, it also has consequences for Europe, and it has consequences for us in

Germany. We are aware that the industrialized nations as a whole will have to do more if we are to honor the pledge.” (Thalman and Wettengel, 2018)

In addition to this, Germany established a “Climate Cabinet” which includes Cabinet members including Finance Minister, Economy and Energy Minister and Environment Minister. This cabinet aims to accelerate the renewable energy transition and fulfill the commitments under the Paris Climate Agreement (Parkin, 2019).

When *Energiewende* is searched on the search engine, the first result is a website of *Energiewende* affiliated the Federal Foreign Office and is designed to promote *Energiewende*'s scope and projects in different languages.¹³ In this website there is an *Energiewende* icon and a map which shows the events on *Energiewende* all over the world. In the first introductory text explaining *Energiewende*, the following statement is included the Germany's responsibility for renewable energy transformation in the world:

“... At the same time, many people are surprised by the dimensions of the project and by how many aspects it involves. By transforming its energy system, Germany is taking its responsibility for the planet and its inhabitants seriously. These wide-ranging tasks and challenges are what we want to present on this website and in our travelling exhibition. We invite you to join us as we shift to green energy.”
(Energiewende-global.com)

In the headlines on the website of the Federal Ministry of Economic Affairs and Energy (BMWi), almost all of the topics under the heading of energy are related to the renewable energy transition. Subheadings in this section are as follows: “The

¹³ See. <http://www.energiewende-global.com/en/>, Last Access: 01.07.2019

Energy Transition, Renewable Energy, Conventional Energy Sources Grids and Grid Expansion, Energy Market Efficiency, Energy Research.”



Figure 4. 3. Federal Ministry of Economic Affairs and Energy (BMWi) – Energy Topics, BMWi, <https://www.bmwi.de/Navigation/EN/Home/home.html>, Last Access: 10.07.2019

Under these headings, only the conventional energy resources section emphasizes the importance of fossil resources. However, in the content of this chapter, it is emphasized that these resources are used for the need for only renewable energy transformation process. This is explained by the Ministry as follows:

“We are currently transforming our energy system to make it climate-friendly and sustainable. This level of restructuring takes time. Energy from conventional sources is helping us ‘keep the lights on’. Conventional energy sources still account for two thirds of the electricity that is generated in Germany. However, the ongoing expansion of renewables capacity and the phase-out of nuclear energy will have a lasting impact on the composition of the electricity mix.”(BMWi, 2019)

Tatsachen-ueber-Deutschland (Facts about Germany)¹⁴ is another example of Germany's desire to become a pioneer in climate change sensitivity and renewable energy transition. This website provides brief information on various German issues and it is available in 14 languages. Furthermore, the information is printed as a book¹⁵ and used as promotional material in foreign representative offices. In this book, information on foreign policy, society, science, and economy were addressed briefly. Also, environmental and energy issues are also noteworthy. The book only focuses environmental friendly renewable energy transition in promoting Germany's energy goals and there is no even one statement about the use of fossil resources. In this book, Germany's environmental energy policies are discussed under the following headings: “A Pioneer in Climate Policy”, “Innovative Force behind Climate Cooperation”, and “Energy Transition - A Project for Generations” (Bischoff et al., 2015: 78-92)

Reducing the use of fossil resources appears to be the biggest challenge in the *Energiewende* process. In 2016, Germany's total energy consumption was 572,84 Terawatt-hours (Twh). This is quite high compared to other countries (such as Denmark with 33,71 Twh, Portugal with 50,31 Twh)¹⁶ that are progressing rapidly in renewable energy transition. In this amount of consumption, renewable energy transition is a demanding process for Germany to phase out nuclear energy and accelerate renewable energy investments. In this sense, although the use of fossil

¹⁴ The website "Facts about Germany" is a service by FAZIT Communication GmbH, Frankfurt/Main, in cooperation with the Federal Foreign Office, Berlin, <https://www.tatsachen-ueber-deutschland.de/en>, Last Access: 05.07.2019

¹⁵ For example, this book is translated into Turkish by the name of “İşte Almanya.”

¹⁶ See. For more details about countries' energy consumption or other indicators <https://www.iea.org/countries/Germany/>, <https://www.iea.org/countries/Denmark/>, and <https://www.iea.org/countries/Portugal/>

fuels accelerates environmental problems in the short term (like increases in greenhouse gas emissions), the proliferation of renewable energy sources is expected to play a role in overcoming these problems.

Annegret Kramp-Karrenbauer, CDU General Secretary, stated about nuclear phase out in her speech at the CDU Regional Conference in Düsseldorf as follows:

“I would be happier if the French phased out their nuclear power. But in the end, we will only succeed if we’re not content with exiting nuclear ourselves while everyone around us stays in. We will only succeed if we create a blueprint that shows you can have a strong economy and industry even without nuclear power and in a CO₂-friendly way. That is the great art of the energy transition.”

In this statement, Kramp-Karrenbauer emphasizes the importance of acting within the framework of Germany’s own norms and in line with its own goals, independently of other actors.

These challenges also affect *Energiewende's* international status. One of the most important debates is that if this transition cannot be succeed in a country with economic power like Germany how the countries with more economic difficulties will actualize this transition (Shellenberger, 2019). Although the challenges faced in the transition process are highly criticized, Germany is committed to *Energiewende* and applies a policy within the framework of the norms it believes. In this respect, Germany continues to act in accordance with these norms and notion of international leadership and to supports more than 50 countries in terms of renewable energy transition since the oil crises of the 1970s (Steinbacher, 2019: 205). Besides, Germany has increased its Official Development Assistance¹⁷ (ODA) spending

¹⁷ “Official Development Assistance” (ODA) is the development assistance and loans except for military programs, granted by governments of OECD countries, coordinated by the OECD Development Assistance Committee. For more detail, See,

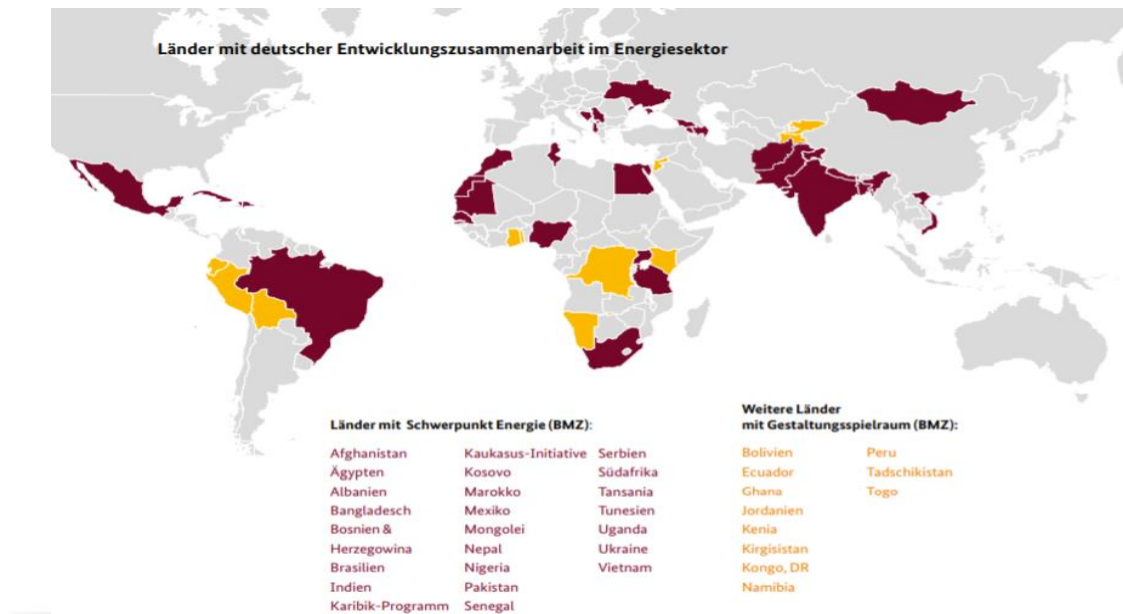
significantly in energy sector. While these expenditures were 98 million dollars in 2000, this amount increased to 2.5 billion dollars in 2016 (Steinbacher, 2019: 205).

In addition to ODA, Germany has extensive initiatives in the field of renewable energy transition around other bilateral and international agreements. Within the scope of “UN’s Sustainable Energy for All (SE4All)¹⁸” initiative for renewable energy transition and energy access, it is planned to spend up to EUR 3,6 billion by 2030 (BMZ, 2012: 12). Germany has also played an effective role in the establishment of the “Renewable Energy Policy Network for the 21st Century (REN21)”. REN21 is an international think tank and a global multi-stakeholder network that focuses on renewable energy policy. The objective of REN21 is to facilitate policy development, information exchange and joint action for a rapid global transition to renewable energy. As the main financier of this institution, it also supports think tanks that support the “environmental dimension” of energy security (Steinbacher, 2019: 206)

Map 4. 2. Countries supported under UN’s Sustainable Energy for All (SE4All), UN’s Sustainable Energy for All

<https://www.oecd.org/dac/stats/officialdevelopmentassistancedefinitionandcoverage.htm>, Last Access: 08.07.2019

¹⁸ For more details about SE4ALL, See, <https://www.seforall.org/>, Last Access: 07.07.2019



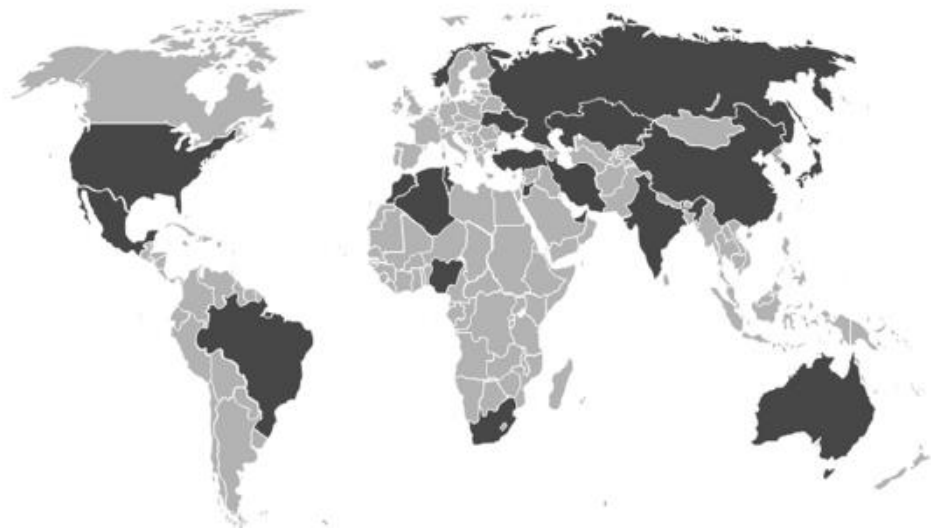
In this context, Germany takes initiatives in the transformation of renewable energy and tries to become a leader through its projects and policies. In this sense, another attempt was made to make *Energiewende* an international energy policy: “Renewables Club” or “Club of *Energiewende* Countries” (*Club der Energiewendestaaten*). This club was launched in 2013 with participating high-level representatives from nine countries: “Germany, Denmark, France, India, Morocco, China South Africa, Tonga, the United Arab Emirates, and the United Kingdom” (IRENA, 2013).

The main objective of this club is to increase the cooperation of countries with different levels of development but with a target of using renewable energy. The club's 2014 communiqué describes both its aspirations for increasing the use of renewable energy and the recommendation of other countries to act in this direction. (IRENA, 2014: 1,2). These are stated in the communiqué as follows:

“We are convinced that renewable energy, including transmission and interconnection infrastructures, is an essential part of the solution to the existential

challenges we are facing and the means to transform the path to sustainability. We stress that renewable energy has entered into a virtuous circle of falling costs, increasing deployment and accelerated technological progress, renewable energy technologies now representing economical choices in an increasing number of countries and regions. We call on other countries to follow suit and affirm our willingness to share information and experiences, in a resolve to strengthen cooperation and increase the number of countries who share the objectives of, and contribute to, the Renewables Club.”

Map 4. 3. The Countries that cooperate with Germany in Renewable Energy Transition (Steinbacher, 2019: 204)



Another important initiative of Germany is the large scale project called “DESERTEC”, which is planned to benefit from the renewable energy potential of the North African countries and to help the development of the region. The main aim of this project is “to provide climate protection, energy security and development by generating sustainable power from the sites where renewable sources of energy are

at their most abundant” (Desertec, 2013). Prof. Dr. Roland Berger, DESERTEC Trustee, emphasizes the importance of this project not only for Germany but for the world as follows:

“Emerging regions urgently need clean and reliable energy as the basis for prosperity, food and drinking water production. At the same time, we can accelerate the energy revolution of the rich world with energy imports from desert regions. We have to promote this development. It’s not about Germany or Europe, it’s our responsibility for the whole planet. We must not destroy the future of the children with technology of yesterday.” (Desertec, 2013)

Energiewende goes beyond being a policy around these discourses and turns into a brand. In this respect, it is consistent with Germany's norm-oriented foreign policy behavior. In other words, Germany, especially after Fukushima Daiichi Disaster, defines and perceives energy security in the scope of *Energiewende* which is a norm-oriented global policy. The adaptation of energy policies to environmental concerns is an essential part of sustainable development and, according to Germany, countries can achieve this not by themselves but by common policies shaped around a collective identity. The maintenance of liberal foreign policy of Germany after the Cold War contributed to the shaping of energy policies in this direction. Within the framework of this foreign policy approach, Germany does not try to activate the power discourse against international problems. However, it has focused on the EU integration process and tries to construct peaceful foreign policy identity. In this sense, the determinants of foreign policy have been adopted norms. In parallel, environmental and climate concerns as a decisive norm shaped energy policies and influenced foreign policy behavior. In this way, Germany is in a position to prioritize environmental and climate concerns in foreign policy and encourage other actors.

State identity is decisive in the norm-oriented development of Germany's energy and foreign policy. In this sense, the identity elements that play a role in the impact of energy policies on foreign policy are the sectoral structures and institutions. In the next section, the structure of the energy sector, which plays a role in shaping energy policies, will be discussed around the varieties of capitalism. It will then focus on the international institutions with which Germany interacts and the international initiatives within these institutions.

4. 3. German Energy Sector and “Varieties of Capitalism”

Hall and Soskice’s study on “Varieties of Capitalism” (VoC) is one of the most cited studies in comparative political economy studies. Many studies have been done on their path and this concept has expanded. According to Pinar İpek, when examining the relationship between energy security and foreign policy from a constructivist perspective, the varieties of capitalism help to understand the strategies of the actors (Ipek, 2012: 226). Countries form a sectoral structure within the framework of their capitalist structure and the objectives of this sectoral structure determine the interests of that country in that sector. In this context, the reflections of states' energy policies on foreign policy depend on the international strategies shaped by the market structure.

One of the most important factor determining the market structure is the levels of development of the countries. Germany is a developed country and the fourth largest economy in the world in 2019 (IMF, 2019). In GDP formation, while the services constitutes 68% of the economy, the industrial sector covers 26%. Within the framework of this development level, the installed energy power of Germany also

has a strong structure (IMF, 2019). In 2016, installed energy capacity of Germany was 209 million kilowatts (IEA, 2016).

Within the framework of this thesis, the concept of VoC is important in terms of revealing how countries' energy markets are structured because market structures are one of the main factors affecting what countries understand the concept of energy security. Countries define energy security in line with the needs of their sectoral structure. Therefore, understanding the market structure will help to understand how countries determine their energy needs. In this context, the structure of Germany, defined as the Coordinated Market Economy, will be examined in the energy sector. Market structuring covers a long period of time and ultimately affects not only the energy sector but also the entire economic structure. It is also intertwined with political processes. In this context, it is a detailed, multivariate and complex process. Therefore, Germany's post-unification renewable energy market structure will be examined in order to contribute to the focus of the study.

4. 3. a. Impact of Local Actors

From a historical point of view of the market structure of the German energy sector, it is seen that the energy laws and policies (introduced in Chapter 4. 2. a.) are determining factor. Incentives for the utilization of renewable energy within the scope of feed-in law (in 1990 and 2000) appear to be important stages for the development of the sector. Incentives especially for the use of wind and solar energy provided start-up support to the sector until the 2000s. “A 100 MW Wind Programme” and “1000

Roofs Programme” for photovoltaics (PV)¹⁹ were launched as two major market creation Programme (Lauber and Mez, 2004: 601). “100 MW Wind Programme” was a comprehensive grant program that incited in the installation and operation of wind turbine power plants. It was expanded to “250 MW” in 1991 and ended in 1996. This incentive was the most important start-up of Germany's installed wind power. The 1000 Roof Program was the solar pillar of this transition initiative. This time, households became part of this project with various incentives.²⁰ The incentive system, which was updated to “100.000 Roofs Programme” in 1991, not only provided start-up support in the use of solar energy, but also influenced the public's view of renewable energy conversion by involving households.

The development of the renewable energy market has not only been maintained by the Federal Government but also municipalities. Significant progress has been made in the use of solar energy, especially within the framework of different models of local initiatives in the “1000 Roof Programme” (Schönberger and Reiche, 2016: 27). These projects, which were initially avoided by the Federal Government because of high costs, were implemented in line with the efforts of the activists in the municipalities. Thanks to these efforts supported by different projects of different states, renewable energy investments have been survived and grown. For example, some states provided support to projects for schools' electricity needs (Bayernwerk in Bavaria, or BEWAG in Berlin), while others provided partial economic support known as “cost-oriented rates” somewhat below the level of “full cost rates”.

¹⁹ Photovoltaic is a method of obtaining electricity from a light source, often from the sun, through solar cells or arrays.

²⁰ For more details for “1000 Roof Programme”, See.

<https://www.iea.org/policiesandmeasures/pams/germany/name-21000-en.php>, Last Access: 12.07.2019

Furthermore, some cities like Bonn and Nurember gave full support to these projects with “full cost pricing” model.

This model was called the Bonn Model since it was first applied in Bonn (Lauber and Mez, 2004: 604). OECD defines “full cost pricing” as “a practice where the price of a product is calculated by a firm on the basis of its direct costs per unit of output plus a markup to cover overhead costs and profits” (OECD, 2002). Within the scope of this definition, this subsidy provided an advantageous and risk-free ground for investors and investments in renewable energy usage increased accordingly. According to Lockwood et al., the greater role of local actors in the energy sector allows for greater environmental concern and the growth of small-scale companies (Lockwood et al., 2017: 319). This allowed small-scale local renewable energy companies to grow and this was the beginning of a bottom-up process.

4. 3. b. Red - Green Coalition and Energy Sector

The fact that the Green Party became a ruling partner in 1998 had a significant effect on shaping the energy sector with "green understanding." While the liberal and conservative wing saw renewable energy as a complement to other energy sources, the social democrats and greens played an essential role in the active involvement of renewable energy within the sector. During the seven-year Red-Green coalition, the government pursued a balanced policy between climate and environmental developments and the energy sector in the country, leading the German energy sector to become sensitive to environmental concerns.

The government wanted to make a consensus with the nuclear power sector and “Nuclear Energy Phase-Out Act” (2001) enacted during this coalition period

(Lauber and Mez). Within the framework of this act, the Government planned to limit the licenses of nuclear power plants and to stop the construction of new nuclear power plants. This consensus could not reach the phase-out of nuclear power plants entirely or partially within a short time, but as a result of this the phase-out of nuclear power plants was implemented as a state policy. Hence, after the 2011 Fukushima Daiichi disaster, this process continued more clearly and acutely (Morris and Jungjohann, 2016: 204-205). It shows that the government direct the policies in line with the demands of the sector. Even within a determined policy framework, there is a system in which not only political interests but also sectoral factors are taken into account.

The second important point is that the coalition government provides incentives for the development of the renewable energy sector and the creation of new business opportunities in the developing sector. "Ecological Tax Reform" is one of the most important decisions taken by the Red-Green Coalition towards the evolution of the sector to an environmental structure. This reform has significantly impacted the structure of the energy sector through its support for labor creation, greenhouse gas emissions, and renewable energy transition. In this interaction, as well as the government, trade unions, and other actors in the sector have become part of the renewable energy transformation as a result of this reform.

In the debates on renewable energy transition between the government and trade unions, the creation of new business opportunities has provided an important pathway, and so unions was an activating actor in the development of the sector. One of the seven guidelines envisaged in the policy paper prepared by the "German Federation of Trade Unions" (*Deutscher Gewerkschaftsbund, DGB*) in 1998 is "a

socially acceptable and employment-creating environmental and energy policy" (Schulten, 1998). In this sense, Energiewende goes beyond just a process that affects the use of energy resources. It is becoming an integrated public policy, including the market, firms, labor, and trade unions.

Following the incentives for renewable energy transformation, the research and development activities have created multilateral actor structure from different fields in line with the coordination between public institutions, private sector, academic and non-academic research programs. After the Fukushima Daiichi Disaster, BMWi provided additional incentives for foreign direct investments in the domestic market and activities in the foreign market (Ćetković, 2015: 9).

One of the most important actors of this process is undoubtedly Nuclear Energy companies operating in Germany. There are four main companies²¹ that continue to operate after 2016, but they do not seek to continue nuclear activities outside Germany. The same companies have activities in different areas (coal, wind, etc.). Although the situation of profit and loss is controversial, companies stated that they will continue to work in non-nuclear areas. In addition to these four companies, Siemens, as a construction company in nuclear sector, has announced that it has

²¹ These Companies are: E.ON, EnBW, RWE, and Vattenfall. On 19 October 2016, the German cabinet (*Bundeskabinett*) finalized a deal with nuclear power plant operators E.ON, EnBW, RWE, and Vattenfall over long-term nuclear waste disposal. Under this agreement, "the four operators are freed of responsibility for storing radioactive waste – that responsibility is instead transferred to the state. In return, the operators will pay a total of €17.4 billion into a state-administered fund to finance the interim and final storage of nuclear waste. They will also pay an additional "risk surcharge" of €6.2 billion (35.5%) to cover the eventuality that costs exceed current projections and that the interest accrued by the fund is lower than expected. The operators will be responsible for decommissioning and deconstructing their own nuclear power plants, as well as preparing their radioactive waste for final storage." (Draft law for the reorganization of the responsibility of nuclear disposal, 2016)

halted planned collaborations with Rosatom (BBC, 2011). Peter Löscher, The Company's chairman, indicated Siemens' exit from nuclear energy sector as follows:

“Siemens was ending plans to cooperate with Rosatom, the Russian state-controlled nuclear power company, in the construction of dozens of nuclear plants throughout Russia over the coming two decades”, (BBC, 2011)

In this bottom-up process, different actors have an active role in the renewable energy transformation, and the public acceptance of renewable transformation has been strengthened. The renewable energy market, in which all stakeholders play an active role, has attained a strong position and has become the norm that Germany advocates in foreign policymaking. Factors such as the EU integration process, international agreements, and current developments in conferences have a major impact on the shaping of the German energy market and policies. The following section will focus on how Germany's energy policies are affected within the framework of international agreements, conferences, and the EU integration process.

4.4. International and European Context of German Energy Policy

In addition to the policies and sectoral factors developed within the framework of Energiewende, Germany has actively participated in international conferences and agreements on sustainable development goals.

The United Nations Framework Convention on Climate Change (UNFCCC)²² did set non-binding language after the Rio World Summit in 1992. Until the Kyoto Protocol, international policies on climate change remained weak. Angela Merkel, then Minister of Environment, made an effort for the launching of the Kyoto

²² See. “United Nations Framework Convention On Climate Change”, <https://unfccc.int/resource/docs/convkp/conveng.pdf>, Last Access: 11.07.2019

Protocol.²³ Under the Kyoto Protocol, Germany has committed a “21% reduction in GHG emissions compared to 1990 levels until the 2012” (BMW, 2015). In this process, Germany reduced its greenhouse gas emissions by 23.6% and approved new commitments covering the 2013-2020 process (UNFCCC, 2017: 10).

Although Germany has made several international initiatives such as “REN21” and “SE4All²⁴”, the Paris Climate Agreement²⁵ (COP21)²⁶ is the most essential agreement in this process in terms of binding. In essence, the Paris Climate Agreement (Article 2) aims to “keep the global temperature rise below 2 degrees Celsius and pursue efforts to limit the temperature increase to 1.5 degrees Celsius” (UNFCCC, 2015: 3). Within the framework of these objectives, the German Parliament unanimously approved these objectives in September 2016 (Appunn, 2016). Not only that, it will also help developing countries in line with these objectives (UNFCCC, 2016).

However, after the formation of the new government in March 2018, the Paris Climate Agreement goals and *Energiewende* began to be discussed. The fact that greenhouse gas emissions could not be reduced as expected since 2017 and the fact that regulations on fossil fuel consumption in transportation lag behind countries such as Norway, India and the Netherlands strengthened these discussions (Höhne, 2018). In spite of all these discussions, Chancellor Merkel states that “it will be continued to

²³ See. “Kyoto Protocol” - Targets for the first commitment period, <https://unfccc.int/process-and-meetings/the-kyoto-protocol/what-is-the-kyoto-protocol/kyoto-protocol-targets-for-the-first-commitment-period>, Last Access: 11.07.2019

²⁴ For more details See, Section 4. 2. b., p. 61

²⁵ For more details about “Paris Climate Agreement” See, <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>, Last Access: 11.07.2019

²⁶ “21st Conference of the Parties”

act in accordance with the goals in line with the Paris Climate Agreement and EU objectives”. In addition, Merkel expressed her commitment on this issue and emphasized the importance of the development of technological progress in line with the climate targets as follows:

“It is about climate neutrality. This means that we should not ensure there are absolutely no CO₂ emissions but that if there are still CO₂ emissions, we must find alternative mechanisms to store this CO₂ or offset it. I therefore propose that we have a discussion in the climate cabinet about how we could reach the goal of being CO₂ neutral by 2050 and the discussion should not be about whether we can reach that goal but about how we will reach it” (Sauer, 2019)

Role and status of Germany in European Union is another international dimension of *Energiewende*. As one of the catalyst countries of the EU, Germany is decisive in the formation of the policies of the EU, while it also fulfills the EU regulations as a member state. According to Schreurs, given the size of Germany within the EU, the climate targets of both actors deeply intertwined (Schreurs, 2016: 92). Both the EU and Germany's understanding of energy security is influenced by each other. In other words, Germany's renewable energy transition policies and EU energy policies mutually interact. This mutual relationship between the EU and Germany is not based on external influence, but on the fact that each other is decisive within their sovereign decision-making mechanisms. While Germany's energy policies and legislation are in line with EU legislation, Germany has a determining role in the formation of EU legislation. At this point, an agent-structure relationship can be mentioned. Germany and the EU are cyclically reproducing their energy security understanding in a decisive position within this agent-structure relationship.

Renewable energy transition poses some structural difficulties. Regardless of the determination of renewable energy transformation, path dependency in energy infrastructure is not a structure that can easily be transformed. Therefore, different energy structures of EU member states bring different expectations in energy policies. In addition, environmental groups and the green party are not the same in all countries and these directly affect EU policies (Schreurs, 2016: 94).

Contrary to these differences, common norms and policies on renewable energy transition contribute to EU integration process and EU identity building. In October 2014, the EU set “the 2030 Climate & Energy Framework”²⁷ and these goals were linked to the 2015 Paris Climate Agreement. The binding 2030 Climate and Energy Framework encompasses three key target compared to 1990: “At least 40% cuts in greenhouse gas emissions; At least 32% share for renewable energy; At least 32.5% improvement in energy efficiency” (European Council, 2014).

The EU integration process also creates a common energy market. In this sense, the EU concentrates on the transparency and accountability of the member states’ energy markets. This interaction, like all member states, has an impact on Germany to ensure a transparent market environment. Future plans for the energy pillar of the EU integration process are based on the Energy Union which will create deeper integration process in energy market. But the Energy Union is not yet an embodied process. Considering all this, the reciprocal relationship between Germany and the EU cyclically reconstructs each other and strengthens both the integration

²⁷ For more details for 2030 Climate & Energy Framework, See, European Commission 2030 climate & energy framework, https://ec.europa.eu/clima/policies/strategies/2030_en#tab-0-1, Last Access: 01.07.2019

process and the path dependency in the energy market. The renewable energy transformation that has occupied the energy agenda of the two actors has now become a new pathway, and the legal and political processes of the two actors have a significant impact on each other.

From a constructivist perspective, Germany is structurally affected by climate change and energy transformation, both on a regional scale with the EU and on a global scale through international agreements. In addition, it reconstructs these structures by playing an active and decisive role in these processes. In this sense, this relationship correspond to the agent-structure relationship of the constructivist perspective.

Finally, when Germany's energy security and its implications for foreign policy are taken into consideration, it is understood that the state identity that maintains its existence after the Cold War is reflected in both fields and plays a role in the reconstruction of energy and foreign policies within an interaction. The renewable energy transition, which has played a dominant role in German energy policy, supports cooperation and sustainability in foreign policy. In this sense, Germany determines its foreign policy interests within the framework of this understanding, supports its bilateral relations and international agreements in line with these interests and even undertakes the leadership notion in these policies.

Germany's perception of energy security has been built with an understanding that promotes environmental norms and renewable energy transformation. In the next Chapter, Turkey will be analyzed within the same indicators. Thus, Turkey and Germany will be compared in the same frame. In this manner, Thus, it will be

understood which decision-making logic affects countries in determining their energy policies and how this is reflected in their foreign policies.



CHAPTER V

TURKISH STATE IDENTITY AND ENERGY POLICY

In this chapter, energy security and policies of Turkey will be analyzed around state identity and the impact of energy policies on Turkish foreign policy. In this sense, it will be discussed that how Turkey defines and perceives energy security in the post-Cold War period in line with capitalist market structure, environmental priorities and the interaction with the international structure.

In this context, first, it will be examined the relationship between Turkish energy and foreign policy. Then, the interaction between Turkey's state identity and energy security will be discussed. Third, the energy market structure of Turkey and its place in energy policy-making will be examined. Last, Turkey's energy policy in terms of relations with international structures and the EU will be considered and will be discussed Turkey's place in the conceptualization of Ciută.

5. 1. Brief Introduction to Energy and Foreign Policy of Turkey

In contrast to Germany, studies on energy security and policy of Turkey generally focus on the importance of Turkey's "geopolitical position as a corridor" between energy supply (Middle East and Caspian) and demand (Europe) or its "energy import dependency" instead of environmental or climate concerns (İpek, 2017; Şahin, 2018; Alekperov 2004; Yorucu and Mehmet, 2018; Yılmaz and Sever-Mehmetoğlu, 2016; Çelikpala, 2015 and 2017; Tagliapietra, 2016; Kardaş, 2011, Wigen 2012; Erşen and Çelikpala, 2019). But this does not mean Turkey's energy security are not being considered around environmental factors. There are many studies in areas such as environmental factors and the use of renewable energy. However, both academic debates and policy practices reflect an understanding that the former issues are more central.

5. 1. a. Turkey's Energy Demand and Import Dependence

In last ten years, energy demand in Turkey has dramatically increased. Turkey is the second biggest country after China in the growth of electricity demand in OECD countries (İpek, 2017: 174). However, this increase began in the early 1990s in line with global demand. As Figure 5 indicates, total energy consumption in Turkey has increased from approximately 40,000 ktoe²⁸ to almost 100,000 ktoe (IEA, 2016).²⁹

²⁸ Kilotonne of oil equivalent

²⁹ See. Figure 5, p.76

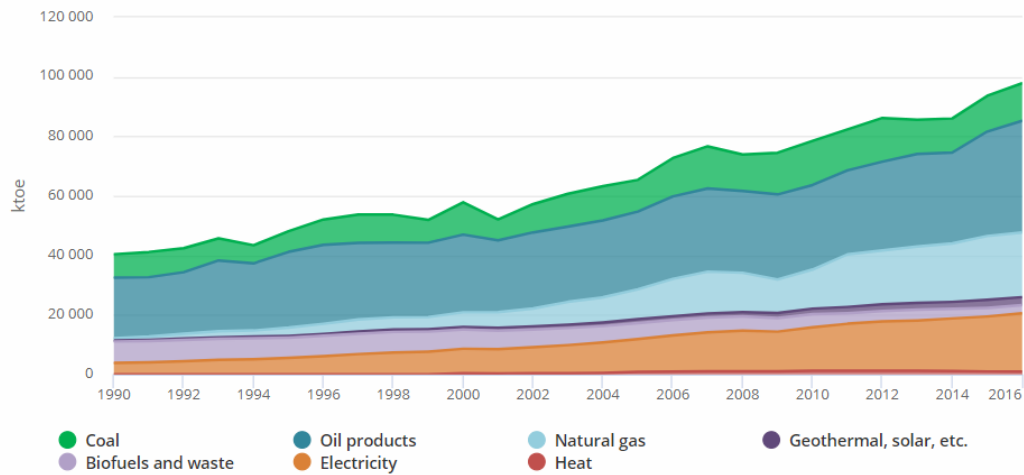
Figure 5. 1. Primary Energy Consumption in Turkey (IEA),

<https://www.iea.org/statistics/?country=TURKEY&year=2016&category=Energy%20consumption&indicator=TFCbySource&mode=chart&dataTable=BALANCES>, Last Access: 04.06.2019

The general trend of Turkey's energy policy can be examined in three

Total Final Consumption (TFC) by source

Turkey 1990 - 2016



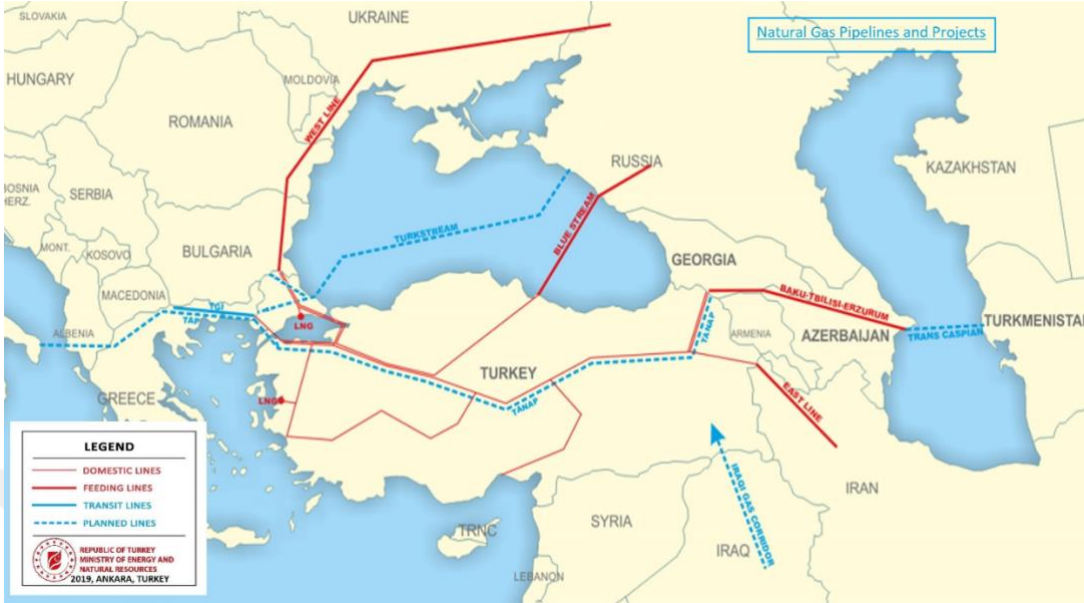
intersecting periods:

1. Transportation and using of Central Asia and Middle East energy resources in line with the rising energy demand, after the collapse of the USSR,
2. Turkey's position in the transportation of energy resources to Europe during 2000s
3. Diversification efforts to reduce energy dependency (with nuclear and renewable energy discussions)

In accordance with these three processes, after the first two processes are mentioned briefly, this study will discuss the third process as it focuses on the “environmental dimension” of energy security.

Energy dependence of Turkey appears to be an essential factor in these three interrelated processes. Import dependency of Turkey in oil was measured to be approximately 92% and this number reached almost 99% in natural gas in 2017

(MENR³⁰, 2018b). In line with the increasing energy demand in the 1990s, in addition to meeting the need for heating, natural gas became an important component for



electricity generation.

Map 5. 1. “Natural Gas Pipelines and Projects of Turkey” (MENR, 2019), <https://www.enerji.gov.tr/en-US/Pages/Natural-Gas-Pipelines-and-Projects> Last Acces: 06.07.2019

Compared to coal, it is considered to be the most suitable option since it is cheaper and has lower carbon emission. Natural gas resources which supplied

³⁰Turkish Ministry of Energy and Natural Resources

through pipelines by Iran, Russia and Azerbaijan has built Turkey's energy dependence path.³²

This dependency on imports affects Turkey's bilateral relations not only in terms of trade relations but also in foreign policy. In other words, relationship between Turkey's energy policy and foreign policy settled in the framework of its import dependency. In this context, energy security is seen as a threat to national security in foreign policy in the context of the results of this high dependency (Erşen and Çelikpala, 2019: 585). The perception of threat points to the fact that reducing dependence not only ensures the security of energy supply but also strengthens the country's foreign policy as a power parameter.

Second intersection period started to be discussed more frequently since the 2000s. As a result of the growing energy needs of Europe and its dependency on Russia, Turkey began to be defined as an alternative route as a hub or corridor. This situation has strengthened the emphasis on Turkey's geopolitical position and was often used in policy-making. The then Foreign Minister Taner Yıldız stated Turkey's geopolitical importance in terms of energy resources as follows:

“... It is misleading to view Turkey only as a bridge. Turkey is on the way to becoming a regional center between Asia and Europe. The center of Turkey's energy policy is circular. And the diameter of this circle is equal to the world's diameter. Thus, Turkey's policy on energy security directly affects global energy security.” (Yıldız, 2010: 16)

³² For more details for Natural Gas Pipelines and Projects of Turkey See, MENR, <https://www.enerji.gov.tr/en-US/Pages/Natural-Gas-Pipelines-and-Projects>, Last Access: 01.07.2019

This discourse emphasizes that Turkey's geographic position could affect the entire world energy market based upon its strategic location. Within the framework of this discourse, the power of geographical location is emphasized rather than a secure energy corridor. In other words, the geographical position of Turkey is seen as a location that could affect world energy security at any disagreement, not as a safe and stable energy corridor.

The third process has led to a focus on nuclear and renewable energy in line with Turkey's efforts to reduce its energy dependence. As a result of tensions and instabilities with energy-exporting countries (like Iran, Russia, and Iraq) from time to time, Turkey is trying to increase the capacity of using internal resources.

5. 1. b. Background of Renewable and Nuclear Energy in Turkey

Turkey, as a country that poor in oil and gas resources, is willing to strengthen energy security by way of diversifying its energy mix by integrating renewable energy resources and investing in nuclear energy. Although the issue of the use of nuclear energy has been discussed since the 1970s, the use of renewable energy has begun to evolve within the framework of the “5346 Law on Utilization of Renewable Energy Sources (YEKA) in 2005.”

Liberalization efforts in electricity markets, which started in 1984, accelerated in 2001 with the “Natural Gas Market Law³³” and the “Electricity Market Law³⁴”. YEKA provided a 10-year tariff guarantee similar to the incentive system (EEG) in Germany, but after 10-year tariff period, no new support was provided and prices were left to market conditions. Nevertheless, the renewable energy share of the market rapidly developed and the rate of RES in Turkey's electricity production has grown steadily.

Studies and discussions on the use of nuclear energy go back much older. The first studies on the use of nuclear energy in Turkey has advanced in parallel with developments in Europe. After the “First International Conference on The Peaceful Uses of Atomic Energy”, "Atomic Energy Commission" was established in 1956. However, there has been no visible improvement until the 1970s. As a result of the nuclear energy studies, which came to the agenda again with the Oil Crisis, Mersin-Akkuyu, Kırklareli-İğneada and Sinop-İnceburun were determined as three areas for NPPs. In 1976, although the license for the Akkuyu site was granted, nuclear disarmament began to be discussed in the international system and the “Non-Proliferation Treaty (NPT)” was signed. In this context, Turkey has refrained from taking steps towards nuclear energy. Turgut Özal's efforts to build a nuclear power plant based on the Build-Operate-Transfer (BOT) model in the 1980s were put aside

³³ “4646 Law on the Natural Gas Market and Amending the Law on Electricity Market”, came into force in 2001 on the purpose of “ensuring sound, stable and transparent market structure”. For more details, See, “Natural Gas Market Law (Law on The Natural Gas Market And Amending The Law on Electricity Market, Law No. 4646 Adoption Date: 18.4.2001)”, <http://www.lawsturkey.com/law/natural-gas-market-law-law-on-the-natural-gas-market-and-amending-the-law-on-electricity-market-4646>, Last Access: 14.07.2019

³⁴ “4628 Electricity Market Law” rectified in 2001 to improve competition and transparency in the Turkish electricity market. For more details See, “Electricity Market Law, Law No: 4628; Ratification Date: 20.02.2001”, <http://extwprlegs1.fao.org/docs/pdf/tur67187E.pdf>, Last Access: 14.07.2019

after the Chernobyl Daiichi disaster (Kaya and Göral, 2016: 425). During the 1990s, the government provided incentives within the scope of BOT and BOO³⁵ projects, and offers were received by consortiums of companies from different countries. However, in line with Prime Minister Ecevit's decision, the government stopped the nuclear power plant initiatives due to financial shortages in 2000.

Following the inauguration of the AKP government in 2002, new initiatives have begun for the NPP. AKP government accelerated the process and in 2007, the “National Nuclear Technology Development Program” was established to start the construction of Akkuyu and Sinop NPPs. In 2010, an international agreement was signed with Russia for the construction of the Akkuyu Nuclear Power Plant and construction began in 2018. The second nuclear power plant planned to be built in Sinop Inceburun was canceled due to high costs. The 2002 Election Declaration contained the following statements about nuclear energy:

“Nuclear power plants will be established by taking necessary security and environmental protection measures as an alternative or substitute investment to power plants that use natural gas dependent on foreign sources.” (AKP Election Declaration, 2002: 61)

As can be understood from this declaration, reducing energy import dependence is seen as the primary priority of nuclear energy use. However, during the AKP's nearly 20 years of government, the use of nuclear energy has gone beyond a need and become a national power instrument. Within the framework of the "domestic and national" discourse, both the use of renewable energy sources and nuclear energy investments have been aimed at eliminating the dependence on

³⁵ BOO: “Build-Own-Operate”

foreign sources of energy and thus removing it from being a national threat. Renewable energy policies and the use of nuclear energy emerge as a reflection of the state identity, and thereafter energy policies has become an instrument in the reconstruction of state identity. Therefore, in the next section, Turkey's renewable energy transition and nuclear energy initiatives, will be discussed associating within the state identity and foreign policy.

5. 2. Interaction between Turkish State Identity and Energy Security

During the Cold War, the Soviet threat and the bipolar structure of international system made it difficult for Turkey to seek an active foreign policy. Turkey, however, tried to play a more active role in regions where in its geographical proximity (particularly the Balkans, the Middle East and the Caucasus) after the Cold War (Parlar Dal, 2016: 1429).

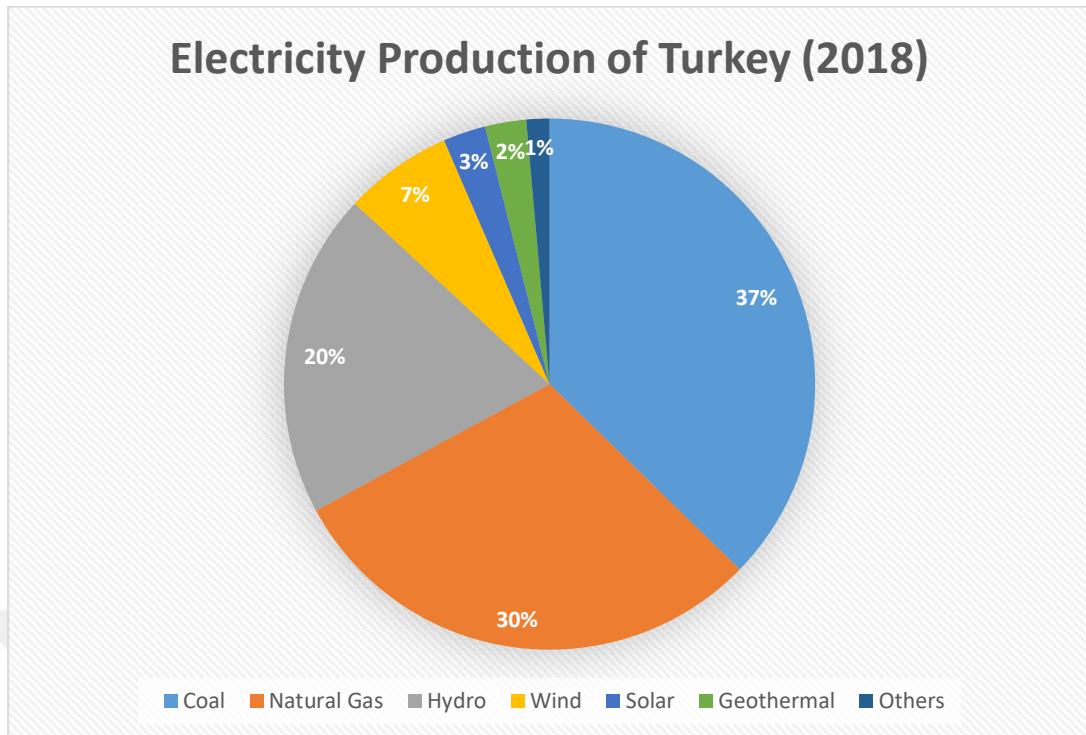
Energy security was an important pillar of these active foreign policy efforts. As an alternative to Russia, Turkey tried to strengthen its relationship with the Turkic countries that have common cultural values in Central Asia. Neo-Ottomanism was the reflection of this identity policy in the Middle East and the Balkans (Demirtaş, 2008). On the other hand, energy resources both in the Middle East and Central Asia has been crucial to the growing energy demand of Turkey. Thus, energy policy is one of the most crucial priorities in determining Turkish foreign policy towards the region.

Since the Syrian crisis, Turkish foreign policy has faced significant puzzles. Russia - Ukraine energy crisis, turmoil in Syria, the annexation of Crimea by the Russian Federation, Turkey's downing of a Russian warplane, sanctions against Iran

and finally the Eastern Mediterranean debates, are some serious foreign policy challenges affecting Turkey's energy policy. All the negativity in this context, Turkey's energy security began to be seen as a national security issue. Therefore, within the framework of the “domestic and national” discourse, it has prioritized the use of internal resources in energy production. Reducing the dependence on energy imports meant, in a sense, reducing the fragility of Turkish foreign policy.

In this respect, Turkey has significantly increased the share of renewable energy sources in electricity generation. While the share of electricity generated from wind, solar and geothermal energy in total production is approximately 13%, when electricity generated from hydroelectric sources is added to this ratio, this figure reaches approximately 32% in 2018 (MENR, 2018b).

Figure 5. 2. “Share of Electricity Generation of Turkey by Fuel” (MENR, 2018), <https://www.enerji.gov.tr/tr-TR/Sayfalar/Elektrik>



However, the main triggering factor in increasing the use of renewable energy sources is not the environmental concerns but the security of supply. Turkey supports coal and nuclear energy investments and emphasizes the importance of the use of this resources as well as renewable energy sources. The importance of coal and nuclear energy is clearly stated in the 62th And 64th Government Programmes:

“By reaching our 2023 target in energy, we will become a country that can supply the energy required by economic development and social development at a constant, safe and minimum cost, and increase our energy supply security by increasing the diversity of resources and technology in energy production. Within this framework, a competitive energy system that uses nuclear energy in electricity generation, utilizes domestic and renewable energy resources at the highest level, and minimizes waste and environmental impacts of energy will be established and strengthened its strategic position in international energy trade” (Republic of Turkey, 62th Government Programme, 2014)

“We took action to make coal more weighted in our energy portfolio. We have discovered 11 new coal fields in the last 11 years. (Republic of Turkey 62th Government Programme, 2014)

“An important reform area in the new period is our Priority Transformation Program based on Domestic Resources. The purpose of our program; to reduce our dependence on foreign sources by mobilizing our domestic resources at the maximum level.” (Republic of Turkey, 64th Government Programme, 2015)

Although the renewable energy and environmental factors mentioned, it is seen as security of supply is a top priority in terms of Turkey's energy security. It is also seen that there are similar emphases on the “2019 Presidential Annual Plan” as follow:

“In line with the goal of reducing dependence on foreign energy production; exploration activities for oil and natural gas at home and abroad will be accelerated and exploration activities aimed at determining the potential of domestic resources such as lignite coal and geothermal will be maximized. In the field of shale gas, comprehensive research activities will be carried out.” (2019 Presidential Annual Plan)

Power discourse has strengthened after the transition to the presidential system. The Ministry of Energy and Natural Resources was directly connected to the President and the logo of the Ministry was changed. This logo change is remarkable in terms of power discourse. The former logo had blue and green colors and while blue color represents “energy”, green color symbolize the environment.³⁶ However, a uniform logo was used in all ministries after the transition to the presidential system in 2018 and new logo of MENR was designed with red and white colors which are the colors of the Turkish Flag (See. Figure 5. 3.). In this sense, while this logo emphasizes national identity, it also has a structure that does not contain environmental factors. The meaning of the new logo of the Ministry is explained in the corporate identity guide as follows:

³⁶ This information was obtained as a result of the information dated 22.07.2019 with the Presidential Communication Center (CİMER).

“The meaning of the new logo is expressed by the Ministry as follows: In the new logo, supply security, localization and predictable markets, which are the basic principles of the National Energy and Mining Policy, come to life.” (MENR, 2019)

Figure 5. 3. Former (left) and Later (right) Logos of The Ministry of Energy and Natural Resources



Another important example is the public service announcement prepared by the Ministry of Energy and Natural Resources during the groundbreaking of the Akkuyu Nuclear Power Plant in 2018. This public service announcement shows that Turkey perceives nuclear energy as not just a need, but also a power parameters³⁷. It contains the following phrases:

“What is the power? It means ‘shaping tomorrow from today’. It means that producing more energy to plan the future. It means that to know the next step. We need to be very strong in science to develop life-saving medical technologies, to keep the flag flying in space studies, to make our dreams come true. For a powerful Turkey, Turkey now wants a clean and independent energy: Turkey wants nuclear power in energy.”(MENR, 2018c)

³⁷ For this commercial, See, “<https://www.youtube.com/watch?v=Gd0DLGkF7OQ&t=5s>”, Last Access: 14.07.2019

In these statements, the emphasis on waving the flag, independent energy and power is very prominent. In other words, this statement shows that nuclear power plant, represented more than Turkey's energy needs. Another aspect of this public service announcement is the emphasis nuclear energy as a clean resources. Unlike Germany, Turkey is not seen the nuclear power plants and nuclear wastes as a threat. President Recep Tayyip Erdoğan made the following statements regarding the environmental impact of nuclear energy production:

“We will make the best use of our facilities without destroying, polluting, destroying our natural riches. Our sensitivity to the environment is not inferior to anyone, on the contrary, it is much more sincere and realistic. We are aware of our responsibilities towards our country, our nation and our responsibilities towards nature and we act accordingly. Turkey does not return to its growth path towards development. Within this framework, we are determined to bring nuclear energy to our country.” (NTV, 2018)

Turkey does not perceive externalities of nuclear energy as a risk. It sees nuclear energy as a clean and zero emission energy source and shapes its discourse within this framework. Minister of Energy and Natural Resources Fatih Sönmez states that nuclear energy is a clean energy source as follows.

“Turkey acknowledges the great importance of nuclear energy for environmental policies and achievement of high technology Turkey's electricity demand will double by 2030 and reach 500 terawatt hours, the minister said. For a growing economy, increasing demand will have to be met without interruption and should be sustained while observing environmental concerns. Nuclear power is able to generate electricity without interruption and independently of seasonal conditions. Therefore, it is reliable, sustainable and environmentally friendly,” (Daily Sabah, 2019).

After the Fukushima Daiichi disaster, President Erdoğan explains the risks posed by the nuclear power plant with the following comparison and argues that this risk is acceptable:

“There is no investment that is not risky. Then you should not use propane cylinder in your houses. You should not build a natural gas pipeline or a crude oil pipeline through the country.” (Hürriyet, 2011)

In this sense, after the Fukushima accident, nuclear energy perspective of Turkey has not changed and nuclear energy has not seen as an environmental risk. This statement by President Erdoğan shows the nuclear risks that may cause huge environmental disasters in the nuclear power plant are disregarded by compared to propane cylinders.

Compared to fossil fuels, nuclear energy production causes fewer carbon emissions. However, the risks posed by nuclear power generation are controversial in many ways. First of all, the NPP itself is a huge nuclear waste. In the Akkuyu case, the status of wastes is ambiguous in the bilateral Agreement.³⁸ Article 12, paragraph 4 of the Agreement is expressed as follows:

“The Project Company is responsible for decommissioning and the waste management of the NPP. Within this framework, the Project Company will make the necessary payments to relevant funds stipulated by the applicable Turkish laws and regulations.” (International Agreement 2010/918)

This article, does not clearly emphasize that how the waste management will be operated by the Project Company. Nuclear waste is generally managed in two ways. Some wastes are non-recyclable and are buried under the ground. However, some wastes (such as plutonium) can be recycled and used as raw materials in the aircraft and war industry. The way the Project Company manages the waste is as important as where it will do it. The Project Company can keep the non-recycling

³⁸ “Agreement between the Government of Turkey and the Government of Russia Federation on Cooperation in Relation to the Construction and Operation of a Nuclear Power Plant at the Akkuyu Site in the Republic of Turkey”, 2010, See, “<http://www.resmigazete.gov.tr/eskiler/2010/10/20101006-6-1.pdf>”, Last Access: 09.07.2019

wastes in Turkey and transfer the recycling wastes to Russia. New risks may also arise during this shipment. The possibility of problems that may occur in the route to be followed during the transfer process extends the risk area.

Another risk factor is that Turkey's geographical position in a major earthquake zone. Although Akkuyu Power Plant will be located in the region with the lowest earthquake risk in Turkey and the strict measures against earthquakes, the presence of a sample such as the Fukushima Daiichi disaster causes discussions to continue (Steinvorth, 2008). In addition to this, some safety issues related to the construction process have also started to come up.

It is a matter of debate both in terms of soil survey of Akkuyu NPP and inexperience of the team of engineers carrying out the construction process. The debate, which started with cracks in the construction of the project, has raised serious concerns. In spite of warnings that mainly cracks occur and unsuitable ground is filled with sea water, the construction process is continuing. Furthermore, it is stated that the Akkuyu NPP, project of the Russian project company, is a replica of similar projects in Russia and in this respect, incompatibilities in the ground and construction phase may cause serious dangers (Gazeteduvar, 2019).

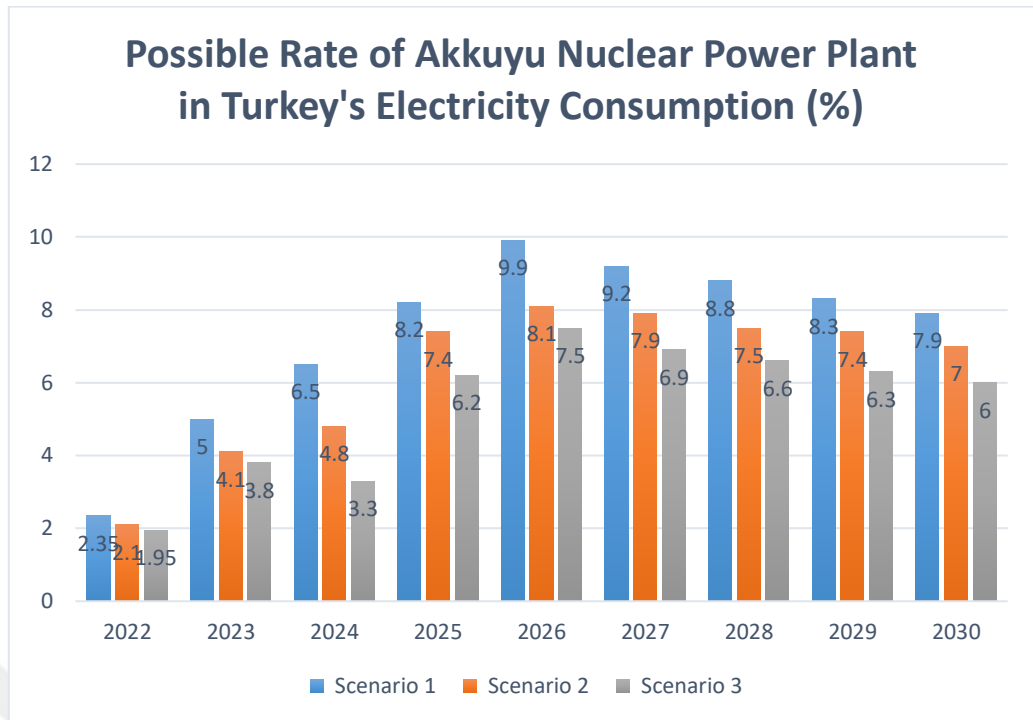
Official statements has also emphasized that the use of nuclear energy will reduce the energy dependency of Turkey. Akkuyu nuclear power plant will generate electricity as a foreign direct investment in Turkey. In this respect, the electricity it will provide will be a product of the domestic market and will increase its domestic market share in energy production. There are three scenarios for the possible rate of Akkuyu NPP in Turkey's electricity consumption (see, Figure 7). In the most positive

of these scenarios, Akkuyu NPP will meet almost 10% of the total electricity consumption of Turkey. In line with the increasing energy demand, it is expected to decrease in the following years. 10% is a fairly large proportion in terms of Turkey's energy needs.

On the other hand, connecting 10% of the total electricity demand to a single power plant poses a risk. A power interruption in this power plant will cause to lose 10% of its electricity demand of the country instantly. The fact that this power plant will meet 10% of the total electricity energy seems to reduce the energy import dependency and official statements are in this direction. However, the project company that builds the power plant is allied to ROSATOM³⁹, a 100% Russian state company. Under Article 5 of the Bilateral Agreement, it is indicated “the cumulative shares of the Russian Authorized Organizations in the Project Company shall not be less than 51 per cent at any time” (International Agreement, 2010/918). This means that even if a Turkish company is a project partner, the majority of the shares remain on the Russian side.

Figure 5. 4. “Possible Rate of Akkuyu Nuclear Power Plant in Turkey’s Electricity Consumption (%)”, enerjiatlasi.com, <https://www.enerjiatlasi.com/nukleer/akkuyu-nukleer-santrali.html>, Last Access: 10.07.2019

³⁹ For more details about “State Atomic Energy Corporation ‘ROSATOM’”, See, <https://www.rosatom.ru/en/global-presence/the-international-business-department/ruastom-overseas-sc-moscow/>, Last Access: 07.07.2019



Furthermore, according to Article 5, Paragraph 2, "The Project Company is the owner of the NPP, including the electricity generated by the NPP". This project is carried out with the BOO model and there is no sales obligation. In this regard, although the Akkuyu nuclear power plant will reduce energy import dependency in Turkey, it will highly intensify dependence to Russia, largest fossil resource supplier of Turkey.

Mitat Çelikpala evaluates risks related to Akkuyu Nuclear Power Plant on five main axes: "law, external dependence, technology and security, economy and environment" (Çelikpala, 2013: 552). In the legal framework, it is argued that the international agreement signed between the two countries has contradictions to international and domestic law. It is claimed that the nuclear power plant is not included in the environmental plan in the Mersin region and this situation was covered up by subsequent arrangements. There are also serious problems with the

ratification of the international agreement. The agreement was approved by the Council of Ministers and in this respect it is in violation of Article 3 of the Law no 244 (Çelikpala, 2013: 553).

Within the framework of overdependence on external resources, the construction, operation and dismantling of the plant is left to a Russian company as a package, and the construction, operation, cooling and dismantling, which coincide with a period of one hundred years in total, mean that it cannot be reversed in any problem with Russia Federation. There are also serious debates in terms of technology and security. Previously unused technology called VVER-1200, will be implemented in Turkey first time with this project and it is an important topic of discussion. Also, waste and cooling methods of this technology have not been tried before.

From an economic point of view, it is seen that Akkuyu NPP costs much higher than world standards. While global average of 6-7 cent per kW/h, Turkey are guaranteed purchases approximately 12,35 US cents. This creates a total cost burden of \$ 70 billion for 15 years and \$ 290 billion in 60 years. In this sense, it is seen that the Russian project company will make a profit of 120 billion dollars. This raises a serious financial burden contrast to the rhetoric of Turkey's national power. In terms of environmental policies, it is seen that the Environmental Impact Assessment Report, which enables the construction of the plant, was given in 1976. The out-of-date report is also an important risk parameter (Çelikpala, 2013: 554).

Another discussion about Akkuyu NPP is shaped in the context of water - energy nexus. In this regard, the Ministry of Environment and Forestry, Water

Pollution Control Regulation (Official Gazette Date: 31.12.2004, No: 25687) is committed to comply (MEF⁴⁰, 2004). Accordingly, “the temperature of the water will not exceed 35 °C regardless of the dilution capacity of the sea; The thermal discharge will not increase the temperature of the mixed water after the first dilution by more than 1 °C during the summer period from June to the end of September and 2 °C during the other months; however, if the seawater temperature is above 28 °C, discharge will be permitted without any limitation in the discharge water temperature, provided that the temperature of the receiving medium does not increase more than 3 °C after discharge” (MEF, 2004). Although the design has not been completed yet, it is stated that the regional temperature increases due to the cooling water supplied to the sea as a result of thermal discharge (Greenpeace, 2014). According to this model, the temperature increase is foreseen to be not more than 1 and 2 °C in summer and winter periods, respectively. The annual sea water temperature measurements given in the Report show that the temperature is already above 28 °C during the summer months and approaches 31 °C in the middle of summer. On the other hand, a water temperature of 34 °C, which can be reached in 3 degrees increments, is a fatal value for almost all marine organisms in the region (Greenpeace, 2014).

In addition to nuclear energy, although there is an environmentalist discourse in the use of renewable energy sources, significant problems are encountered in practice. “The Renewable Energy Law (Law No. 5346)” contradicts the EU legislation in three directions. First, the sectoral distribution is not taken into account when determining “purchase guarantee by constant feed-in tariff”. In other words,

⁴⁰ Ministry of Environment and Forestry

unlike EU, Turkey does not consider capital investments to certain sectors in determining constant feed-in tariff. In this case, a planned sectoral development cannot be achieved (Küçükali and Barış, 2011: 2460).

Secondly, Turkey and the EU to define hydropower plants as renewable energy sources differently. Hydropower plants are one of the most controversial forms of electricity generation in terms of environmental factors. In this respect, the EU does not define hydropower plants smaller than 15 square kilometers as a renewable energy source. But Turkey defines all hydropower power plants as RES (Küçükali and Barış, 2011: 2460). As the majority was located in the Black Sea region, the negative externalities of hydropower plants in Turkey are frequently discussed.

According to European Union legislation, “Environmental Impact Assessment (EIA)”, a report examining environmental impacts in the determination of renewable energy fields and energy production, is requested in the installation phase of RESs (Küçükali and Barış, 2011: 2460). However, a report similar to that in the EU legislation is not required in Turkey, and therefore serious environmental problems occurred in the determination of the renewable energy sites and the production process.

In this context, although Karaburun in Izmir was declared a “special environmental protection zone”, serious problems arose as a result of the provision of renewable energy licenses without considering environmental concerns. 71% of the total area of the District is surrounded by RES and this situation endangers the living life in the region (Altıparmak, 2019).

Nuclear energy attitudes of AKP Government has not been shared by other political actors in Turkey. For example, the Republican People's Party (CHP), the main opposition party, “2019 Election Declaration” frequently emphasized renewable energy sources, despite no target for nuclear energy was specified (CHP, 2019: 21). Another opposition party, Peoples' Democratic Party (HDP), stated its policy on nuclear and renewable energy in the 2018 election declaration as follows:

“As HDP, we will put an end to projects such as hydroelectric power plants, thermal and nuclear projects, mining operations that lead to ecological destruction, and destruction of habitats as a result of industrial waste and pollution.” (HDP, 2018)

In the light of all this, renewable energy transformation and use of nuclear energy within the “domestic and national” discourse, power parameter is highlighted. According to this perception, reducing foreign dependence on energy resources will eliminate one of the country's most important foreign policy vulnerabilities.

Turkey gives importance to the RES for domestic production to ensure security of supply but it does not mean that Turkey completely rejects the environmental concerns. However, it is seen that the importance given to environmental issues at discourse level has problems in legal legislation and in practice. To understand these problems, it is necessary to understand the market structure in the energy market. In this context, Turkey's energy market will be discussed in the next section within the framework of varieties of capitalism.

5. 3. Turkish Energy Sector and Varieties of Capitalism (VoC)

Turkey has been classified as being in “ambiguous position” in the Hall and Soskice’s study on VoC (Hall and Soskice, 2001: 21). Kiran expanded the content of the

concept as a contribution to this concept and made a new classification. Jiyan Kiran defined Turkey as a "hierarchical market economy". There are four key elements play a role on construction of Turkey's market structure as the hierarchical market economy: "the dominance of the family-owned diversified business groups in the economy, state-regimented and weak industrial relations, low skills and the influence of Multi-National Corporations" (Kiran, 2018: 43).

GDP of Turkey as a developing country, are distributed within the sectors as: services 60.2%, industrial sector 23.2%, the construction sector 9.7% and agriculture 6.9% in 2017 (Ministry of Environment and Urban Planning, 2017). In line with its growth targets, Turkey's energy demand has been increasing. In this sense, Turkey's installed power capacity has also been rising. In this sense, while Turkey's installed power capacity was 27 million kilowatts in 2000, in 2016 this figure rose to 78 million kilowatts (IEA, 2016)⁴¹.

Energy market structuring in Turkey also bears similarities with these four parameters. When considering privatization of electric distribution companies since the 2000s, it is seen that certain family-owned companies are in the majority. Currently, there are twenty one companies providing electricity distribution services in Turkey and seven of them are subsidiary companies of Enerjisa, under Sabancı Holding is one of the most important family business. Also, several companies operating in certain sectors (specifically, in the construction sector), like Limak Holding, Kolin, Cengiz Holding, Akenerji, and Çalık Holding are the stakeholders of

⁴¹ For more details Installed power Capacity of Turkey, See, https://www.eia.gov/beta/international/data/browser/#/?pa=000000000000000000000004&c=rurvrvvfvtvnvvlurvrvvfvvvvfvvvou20evvvvvvvvvnvuvu&ct=0&tl_id=2-A&vs=INTL.2-7-TUR-MK.A&cy=2016&vo=0&v=H&end=2016, Last Access: 24.07.2019

many distribution companies (Enerji Atlası)⁴². It is also known that these companies have close relations with the ruling party. These companies are not only limited to the energy sector but also carry out projects in many areas related to public services. It is seen that these companies are involved in many big projects such as airports, public buildings and high speed railways (Uğur, 2016).

Also, the state plays an important role as a market determining actor. Turkish Petroleum Corporation and Petroleum Pipeline Company (BOTAS) ensure that all oil and gas activities are carried out under state control. In this context, industrial relations cannot be improved including different actors.

In the energy market, where the state is a dominant actor, competition does not develop and the sector is dependent on foreign investments. For example, many qualified scientists were unemployed and continued to work abroad as a result of the stopping nuclear energy research of Electricity Authority of Turkey in 1990s (Udum, 2010: 113). This significantly affected Turkey's nuclear energy activities. Both in renewable and nuclear energy, Turkey remains dependent on foreign direct investments.

The decisive role of the state in Turkey's energy market, at the same time prevents the emergence of different attitudes. The market is determined under state control, not in line with its demands. The “Energy Market Regulatory Agency (EPDK)” is semi-independent under the Ministry of Energy and Natural Resources.

⁴² For more details about Electric Distribution Companies, <https://www.enerjiatlası.com/elektrik-dagitim-sirketleri/> Last Access: 02.07.2019

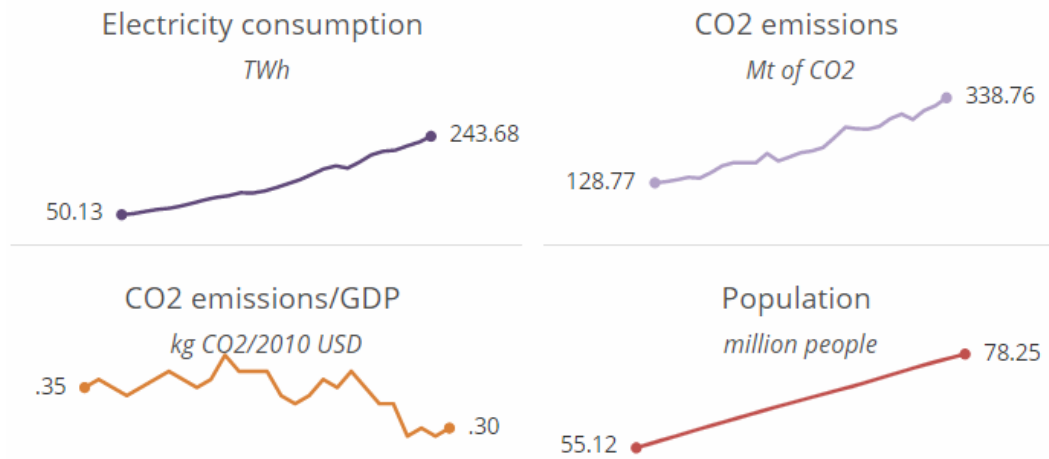
It acts under the control of the ministry as a supervisory body. Under this controlled structure, the market itself supports the discourse of power in energy policies.

International environmental conferences and relations with the EU are emerging as an important factor in determining the perception of Turkey's energy security as well as energy market structure. In this respect, the European Dimension will be discussed in the next section.

5. 4. International and European Dimension of Turkey’s Energy Security

International agreements and conferences on climate and environmental issues has an important place in the development of Turkey's energy policy. Compared with other countries, Turkey has a relatively low carbon emissions. However, Turkey's growing energy demand requires to consider environmental factors. Though CO₂ emission of Turkey is low compared with major consumer countries, carbon emission of Turkey has gradually increased in line with the growing energy demand. Nevertheless, it is seen that Turkey has managed to fall below 1990 levels in terms of “CO₂ emissions/GDP” (See, Figure 8).

Figure 5. 5. “Key stats for Turkey, 1990-2016” (IEA, 2016)



Turkey ratified the UNFCCC in 2004 and in 2007 published the first National Communication of Turkey under the UNFCCC report. Seven reports published to date, shows the calculations of national development and greenhouse gas emissions in Turkey.⁴³ Turkey also ratified the Kyoto Protocol in 2009. Protocol was signed in 1997 and although there is no obligation to Turkey, it was confirmed after 12 years. Moreover, the 2015 Paris Climate Agreement has not been ratified. Turkey argues that countries with high greenhouse gas emissions are the major responsible. Especially with the US decision to withdraw from the Paris Climate Agreement, Turkey has maintained its attitude. President Recep Tayyip Erdoğan reiterated his position at the 2017 Hamburg G20 summit. After the US decision, Erdoğan stated the following on ratification of the Paris Climate Agreement:

“U.S. stance stalls Turkish ratification of Paris climate deal. In case the developed countries do their part, we said if this would happen, the agreement would pass through parliament. But otherwise it won’t pass. Therefore, after this step taken by

⁴³ See. Seventh National Communication of Turkey under the UNFCCC, https://unfccc.int/sites/default/files/resource/496715_Turkey-NC7-1-7th%20National%20Communication%20of%20Turkey.pdf, Last Access: 11.07.2019

the United States, our position steers a course towards not passing this from the parliament.” (Reuters, 2017)

Thus, Turkey has provided conditionally support in line with the Paris Climate Agreement. This conditionality shows that it acted according to the behavior of actors in the international structures, not in accord with its norms and values in defining its interests and values on the environmental dimension of energy security. In this sense, Turkey has to act according to the logic of consequences in terms of energy policy in international developments.

In addition, Turkey’s relationship with European Union is also decisive in construction of Turkey’s energy security perception in the context of environmental concerns. Energy is one of the key issues in the Turkey's EU membership process of Turkey and energy legislation of the EU negotiations are based on the Chapter 15. This Chapter is important in terms of steps in the liberalization and privatization process of energy market, renewable energy transition and more importantly interaction between EU’s and Turkey’s energy policies. Despite the emphasis on Turkey's progress in the alignment with the EU legislation is shown, significant requirements has emphasized on nuclear energy policy of Turkey (MFA, 2017). This is expressed as follows in the Chapter 15:

“Turkey’s intention to construct nuclear power plants created a need for legal arrangements. Studies initiated to regulate the nuclear energy sector, contribute to the legislative alignment process in this field. EU puts emphasis on high level nuclear safety. In this respect, Council Directive 2009/71/EURATOM of 25 June 2009 establishing a Community Framework for the nuclear safety of nuclear installations was adopted in 25 June 2009. In accordance with the new directive, Turkey will also need new legislation once nuclear power plants are constructed. Furthermore, Turkish Atomic Energy Authority (TAEK) needs to be restructured in order to become an independent regulatory authority, separating regulatory and operational activities. In this context, it is expected that Turkey meet the requirements of the Convention on Nuclear Safety that was ratified on 20

September 1994 by Turkey. Thus, studies on the preparation of a Draft Nuclear Law are ongoing to promote and further develop the use of nuclear energy in Turkey. (MFA, 2017)

In this context, the EU evaluates Turkey's nuclear energy policies within its own norms and values. The EU is calling on Turkey, which is a candidate country to comply with its regulations. In this respect, liberalization of energy market and policies and projects in line with renewable energy transition, affect the formation of Turkey's energy policy encouraged by the EU.

Consequently, Turkey is producing a discourse on energy security within the framework of state identity and this discourse reconstructs the state identity. As a result of this interaction, Turkey's perception of nuclear energy and renewable energy is shaped around power parameter. In this sense, it considers energy import dependency as a foreign policy fragility and tries to increase the use of domestic resources, whether renewable or not.

In this cycle, this foreign policy behavior reproduces the state identity and the discourse of power which is decisive in energy policies. Thus a cyclical reproduction process emerges and Turkey diverge from the green energy policy in the framework of reproducing power as a rhetoric. Hence, Turkey and Germany consider energy security in different perspectives. In this respect, in the next section, the hypotheses of the study will be tested by comparing the two countries.



CHAPTER VI

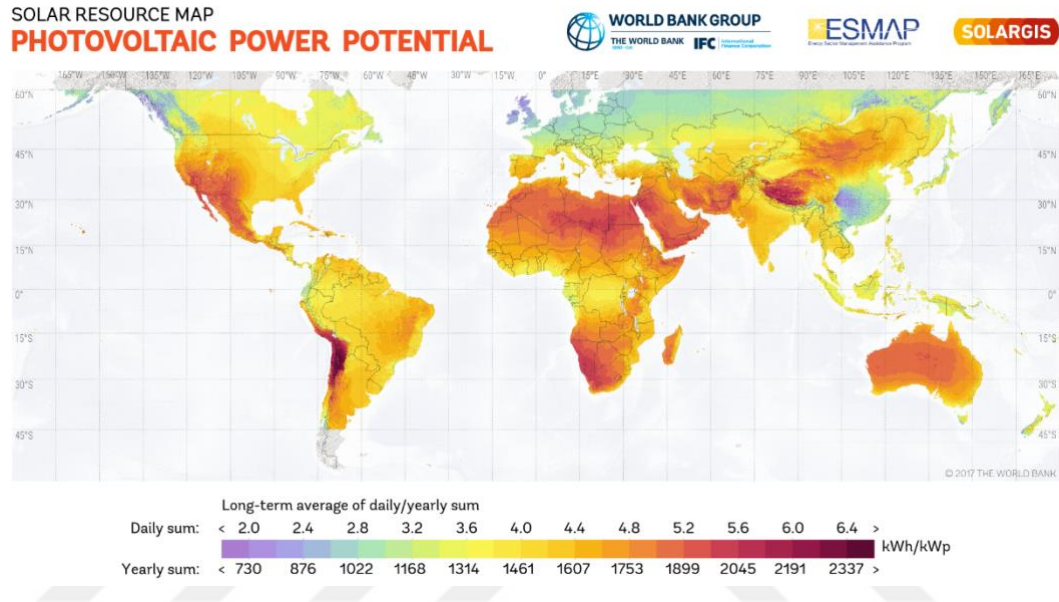
COMPARISON OF TURKISH AND GERMAN ENERGY SECURITY DISCOURSE AND POLICIES

Until this section, German and Turkish energy security were evaluated in the framework of state identity, energy policies, and foreign policies. In this context, it has been determined that Germany's energy security is shaped in a structure that prioritizes environmental concerns and international norms. By contrast, Turkey perceived energy security as a national power parameters rather than environmental priority. In this respect, the energy security perceptions of the two countries are different and in this chapter this differentiation will be addressed and outlined around the six sub-hypotheses presented in the methodology section.

Differentiation of German and Turkish energy security perceptions is shaped around the similarities like population and western worldviews, and differences like capitalist market structures, international and foreign policy perspectives. However, one of these parameters is more prominent. Considering the renewable energy policies implemented by countries and their renewable energy potentials, an unexpected differentiation emerges. Although Germany has lower potential for renewable energy compared to Turkey, It gives much more priority to renewable energy transition. Especially when considering the number of sunny days, Turkey has a greater potential than in Germany (see. Map 6. 1.). Whereas in Germany the average

1000-1100 hours of sun per year, this figure reaches 1600-1700 hours in Turkey (Global Solar Atlas, 2017).

Map 6. 1. Photovoltaic Power Potential, World Bank Group, 2017, <https://globalsolaratlas.info/?c=49.279063,58.183596,3>, Last Access: 19.07.2019



In addition to material factors, the state identities of these two states have a major role in shaping their perceptions of energy security. Within the framework of the Western worldview, the state identities and foreign policy relations of the two countries bear a significant similarity. However, in the post-2011 period, the energy security perceptions of the two countries has changed.

After a series of crises which affect directly Turkish foreign and energy policies, Turkey's energy import dependence has seen as a growing threat and a foreign policy vulnerability. In this context, Turkey has sought to increase the use of domestic resources to eliminate this vulnerability. Although significant progress has been made towards renewable energy sources, the main triggering factor was the

elimination of this vulnerability and meeting the increasing energy demand through domestic resources whether they are renewable or not.

Within this framework, energy security has become a national power parameter with its domestic and national discourse. Nuclear power was accepted as a factor that would increase the power of the country in the international arena rather than meeting the energy needs of the country and the discourses were handled within this framework. There has been no change in nuclear energy policies after the 2011 Fukushima Daiichi disaster.

On the other hand, renewable energy transition has become a part of the German state identity, particularly as a continuation of market incentives and developing public opinion, starting with the coalition process of the Green Party. The renewable energy transformation initiatives accelerated by this process were strengthened by the *Energiewende* discourse and turned into a state policy.

Energiewende has become a concept that not only represents Germany's internal renewable energy transition but also its foreign policy interests. Following a norm-oriented policy in foreign policy, Germany played an important role in supporting the renewable energy transition of developing countries and in the formation of international climate agreements.

The Fukushima Daiichi disaster was one of the most important breaking points of Germany's energy security perspective. Germany has decided to shut down all nuclear power plants. In spite of the problems and the accompanying criticisms, Germany has made renewable energy transition one of the most important parts of

energy security perception as a state policy discourse. Regardless of whether it is successful or not, *Energiewende* has become a part of its identity, emphasizing environmental concerns as a policy and the role of renewable energy transformation in addressing these issues at every stage. Thus, it became a pioneer country that produces norms in international environmental and energy issues.

This differentiation between the two countries validates the first sub-hypothesis of the study: *Though Turkey and Germany's state identity bear a resemblance with each other, their energy security identities have evolved in different directions in the period after 2011.* In this process, Turkey has given attention to domestic investment. In addition to renewable energy investments, it has made significant investments in coal, LNG and nuclear energy. On the other hand, Germany has not only decided to phase out the nuclear energy, but has shut down quarries and built an energy policy within the framework of norms regardless of costs.

One of the main triggers of this differentiation in identities and energy policy is the capitalist structures of the countries. Founding and operational capability of Germany, as a developed country, is an important factor in this differentiation. But this alone does not provide a sufficient explanation. The capitalist structure shapes the energy sector as a bottom-up process and in this sense constructs the identity of energy policies. The structure of the German energy market with a coordinated market economy means that different actors are effectively decisive and addresses the interests of all market stakeholders. This leads to a more integrated implementation of rules and norms, as well as long-term market planning. Also, the existing nuclear power provides Germany a baseload power and the energy demands

does not increase dramatically due to its highly industrialized market structure. This strengthens the ability to renewable energy transition.

In contrast, The Turkish energy market is shaped by the short-term plans along with its hierarchical market economy and the state plays a determining role as the main actor. This structure restricts the capability of Turkey as a developing country in energy transition. According to Diriöz and Reimold, states aim to provide energy security strategically with a baseload power with nuclear energy (Diriöz and Reimold, 2014: 78). Turkey also is shaping nuclear energy targets in this direction and is willing to use the nuclear energy as a baseload power generation regardless of climate conditions.

It is also difficult to invest in high-cost R&D studies. The fact that the market is under the control of a small number of government-supported companies and the state prevents the balanced development of rules and norms. Ultimately, this validates the second sub-hypothesis of the study: *Sub-hypothesis 2: Capitalist market structures of states affect the structure of the energy sector, and this is a part of the construction of state identity.*

Both cases show that the relationship between state identity and energy policies is not unilateral. The energy policies shaped around state identities play a role in the reconstruction of state identities in the ongoing process. Germany's Energiewende policy constitutes an effective discourse in foreign policy. In this sense, Germany plays a global role and the policy rebuilds the German state identity.

On the other hand, Turkey builds its energy security discourse on import dependence. This discourse corresponds to Turkish state identity which is shaped around the desire to become a regional power in foreign policy. In this sense, reducing external dependence is also seen as a factor of power, and especially the discourse on the use of nuclear energy supports the power-oriented state identity. The existence of this interaction also supports the third sub-hypothesis of the thesis: *German and Turkish state identities affect the energy policies of the countries, as well as energy policy plays an active role in the process of reconstruction of the state identity.*

There are also significant differences in environmental dimension of energy security in terms of understanding and implementation of the two countries. Considering the parameters determined by Azzuni and Brayer (see. Section 2. 1. d., p. 18), significant application differences are observed. Legislations of both countries differentiate in terms of land use and extraction methods. Germany regulates land use and extraction methods for energy production in line with environmental impact assessment required by EU legislation. In contrast, Turkish Mining Law No. 5177 in 2004 clearly stated that “petroleum, geothermal and mineral exploration activities, is outside the scope environmental impact assessment (Grand National Assembly of Turkey, 2004). Also, Circular 2014/24 stated that the governorship will decide whether the EIA report is necessary. The Ministry of Environment and Urbanization obliged to obtain an EIA Report for geothermal power plants with a capacity of 20 MWe and above with Article 44 of EIA Regulation Annex-1 List in 2014. Nevertheless, no EIA report is required for the plants below this capacity (Republic of Turkey Ministry Of Environment And Urbanization, 2015).

The progress of the two countries in terms of greenhouse gas emissions also varies. The level of development of the two countries is an important factor. The existing industrialized structure of Germany has led to reduce GHG emissions in line with the arrangements. However, GHG emissions has gradually increased in Turkey as a result of growing energy demand and industrialization.

	1990	1995	2000	2005	2010	2015
Germany	1 251 635.18	1 123 368.77	1 044 968.80	993 091.09	942 783.09	906 751.85
Turkey	210 714.73	242 194.62	293 494.16	332 654.16	402 563.69	469 930.44

Table 6. 1. GHG Emissions of Turkey and Germany, Tonnes of CO₂ equivalent, Thousands, OECD.stat, https://stats.oecd.org/Index.aspx?DataSetCode=AIR_GHG, Last Access: 22.07.2019

In addition, nuclear energy has seen as a clean energy source in Turkish political discourse. However, Germany sees nuclear energy as risky within the framework of the problems it may cause. This shows that the two countries have different perceptions of energy security in the environmental dimension. This corresponds to the fourth hypothesis of the study: *In terms of the “environmental dimension” of energy security, Turkey and Germany have different structures.*

Accordingly, Germany has taken a leading position in international climate conferences and agreements. But Turkey argues that the responsibility belongs to big consumer countries. In this sense, it acts within the framework of its own energy security rather than global norms. This differentiation is reflected in the foreign policies of the two countries differently. While Turkey was defining its energy needs in line with its interests to reduce foreign dependence and to become a strong country

by eliminating its energy vulnerability, Germany has played a leading role in international system my means of defining its interests around environmental norms.

Also, relationship with EU, effects both countries' energy policies. The role of the EU in the development of energy markets in both countries is important. These international effect on the countries energy policies shows that agent/structure relationship of constructivist theory. This international organizations like the EU or COP21 has created by the states. However, they influence the countries' energy policies by their norms and rules.

In this context, Turkey and Germany's interactions with the EU and approaches to international climate agreements are different from each other. In this sense, the fifth sub-hypothesis is also valid: *International climate agreements and relations with the EU differentiate the role of energy in the foreign policies of the two countries.*

Lastly, differentiation between German and Turkish energy security perceptions leads to the different logics of energy security that Ciută puts forward. Within the framework of discourse and import dependence, Turkey sees energy security as part of national security and a power parameter. Turkey defines its energy security around the “geopolitical position” and emphasizes its location between supplier East and demanding West. In addition, there is a state-dominated configuration that allows for limited competition in market structuring.

In the context of discourse discussed in the case section, it is understood that Turkey perceives nuclear energy beyond the energy needs. Nuclear energy has not only seen as a resolution of significant vulnerability of Turkey's dependence on

foreign energy, but also perceived as an important tool to strengthen the discourse that Turkey is a powerful country in the international system. In this sense, the state sees energy security as a national issue and does not give up control of this market. In this context, Turkish energy security perception bears a resemblance to the concept of Logic of War.

On the other hand, Germany, perceives energy security with its long term needs in terms of its norms, sectoral structure and state identity. The energy market provides opportunities for veto players and takes shape in a competitive environment. Thus, non-state actors play an active role in energy policy-making.

Within the scope of Germany's foreign policy identity, which emphasizes the security and peace since the Second World War, German energy security perception has been constructed in a structure that prioritizes environmental norms and in an effort to spread this understanding to other countries. Despite the enormous energy demand brought by its economic growth, it has decided to shut down nuclear energy within the framework of these norms and has been accepted as the leading country in renewable energy transformation. Therefore, logic of subsistence largely explains Germany with this energy structure. Because Germany builds its interests on the internationalization of renewable energy. Energy security is not a national threat for Germany, it is a market opportunity where it can become an international brand in line with its investments. In this context, the sixth and last sub-hypothesis of the study is also valid: *German and Turkish energy security perceptions are shaped in different logical planes.*

Within the framework of all these, in the next section, the findings of the thesis, which obtained as a result of the comparison made around the six hypothesis, will be mentioned.



CHAPTER VII

CONCLUSION

The concept of Energy Security has been discussed in many dimensions and an interdisciplinary literature has been created. One of the most important of these dimensions is the “environmental dimension”. Identifying the new environmental concerns in the countries' perceptions of energy security allows them to understand their energy security perceptions and how foreign policy processes are shaped as a result of these perceptions.

In this study, the Turkish and German energy security perceptions was examined in detail and the main causal link in this differentiation was identified as state identity. Turkey and Germany define the energy security within the different interests in the framework of state identity.

Within the framework of these identities, the market structures of the two countries also play an important role in determining energy policies. Market structures show what kind of energy structure the country needs. In this sense, Germany needs a stable and cooperative market system and the way to protect this market is to build norms and rules and to shape its policies accordingly. However, the energy market is dominated by the state which sees energy security as a national threat and this constructs a power-oriented energy policy in Turkey. Germany's Green Party is playing an important role in the renewable energy transition. However, the absence of such a political initiative leads to the lack of environmental concerns in energy security perception and policies in Turkey.

The influence of the two countries on the developments in the international structure reflects the agent-structure interaction and the two countries have unique and different interactions with international organizations and structures. Germany interacts with international actors in terms of use of RES and environmental protection. Germany cooperates with more than fifty countries in the transformation of renewable energy. This shows that Germany defines green energy and environmental factors in its foreign policy interests. On the other hand, Turkey started to build a nuclear power plant and in this respect, contributes to supporting of nuclear energy in the international environment.

Ciută's conceptualization that "energy security can be understood in different ways" has provided a coherent framework for revealing the different structures of the two countries. In this context, energy security has seen as a threat to national security and foreign policy fragility in Turkey and it shows Turkey's securitization of the use of nuclear energy and domestic sources. In this sense, Turkey is located in the frame of Logic of War. Yet, Germany indicates the RES and environmental concern in the foreground. In this sense, energy security is not a national issue, but a sustainable need. The most important issue in terms of energy security is the obstacles to sustainable development.

There is a decisive connection between both Turkey and Germany's energy policy and state identity in terms of environmental dimension of energy security. But there are many sub-dimensions of energy security. Environmental aspects of identity, energy, foreign policy relationship is emerging as a strong argument in the case of Turkey and Germany. However, addressing other aspects of energy security

perceptions of the two countries has the potential to demonstrate this relationship more strongly. Studies can be conducted in many different fields such as energy efficiency, fossil fuel imports, legal regulations and public perceptions of the two countries.

As a result of this limitation, the connection between German and Turkish energy security, state identity and foreign policy behaviors is tried to be understood. In this respect, firstly, the broad and interdisciplinary place of energy security concept in the literature is introduced. By examining how the concept of energy security evolved with the expansion and deepening in the post-Cold War period, it was shown that the thesis studied in which dimension of the energy security. As the two countries' nuclear energy and renewable energy perspectives are compared, the conceptual framework is shaped around the environmental dimension of energy security.

After the conceptual framework, the theoretical framework of the thesis is determined as social constructivism since it focuses on the relationship between identity and energy security. In the context of social constructivism, identity, agent/structure relationship and different logic frameworks are discussed. The link between social construction and energy security is shaped around these main concepts of theory. In addition to theoretical framework of social constructivism, thesis was supported with three different logics categorized by Ciută and the types of capitalism.

In methodology chapter, factors in selecting the cases of Germany and Turkey have been detailed, and research questions, hypotheses and sub-hypotheses have been presented. Then, the research design was determined thereby variables and the causality relationship between the variables founded.

In the fourth chapter, the relationship between German energy security perception and state identity is discussed. In this sense, firstly the development of German state identity, energy and foreign policy are examined. Afterwards, *Energiewende*, which shaped German norm and value-oriented energy policy, was discussed in detail and the relationship between Germany's state identity and energy policy was examined within the framework of discourses.

In the following, the capitalist structure of the German energy market was analyzed, and the effect of this structure on German state identity and energy policies was discussed. Germany's coordinated market economy plays an essential role in shaping energy security understanding around norms and values. The common interests of the market make rules and norms determinant. At this point, the role of the German Green Party in the development of energy security approach was examined, and then the role of Germany in international climate agreements and the EU was analyzed. Thus, the interaction between German energy security, state identity, and foreign policy is presented.

In the fifth chapter, Turkish state identity, energy security, and foreign policy behaviors are examined similarly with Germany, and thus, the possibility of a consistent comparison is revealed. Turkey's energy security has been shaped around the discourse of power in parallel with increasing power emphasis in state identity. In this sense, the fact that the role of the state is a determining factor alone has been effective in establishing the power parameter.

The hierarchical structure of the market also supported this relationship between state identity and energy policies. On the other hand, Turkey has not

preferred to play an active role in international climate agreements like Germany and has followed developments related to processes. Hence, The Kyoto Protocol was ratified 12 years later after it was signed, while Paris Climate Agreement has not been ratified yet.

Within this broad scope, Turkish and German energy security perception was compared within the six sub-hypothesis in chapter six. Within the framework of these 6 sub-hypotheses, it has been determined that the differentiation of Turkish and German state identity causes differentiation of energy security perception. The mutual interaction between energy security and state identity is also reflected in foreign policy behavior and the two countries are differentiated from each other. Thus, the hypothesis formed around the research question of the thesis becomes valid.

As a result, Turkey and Germany have different perceptions of energy security. In conceptualizing the Ciută, while Turkey corresponds to “logic of war” with its power discourse, Germany accommodates to the logic of subsistence in terms of its norm and value-oriented energy policy.

Last, this study focuses on the relationship between energy security, state identity, and foreign policy behaviors and reveals that the concept of energy security can be defined differently around the identity and interests of countries. Aim of this thesis is to contribute to the literature by investigating German and Turkish energy security perception within the framework of state identity. As a result of this study, this thesis bridges an important connection between state identity and energy security in terms of social constructivism and comparative analysis studies in Turkey. In this sense, the thesis is a small but important contribution to the current IR literature.



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