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POLITICS OF RENEWABLE ENERGY POLICIES IN TURKEY

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Buket ATLI

SWORN STATEMENT

I certify under penalty of perjury, that the present work was been produced by me independently, all tools and sources are used as indicated and the work has not been submitted to any other institution for consideration.

Place, Date

Ankara, 29.04.2012

Handwritten Signature

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LIST OF ABBREVIATIONS

- ACF : Advocacy Coalition Framework
- AKP : Justice and Development Party (*Adalet ve Kalkınma Partisi*)
- Amendment Law: Law No: 6094, Amendment of the Law Concerning the Use of Renewable Resources for the Generation of Electricity Energy (Ratification date: 29.12.2010, Enactment Date: 08.01.2011)
- BOO : Built Operate Own (*Yap- İşlet*)
- BOT : Built Operate Transfer (*Yap-İşlet- Devret*)
- BiyogazDer : Biogas Investments Development Association (*Biyogaz Yatırımlarını Geliştirme Derneği*)
- HEPP : Hydroelectric Power Plants
- EML : Electricity Market Law No: 4628 (Ratification Date: 20.02.2001 and Enactment Date: 03.03.2001)
- EPDK : Republic of Turkey Energy Market Regulatory Authority (*Enerji Piyasası Düzenleme Kurumu*)
- TBMM Energy Commission: Expertise Commission in Turkish Grand National Assembly of Turkish Republic about Industry, Trade, Energy, Natural Resources, Information and Technology (*TBMM İhtisas Komisyonu / Sanayi, Ticaret, Enerji, Tabii Kaynaklar, Bilgi Ve Teknoloji Komisyonu*)
- EU : The European Union
- EÜAŞ : Electricity Generation Co. Inc.
- FIT : Feed -in Tariffs
- IMF : International Monetary Fund
- MENR : Republic of Turkey Ministry of Energy and Natural Resources
- MFA : Republic of Turkey Ministry of Foreign Affairs
- PMUM : Market Financial Settlement Centre (*Piyasa Mali Uzlaştırma Merkezi*)
- REL (Renewable Energy Law): Law No. 5346 Concerning the Use of Renewable Resources for the Generation of Electricity Energy (Ratification date: 10.05.2005, Enactment Date: 18.05.2005)

- REN21 : Renewable Energy Network for 21st Century
- RES : Renewable Energy Sources
- RESSIAD : Wind Power and Hydropower Plants Businessman's Association
(*Rüzgar Enerjisi ve Su Santralleri İşadamları Derneği*)
- RESYAD : Wind Power Plants Investors Association (*Rüzgar Enerjisi Santralleri Yatırımcıları Derneği*)
- TBMM : The Grand National Assembly of Republic of Turkey (*Türkiye Büyük Millet Meclisi*)
- TEİAŞ : Turkish Electricity Transmission Corporation Co. Inc.
- TETAŞ : Turkish Electricity Trading & Contracting Co. Inc.
- TMMOB : Union of Chambers of Turkish Engineers and Architects (*Türk Mühendis ve Mimar Odaları Birliği*)
- TOOR : Transfer of Operating Rights
- TÜREB : Turkish Wind Energy Association (*Türkiye Rüzgar Enerjisi Birliği*)

CHAPTERS

1. Introduction

Owing to the unfortunate accidents happened in Fukushima nuclear power plant in the aftermath of the 11th March 2011 dated earthquake in Japan, renewable energy has become one of the mostly referred issues in energy related discussions all around the world. As a result of intensive public discussions about the safety of nuclear energy, governments in many European countries such as Germany and France had to question the place of nuclear power in their energy mix. Consequently, renewable energy sources came under the spotlights as being one of the best alternatives to nuclear energy. However, a closer look reveals that the field of renewable energy has already been facing a rising interest, not only from the developed but also from the developing countries, even before the recent accident inflamed the discussions about its closest rival other than the fossil fuels.

The reasons of such a change in national and international energy preferences is said to be the challenges regarding the energy security due to the estimated rise of the oil prices in the future and the depletion of fossil fuel sources¹ as well as various environmental problems caused by fossil fuels such as climate change and loss of biodiversity (Rifkin, 2009: 1). Therefore, it is possible to say that there is a general tendency of energy policies turning away from mainly fossil fuel sources, after recent developments from nuclear energy too, towards sustainable energy policies for the sake of environmental and economical sustainability. Scholars such as Saygın & Çetin (2010) and Nuttall & Manz (2008) prefer to name those changes as ‘paradigm shift in energy policy’, meaning that the energy policies are now formulated in an order according to their sustainability level. Policies regarding the improvement of energy efficiency ranks at the first place, which are followed by increased usage of renewable sources, and finally the exploitation of unsustainable sources with low-carbon technologies (Saygın & Çetin, 2010: 2). Nevertheless, in this study it is preferred to be

¹ For more information about this phenomena which is also referred as ‘peak oil’ in some sources, please see Chapter 3.

more careful before naming this rising interest towards sustainable and renewable energy policies as a paradigm shift. However, it is not possible to deny the obvious changes of the national and international energy discourses and its reflections on the rising interest in investments and policies of renewable energy sources (RES).

Many advocates of renewable energy sources as well as scholars such as Akça (2008) attributes a crucial role to the states in promoting not only the renewable but also all kinds of sustainable energy sources against the conventional energy sources. The following paragraph is a good example of the dominant way of thinking about the reasons why renewable energy sources should be preferred and RES investments should be supported - especially by the states:

Sustainability has become an important concept in energy sector in the last few decades. This is because fossil based fuel resources are finite and alternative resources should be developed before they become scarce. Another issue gaining importance in energy sector is the climate change caused by fossil based fuel usage. Environmental issues are one of the reasons for the search of alternative energy resources. Renewable energy resources address both sustainability and environment related issues. Although renewable energy addresses these issues, it is not possible for renewable energy to compete with conventional energy resources under current market conditions without some support and incentive mechanisms (Akça, 2008: 80).

As it is seen above, the dominant discourse argues that renewable energies should be promoted by the states due to several economical and environmental reasons. That is why, in many countries state is expected to be the main driver force of renewable energy market formation by creating and shaping the market conditions for RES investments through the usage of different incentive mechanisms.

Having an emerging renewable energy market, Turkey is said to have a considerable potential of RES that can be used for different purposes such as thermal heating from geothermal energy as well as electricity production from hydro, solar, wind and biomass (Toklu et al., 2010: 1174). However, the biggest barrier for Turkey to realise its renewable energy potential is said to be the lack of financial resources (ibid.: 1183). Looking at the fact that Turkey increased its position by three points in three months and ranked 24th at the May 2011 dated issue of Ernst & Young's Renewable Energy Attractiveness Index List, it is possible to conclude that Turkey is becoming more

attractive for renewable energy investors day by day (Ernst&Young, 2011: 15). In that respect, there was a high expectation of foreign and domestic investors from the Turkish government to determine the dynamics of this market which has been emerging in line with the general global trend of rising interest in RES investments since the 2000s (REN21, 2010: 9).

Under that circumstances, the first discussions in Turkey about a law to support the investments in renewable energy sources started in 2004 (Gürbüz, 2009). As a result of a one-year long process, Law on Utilization of Renewable Resources for the Purpose of Generating Electrical Energy (Law No. 5346, a.k.a Renewable Energy Law) was finally ratified in 2005. However, later it is seen that the state incentives defined in Renewable Energy Law (REL) to pay when the electricity to be generated from renewable energy sources are bought were not enough to prosper the expected amount of private sector investments (TBMM Session No: 15, 2010: 30). Consequently, due to the intentions of the government to make some changes to the existing Renewable Energy Law; renewable energy happened to be again one of the mostly debated topics of the Turkish energy politics in 2009. The level and type of state incentives were of great concern for both Turkish² and foreign actors, who were waiting for the level of state incentives to be declared before deciding on whether to invest in the field of renewable energy in Turkey or not (PWC, 2009: 21-22). In spite of the strong support given to the amendment by the opposition parties as well as the Minister of Energy and Natural Resources and the governing party, it has taken two years until the draft of the Amendment Law was accepted in the Grand National Assembly (Gürbüz, 2009).

Some articles in Amendment Law were quite surprising for many national and international actors, who were expecting high levels of state support in line with the dominant way of thinking that was mentioned before. For example, the new feed-in tariffs levels, which were this time calculated in terms of \$/cent instead of the previous €/cent levels to everybody's surprise, were quite lower than the expectations. Some investors defined these state supports to be disappointing compared to the generous

² This information was gathered by the author during some meetings done with big farmers (cattle and poultry breeders) in Suluova district of Amasya Province. The meetings were conducted within the framework of a field trip organised in August 2010 together with experts of Gesellschaft für technische Zusammenarbeit GmbH (GTZ) with an aim of understanding the willingness of local people to invest in biogas.

incentives given in other countries such as Germany and Spain (Radikal Newspaper, 2011). More surprisingly, a new additional bonus structure is introduced for some certain equipments of the RES plants if they will be domestically manufactured in Turkey (Amendment Law, 2010).

It is not possible to understand the process and outcomes of the amendment to the Renewable Energy Law in Turkey by using the previously presented dominant way of thinking, which takes the ideas of renewable energy sources being a must to be promoted for a better future and the states being monolithic institutions that are responsible from supporting the investments in RES for granted. Despite the importance of the role attributed to the states in promoting renewable energy sources in that approach; questions about how energy policies of the states are formed in that certain way stays mainly unexplored. Why did it last two years to accept the Amendment Law in the Parliament despite the consensus about renewable energy ‘obviously’ being a source to be supported for better futures? Why did Turkish government preferred to have that certain feed-in tariff rate? How come was it decided to give a bonus to the domestic production in the Amendment, which was avoided in 2005?

Considering all those above-mentioned points, it is thought that the politics of renewable energy policies in Turkey deserves a closer look. In order to understand why the amendment to the Renewable Energy Law in Turkey is shaped in that certain way, the main question to be dealt within the scope of this thesis will be about how the renewable energy policies in Turkey are formed. For the sake of a better understanding of the historical stems of the policy formation in this field, it is preferred not to isolate the discussions related to the Amendment from the formation of the Turkish electricity market in the late 1990s and the preparation of Renewable Energy Law in 2005. Therefore, a general overview of the 2000s will be provided with a focus on the rationalities to be effective in shaping the recent amendment to the Renewable Energy Law.

The energy policy studies are mainly dominated by scholars from various disciplines such as engineering and economists, whose area of interest are mainly at the technical level rather than political dimension of the energy policies (Prontera, 2009: 1). Hence, the literature about renewable energy sources is mostly dominated by the

technical discussions about energy potential and renewable energy technologies, rather than studies about how the renewable energy policies of the states are formed. However, the power relations and rationalities behind the policy making process are nonlinear and too much complicated to be understood with some formulas or theories that can be repeated and tested for their results. As nicely stated in the following sentences, it is difficult to analyse the decisions of the states by trying to apply the ‘positivist’ approaches of natural sciences to the social sciences³:

‘Policy-making is, however, not a ‘rational’ technocratic process but rather one that appears to be based on such things as visions and values, the relative strengths of various pressure groups, perhaps on beliefs of ‘how things work’ and on deeper historical and cultural influences.’ (Jacobsson & Lauber, 2006: 257)

As Prontera (2009) stated, the studies about energy policies that are more close to the field of political science mostly come from the field of international relations. But these are mainly interested in the strategic aspects of the energy decisions taken by states, which are seen as actors of power games in the field of international policy. Not much attention is paid to understand the formation of those states through looking at the power relations between the state and society. Therefore, such a study from the field of social sciences is thought to be refreshing and enriching for the field of energy policies, especially in case of a field like renewable energy studies, which lacks the attention of social scientist even more.

Due to the reasons explained above, the study differs from previous studies done in the field of renewable energy policies in Turkey, which generally starts with the Turkey’s renewable energy potential and then emphasizes the need for the states support and finally makes some suggestions about how to increase the investment amount in RES.⁴ The theoretical basis of the study is constructed under the general umbrella of critical theory through the usage of several ideas derived from mainly the writings of Robert Cox (1981) and Michel Foucault (1991). Critical theory is thought to fit well to the study due to its features of questioning how the certain types of order are formed and using a historical and broader point of view to analyse the frameworks of

³ For further information about the discussion, please see Chapter 1.

⁴ Please see Kaya (2006), Erdem (2010), Akça (2008) and Yüksel (2010) as an example to some of the studies done about the renewable energy policies in Turkey.

action. Therefore, even though the question to be answered within the scope of the study is specifically about the Amendment to REL in Turkey, the study makes a first an analysis of the rationalities shaping the renewable energy policies in the world and then starts to examine the formulation of energy and renewable energy policies in Turkey while keeping the general tendencies in the world in mind.

The study is structured in a descending order which starts from more general topics about how the state and policies are formed, continues with the renewable energy policies in the world and finally leads to more specific ones, such as the state formation and energy policies in Turkey and the rationalities to be influential in shaping the renewable energy policies in Turkey. In other words, after ‘denaturalizing’ the understanding of states being a ‘unified’ actor that has to support renewable energy sources for better futures, the role and tools of the states in the formation of renewable energy markets will be examined and finally the repercussions of different rationalities in the formation of renewable energy policies in Turkey will be traced. One important point is the fact that, within the scope of the study it is mainly aimed to draw an analytical picture of how the renewable energy policies in Turkey are imagined by different rationalities without focusing too much on the details about the relevant instruments and social actors who formed or used those rationalities.

Chapter 2 begins with some information about critical theory in order to clarify the necessity of a different approach to the energy policy studies. It will be discussed that the institutions and forms of state are continuously formed, shaped and transformed according to the dynamics resulting from the interaction among power relations at a certain point of time. Building an understanding of state as a historical concept rather than a predetermined and unified entity with some certain duties, will enable us to see the state as a part of a governing and problematization activity. State will be defined as a continuous political battleground of different ‘state projects’ of different rationalities that are institutionalized through the laws and policies. Finally, some features of the neoliberalism, developmentalism and neomercantilism will be given in order to be able to aware of the differences in the roles given to the states by different rationalities of government.

After setting the general theoretical background, Chapter 3 tries to apply this general framework to the specific field of renewable energy policies and argues that neither the idea that state should support the renewable energies nor the way in which these supports are given should be taken for granted. In order to reach that aim, firstly, the existing perception of synonymy between alternative energy, clean/green energy and renewable energy is denaturalized. A short introduction to the history of the usage of renewable energy sources will be done to show their transition to become a part of market logic during the institutionalization of the neoliberal rationality. Finally, some of the problematizations and tools that have been used by the states to create and shape the renewable energy markets starting with 1970s will be examined.

Chapter 4 examines the dynamics of the Turkish state and energy policies through the lenses of the theoretical framework defined in previous chapters. First, a general overview of the neoliberal, developmentalist and neomercantilist state projects that have been observed as a result of the Turkish state and society relations starting with the 1950s will be done. Then, Turkey's energy sources, energy mix and energy politics will be mentioned in order to be able to understand the political and material framework within which the emerging renewable energy market was shaped. Finally, the liberalization of the Turkish electricity market in the 1990s will be explained due to their relevance in laying the foundations of the renewable energy market later in 2000s.

Chapter 5 totally focuses on the rationalities and historical structures that have been influential in the policymaking process to create and shape the renewable energy market in Turkey. First, the discussions about the emergence of renewable energy market that was directed by different social forces during the preparation of Renewable Energy Law in 2005 will be examined. Later, in order to show how the Turkish renewable energy market can be interpreted according to the influences of different rationalities, the traces of different state projects during the formulation of the Amendment Law in 2010 will be chased. Not only the neoliberal rationality which has been the dominant state project for the renewable energy policies in Turkey, but also its struggles and interaction with developmentalist and neomercantilist state project as well as the influences of the world order and social forces on the state formation will be included.

Chapter 6 concludes by making a summary of the general picture reached as a result of the analysis conducted about the rationalities to be effective in the formulation of renewable energy policies in Turkey and makes an evaluation of the limitations or shortcomings of the research, and the possible contributions done to the studies in the field of renewable energy policy in Turkey.

Due to the fact that it has not been a long time since the Amendment is ratified at the end of 2010 and problems faced in finding literature about renewable energy policies in Turkey from the field of political science, the scope of the secondary literature to be use in this study was quite limited. Therefore information used for the empirical part of the thesis rely mainly on primary literature such as the official reports of the TBMM Energy Commission and protocols of plenary sessions in the Turkish Grand National Assembly (TBMM). There are also ten interviews conducted at several times between May – July 2011 with officers from Ministry of Energy and Natural Resources (MENR) and related institutions TETAŞ, TEİAŞ, Energy Market Regulatory Authority (EPDK), the former head of TBMM Expertise Commission about energy policy and also current deputy in the TBMM from the ruling party, representatives from civil society such as Turkish Wind Energy Association (TÜREB), Wind, Power and Hydropower Plants Businessman’s Association (RESSIAD), Biogas Investments Development Association (BiyogazDer). The names and positions of the interviewees are not revealed in order to ensure the anonymity. The interview are based on open ended questions about the development of renewable energy in Turkey and their ideas about the reasons and content of the latest Amendment. Finally, there were also some additional online material such as interviews with stakeholders and news about the law making process of Renewable Energy Law as well as the Amendment Law that are published at internet magazines, newspapers and online portals.

2. Theoretical Background

2.1 Wearing ‘Critical Lenses’

Sabatier explains the role of theory, model or frameworks as being formed to guide the analyst to ‘find some way of simplifying the situation in order to have any chance of understanding it’ (Sabatier, 2007b: 4). Hence; it is important for the analyst to be aware of that differentiation between the real life and the theory from the very beginning,

before deciding on what kind of ‘a lens consisting of a set of simplifying presuppositions’ is going to be used during the analysis process (ibid.: 5).

The crucial point here is not to forget the fact that, independent of the way how they are conceptualized, ‘a theory is always for someone and for some purpose’ (Cox, 1981: 128). Otherwise, it would be misleading to consider the theories both in natural as well as in social sciences independent of ‘perspectives derived from a position in time and space, specifically social and political time and space’ (ibid.). However, sometimes people forget to take it into consideration the fact that analyst also wears lenses and tend to consider everything told under the name of science as precise and de facto facts.

On the contrast, especially in social sciences, there exists ‘no such thing as theory in itself, divorced from a standpoint in time and space’ (Cox, 1981: 128). The social and political theory is formed as a result of 'historically conditioned awareness in certain problems and issues, a problematic’ but at the same time always tried to be generalized by ‘the framework of some general propositions and laws’ despite its historical bounds (ibid). According to Cox, it is possible to distinguish two different types of purposes that lead to distinct types of theories. The first purpose of theory is defined to be ‘a guide to help to solve the problems posed within the terms of the particular perspective which was the point of departure’ and is valid for *problem solving theory* (ibid.). Problem solving theory, which takes the existing institutions, social and power relations as the ‘given framework for action’, divides particular problems into multiple spheres and, with the help of the *ceteris paribus* assumptions, enables it to come up with statements of laws or regular patterns that seem to include ‘general validity’ (Cox, 1981: 129).

The second purpose of the theory defined by Cox (1981) is ‘to become clearly aware of the perspectives which gives rise to theorising and its relation to other perspectives’. Such an approach leads to the formation of the *critical theory*. In this study it is preferred to make use of critical theory to wear the thinnest lenses possible and be able to come closer to the real world in understanding how policies of renewable energy in Turkey are shaped. As Smith (2007) nicely described him to be one of the ‘preeminent critical theorist’, Robert Cox, explains the reason why it is called critical

theory as ‘it stands apart from the prevailing order of the world and asks how that order came about’ (Cox, 1981: 129). One of the most important and the most relevant features of critical theory for this study is its difference in approaching the institutions and power relations.

‘Critical theory, unlike problem solving theory, does not take institutions and social and power relations for granted but calls them into question by concerning itself with their origins and how and whether they might be in the process of changing’ (Cox, 1981: 129).

This point is taken for granted by problem solving theories and it is rather focused on ‘solving the problems arising in various parts of a whole’ so that the system can function again as ‘smoothly’ as it was before (Cox, 1981: 129). Moreover, unlike the previously mentioned claims of being objective or ‘value free’ that are put forward by the problem-solving theory, critical theory is aware of the fact that it ‘contains problem-solving theories in itself’ (Cox, 1981: 130).

Critical theory looks at social and political complex as a whole rather than fragmenting them into small pieces for the sake of limiting the topics to be dealt with (Cox, 1981: 129). Although critical theory also takes only particular spheres of the human activity as the problematic, it is aimed to construct a larger picture of the whole and ‘seeks to understand the process of change in which both parts and whole are involved’ (ibid.). However, the critical theory fails to reach the preciseness of the analysis done by problem solving theory which ahistorically assumes a continuing present and ends up with an ‘ideological bias’ of having fixity in social and political order (ibid.). The relevance of choosing to wear critical lenses which question the existing order and examine the ‘continuing process of historical change’ rather than trying to find solutions to keep the system functioning can be better understood in Chapter 3 while talking about the conceptualization of renewable energy sources.

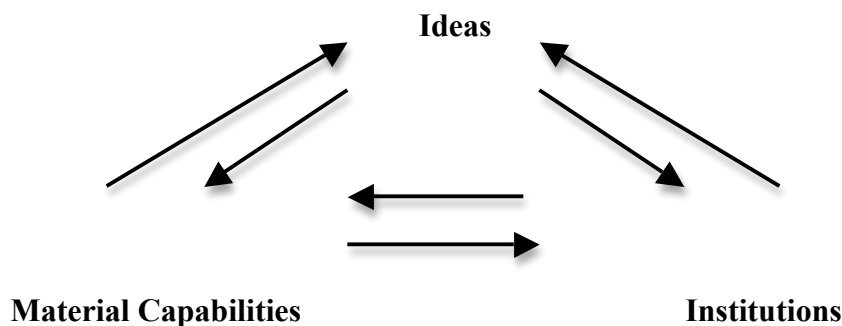
2.2 Power Relations and Historical Structures

‘The fact that conventional energy system technologies that -- centralized large-scale power plants utilizing fossil fuels and atomic energy – are still dominant today is a result of previous policy decisions of economically strongest countries influenced by the conventional energy industry’ (Hirschl, 2009: 4408).

It is believed that interpreting the reasons and dynamics of policy decisions is complex enough not to be simplified into an explanation, in which power is presented as something that can be possessed by some actors and then imposed on the others. Deriving from the studies of scholars such as Robert Cox and Michel Foucault, who applied critical theory in the field of international relations and social development, this study rather prefers to examine the energy policy decisions as a result of interactions among the power relations between state and society rather than looking for the most powerful actor determining the renewable energy policies in Turkey. In order to conduct such an analysis, the rest of the Chapter tries to clarify our understanding of the frequently used concepts such as power (or force as Cox (1981) preferred to use), institutions, rationalities of government, state and policy.

Cox (1981) states that being conscious about the fact that both the action and the theory is not free from the problematic within which it is formulated, critical theory names the framework for action as ‘an historical structure, a particular combination of thought patterns, material conditions and human institutions which has certain coherence among its elements’. Historical structure is described as ‘a picture of a particular configuration of forces’ (Cox, 1981: 135).

Figure 1 – The configuration of forces



Source: Cox (1981: 136)

These three different forces could interact with each other in reciprocal directions depending on the relations of forces at that specific time in the history. (Cox, 1981: 136). Therefore, it is not possible to assume a certain way of direction for the interaction among the forces in advance. What is meant by the *material capabilities* are ‘productive and destructive potentials’ which could exist in the form of technological and organizational capabilities, natural resources and stocks of equipment and capital (ibid.).

The second type of forces in that historical structure configuration is *ideas*, which are differentiated into two different categories. The first one is ‘intersubjective meanings, or those shared notions of the nature of social relations which tend to perpetuate habits and expectations of behaviour’ (Cox, 1981: 136). These are long lasting notions, so to say the rules of game, about how the world politics function in that historical period: Is the state territorially defined? Are the relations between states function through diplomatic interactions? How does conflicts occur and are solved? The second kind of ideas are ‘collective images of social order held by different groups of people’, which can have differ a lot and oppose to each other compared to the broadly common character of the previously mentioned intersubjective meanings (ibid.). The clashes between different collective ideas leads the way to the conflicts and change which results with the emergence of alternative paths as the current possible material and institutional basis are started to be questioned (ibid.).

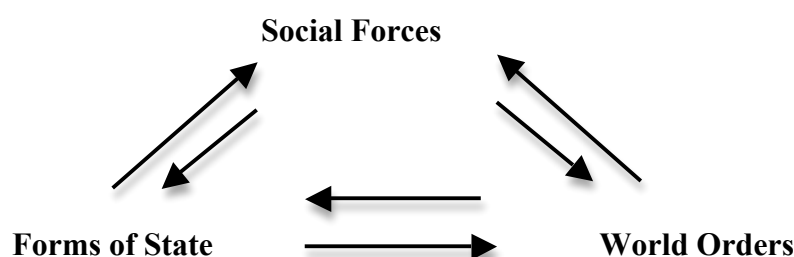
The final force in the historical structure is *institutions*, which ‘reflect the power relations prevailing at their point of origin and tend, ... to encourage collective images consistent with these power relations’ (Cox, 1981: 136). The most important point is that the certain configuration of forces are also reflected in the future, due to the influence of institutions on the development of ideas and material capabilities (Cox, 1981: 137). Hence, the combination of power relations between ideas and material capabilities at that historical time are stabilized through institutions which are named by Cox as ‘amalgams of ideas and material power’ (ibid.). As it is stated before, the configuration of the historical structures which emerge according to the relationship between the forces of ideas, material capabilities and institutions does not propose any determinism about the results of the actions. On the contrary, ‘individuals or groups may move with the pressures or resist and oppose them, but they can not ignore them’ (Cox, 1981: 137).

These opposition could occur within the institutions as a result of institutions being ‘either a battleground of opposing tendencies, or stimulate the creation of rival institutions reflecting different tendencies’ (Cox, 1981: 135). Therefore, what is expressed by that historical structure does not necessarily have to be actualised or observable, but they are rather the simplified versions of reality as mentioned before and ‘an expression of tendencies, limited in their applicability to time and space, rather

than fully realised development' (Cox, 1981: 137). That is why, as Cox (1981) stated, critical theory tries to understand the historical process of changes in the framework of action, or in other words, the historical structures.

Within the scope of his study, Cox (1981) applies the method of historical structures to three other levels or spheres of activity, which are also interrelated and can be pictured in the same way with the configuration of forces in Figure 1.

Figure 2 – Three spheres of activities



Source: Cox (1981: 138)

Social forces, forms of state and world order, which can be imagined as the corners of a triangle with two –way arrows in between, are explained as follows:

‘(1) the organization of production, more particularly with regard to the *social forces* engendered by the production process; (2) *forms of state* as derived from a study of state/society complexes; and (3) *world orders*, i.e. the particular configurations of forces which successively define the problematic of war and peace for the ensemble of states’ (Cox, 1981: 138).

Sinclair (1996) notes that Cox uses the word production in a broader sense that includes production of ideas, intersubjective meanings, norms and institutions without being limited to economy related activities of human beings. Similarly, the terminology of social relations of production comprises ‘the totality of social relations in material, institutional and discursive forms’, from which particular social forces generate (Bieler & Morton, 2004: 87). Abovementioned three levels are interrelated in such a way that the change in one level triggers some changes in the other level (Cox, 1981: 138). To illustrate, Cox (1981) state that the transnational social forces first caused some change in the world order and started to influence the development of state structures through those changes.

2.3 Searching for Rationalities of Government

Deriving on the ideas mentioned in the previous section about frameworks of action not being universal and predetermined but rather historical and variable due to the power relations between material capabilities, ideas and institutions; it is mentioned that institutions, and therefore, state plays an important role during the stabilization process of the prevalent historical structure grown out of the relationship between ideas and material capabilities. However, the question of *what is state* and *how is it formed* is one of the oldest themes that has been discussed within the scope of political science for centuries and has been defined and conceptualized in many different ways. Opposing concepts such as state with civil society, public with private, government with market can be insufficient to explain how rule is exercised due to the reason that ‘political power is exercised today through a profusion of shifting alliances between diverse authorities in projects to govern a multitude of facets of economic activity, social life and individual conduct’ (Rose & Miller, 1992: 174). Therefore, within the scope of this study, the state and policymaking will be seen as a part of ‘problematics of government’ rather than seeing it as a zero sum game of power among different actors (ibid.):

‘Government refers to more or less systematized, regulated and reflected modes of power (a “technology”) that go beyond the spontaneous exercise of power over others, following a specific form of reasoning (a “rationality”) which defines the telos of action or the adequate means to achieve it’ (Lemke, 2000: 5).

Governmentality is a concept which has been first introduced by Michel Foucault during his lectures in 1978/1979 and used afterwards by many scholars in order to examine not only the political power in the limits of state, but also all form of ‘arts of government’ in a comprehensive manner (Walters & Haahr, 2005: 3). The main focus of the governmentality studies is to search for the rationalities of government, not only for the limited borders of political power but in general for all human activities. Governmentality is best summarized by Foucault with the phrase of ‘the conduct of conduct’, or better explained ‘a form of activity aiming to shape, guide or affect the conduct of some person or persons’ (Walters & Haahr, 2005: 12). One important question that comes to the minds is about how to find those rationalities of government.

The rationalities of government are searched in the reasons and ways activities are problematized because as Foucault (1979) put it, the rationalities of government can be best seen when a problem is formulated out of an existing situation:

‘It is in actions and moments of problematization that mentalities and their forms of reason can be identified. It is in all those sites where a given policy or practice is called into question, identified as deficient, failing, too costly, unethical – it is in these places that mentalities of government lend themselves most readily to our scrutiny’ (Rose & Miller, 1992: 175).

At this point, it is necessary to note once more that power is not referred as something to be possessed and imposed on the others but rather ‘power comes from below, that is, there is no binary and all-encompassing opposition between rulers and ruled at the root of power relations’ (Foucault, 1990 cited in Walters & Haahr, 2005: 12). There are two important points about the concept of power relations meant in this study in line with the analysis of governmentality. First, power and government is not under the ‘monopoly of state or big business’ but rather exercised in all fields of economic and social relations, no matter where the conduct of people are aimed to be shaped (Walters & Haahr, 2005: 12). Secondly, the power is not solely imposed by one party on the other, but rather always subjected to resistance from the side of governed, whose identity also does not stay the same but rather change. Thereby, instead of focusing on the power itself, it is preferred to talk about power relations, which ‘arise from the fact that subjects always have a certain scope to act otherwise’ (ibid.). That is why examining the rationalities of government by looking at the problematization of renewable energy policies in the world as well as in Turkey is expected to give clues about how and why the renewable energy policies in Turkey are shaped in that certain way rather than other examples of state incentives implemented in different countries such as Germany, Spain or United Kingdom.

2.4 State: Unified Actor or Battleground of Projects?

Having mentioned the important role of institutions as an amalgam of the historical configurations of material capabilities and ideas, understanding state as a part of Foucault’s rationalities of government and power relations between the state and society

is introduced. The focal point of this section will be about introducing the state as an arena consisting of different projects and strategies against the understanding of state as a unified actor with its own aims and interest.

The results of the sociological histories of the state formation show that there exist various ways of state formation, and until the eighteenth century the governance of the activities in the society in Europe had little to do with the state in the sense that is understood today (Rose & Miller, 1992: 176). However, the emergence of modern nation state 'as a centralised institutions and personnel wielding authoritative power over a nation' caused the state to be perceived by some analysts as 'unified actors with considerable autonomy, ruling domestically and pursuing their interests upon the world stage by means of diplomacy and warfare' (Rose & Miller, 1992: 177). Foucault (1991) opposes to the attribution of an extra value to the state such as its unity or functionalities that it does not possess:

'But the state, no more probably today than at any other time in its history, does not have this unity, this individuality, this rigorous functionality, nor, to speak frankly, this importance; maybe, after all, the state is no more than a composite reality and a mythicized abstraction, whose importance is a lot more limited than many of us think' (Foucault, 1991: 103).

Wearing the lenses of critical theory, just like many others, Michel Foucault questioned the conceptualization of governance by state as a given fact (Lemke, 2007: 5). Therefore, it would not be wrong to say that according to the analytics of government there is nothing like a unified and ever existing *the state*, but rather state is thought to be in constant change because of being 'a dynamic and contingent form of societal power relations' (Lemke, 2007: 17). To illustrate, Bob Jessop emphasized the 'inherent impossibility of the existence of a unified state' because there exist no state like an 'automatic pilot' to be founded in a certain territory which functions according to 'fixed and inevitable laws' (Jessop, 2002: 16 and Jessop, 1990: 9). Instead, state should be also seen as a part of dynamic relations of forces that are stated in the previous section which 'produce the institutional structure of the state and the knowledge of the state' (Lemke, 2007: 6).

Therefore; according to Lemke (2007), looking from the glasses of ‘analytics of government’, one of the features of state is defined as being ‘an effect and instrument of political strategies and social relations of power’ (Lemke, 2007: 10). Deriving from the Poulantzas’ conceptualization of state as a ‘social relation that is reproduced in and through the interplay between the state’s institutional form and the changing nature of the political forces’; Jessop (1990) introduced a new terminology of ‘state project’ (ibid.). The existence of state is associated with the struggle of different rationalities or imaginations of government as follows:

‘Whether, how and to what extent one can talk in definite terms about the state actually depends on the contingent and provisional outcomes of struggles to realize more or less specific ‘state projects’ (Jessop, 1990: 9).

By introducing the state projects, Jessop (1990) opens up a space for the idea of plurality of state as an area where different projects co-exist and constantly compete with different strategies and projects of the other rationalities. Lemke (2000) mentions that Foucault did not see government as a technique of state authorities, on the contrary; the state itself is perceived ‘as a tactics of government, as a dynamic form and historic stabilisation of societal power relations’ (Lemke, 2000: 11). Therefore, the state can be best summarized with the following sentences:

‘The state is an *effect* of strategies since it cannot be reduced to a homogenous, stable actor that exists prior to political action. Rather, the state is to be understood as an emergent and complex resultant of conflicting and contradictory governmental practices’ (Lemke, 2007: 10).

Secondly, the state is perceived as ‘not only an effect but also an instrument and a site of strategic action’ (Lemke, 2007: 11). It is seen as an *instrument* of strategic action due to the extent that ‘it establishes a frontier regime that is defined by the distinction between inside and outside, state and non-state’ (ibid.). The reflections of the usage of state by strategic actions as an instrument to define both the external as well as internal borders of power can be traced in the previously referred discussions about the changing definitions of the scope of public, private or civil society. It is important to note that, looking at the strategic dimension of statehood and talking about the border of state and non-state, private is not meant as ‘a protected and separated space outside state

interventions' but rather still seen as 'the object of the state's power of definition and regulation' to be changed, transformed and redefined during the activities of government (Lemke, 2007: 12).

Therefore, the understanding of state to be followed in that study is not an unified actor which has predetermined definition, duties and interests but rather a battlefield as well as an instrument of several 'state projects' of rationalities of government (or ideas, if the historical structures analysis of Robert Cox is preferred). These state projects resulting the different rationalities of government are tried to stabilized through the state formation process (or institutions, if the historical structures analysis of Robert Cox is preferred). Lemke (2007) emphasizes that 'the commonplace contrast between state formation and policymaking' starts to disappear since policy also contributes to the long term process of state formation by affecting the state structure (Lemke, 2007: 7). That is why; policymaking and policies can be also seen as an important part of the stabilization of the ideas and material capabilities by shaping and influencing the daily life and modes of thinking. In the light of all the above discussions, policy-making processes will be rather seen as a part of state formation which causes it be seen as an area including different actors pursuing different rationalities and state projects who are trying to institutionalize those within the scope of their power and capabilities through the usage of various strategies.

2.5 Developmentalism, Neoliberalism and Neomercantilism

This section tries to concretise the above discussions of the critical theorists about the rationalities of government, state and state formation by giving an overview of some of the rationalities which are thought to be the most relevant ones for the further discussions, namely developmentalism, neoliberalism and neomercantilism. The scope of the overview is limited to the important and distinctive characteristics of those rationalities of government with a focus on their specific understanding of state and society relations. This section aims to familiarise with the main logic of those rationalities only enough to be able to follow the footprints of those rationalities in the field of renewable energy as well as in renewable energy politics of Turkey in the coming chapters.

The first rationality of government to be explained is developmentalism. As an idea, developmentalism has its roots in the nineteenth-century thinking when ‘human history was pictured as a unilinear developmental progression from “savage” and “barbarian” levels of social evolution toward the “civilized” status represented by the modern West’ (Barnard & Jonathan, 2002: 234). However, as a result of the changes in the configuration of historical structures after the World War II, developmentalism used mostly in reference to a specific rationality of in the field of economy that is ‘generally understood to involve the expansion of production and consumption and/or rising standards of living, especially in the poor countries of the ‘Third World’”(ibid.). To illustrate, as Mainwaring (1992) stated, starting with the 1950s, developmentalism was used in Latin America as a model of economic development with a special focus on industrialization, especially import-substitution industrialisation (ISI) and strong state presence as ‘organiser of economic activity’ (Mainwaring ,1992: 333 and White, 1984: 97). In line with the “national developmentalism.” strategy, the state was ‘principal instrument of collective action’ in order to reach the aim of maintaining the economic growth of the nation (Bresser-Pereira, 2011: 3). Developmentalism was influential not only in Latin America but also in Asian countries, namely the four East Asian countries, Taiwan, South Korea, Hong Kong, and Singapore, which are found to be the most successful countries to emerge from the Third World with extraordinary economic growth rates (Onis, 1991: 109). In order to achieve that growth rates, developmentalism prioritizes industrialization more than other societal goals and attains the leading role to the state for the promotion of it (Woo- Cumings, 1999: 283).

Due to the fact that main role in promoting industrialization is given to the state, a small-scale but strong elite economic bureaucracy creates the instruments to guide the market (Onis, 1991: 111). However, unlike the expectations, elite bureaucracy and (major) private business companies are in close contact to built a consensus on goals and to maintain the information exchange, both of which are important for the formation and implementation of the policies (ibid.). Especially the strategy of Import Substitution Industrialisation (ISI) is one of the examples where the logic of the developmental state with ‘an unusual degree of public-private cooperation’ can be better seen (ibid.: 115). A very crucial point of this relationship in developmental state is to leave enough space for the autonomy of the bureaucracy (ibid. 111).

The second rationality of government is the neoliberalism, which is as Guthman (2008) expressed, rather ‘contingent, contradictory, and unfinished’ and has a unique nature in each country. The biggest difference between the previously stated developmentalist rationality and neoliberalism is, its scepticism about ‘capacities of political authorities to govern everything for the best’ (Rose & Miller, 1992: 31). Therefore, the neoliberal rationality of government introduces markets as the new regulatory principle of the economical activities rather than the previous tradition of state planning (ibid.). Emergence of market forces as the regulatory principle of the economic activity has changed the rationality and ownership of the investments, whose decisions were previously taken and realised by the state. Whereas, neoliberalism has opened a space for the private sector that resulted with ‘the rise of managers between expert knowledge, economic policy and business decisions’ (ibid: 33).

Unlike the characteristics of ‘father state’ in the developmentalism, which takes care of its society; the society in a neoliberal project consists of individuals who are expected to apply market rationalities in their daily life and are ‘encouraged to strive to optimise their own quality of life and that of their families’ (Rose & Miller, 1992: 32; Guthman, 2008: 1173). Therefore, the frameworks are needed to be set by the state in order to introduce the principles of market and competition in various areas, not only in all possible sectors of economical activities but also in social as well as environmental spheres, where the aim is ‘to create new markets in order to ensure more “rational” allocation of resources’ (Tuncer, 2011: 89 and Guthman, 2008: 1173). The new function of the state as a result of the ‘governmentalization of the state’⁵ would better seen not as the decline of the state but rather as a transformation of it to the neoliberalism:

‘The State must be strong to defend the interests of the nation in the international sphere and must ensure order by providing a legal framework for social and economic life. But within this framework, autonomous actors – commercial concerns, families, individuals – are to go freely about their business, making their own decisions and controlling their own destinies’ (Rose & Miller, 1992: 32).

⁵ *Governmentalization of the state* is used to refer to the minimal state ‘not as the decline of state sovereignty but as a promotion of forms of government that foster and enforce individual responsibility, privatized risk-management, empowerment techniques, and the play of market forces and entrepreneurial models in a variety of social domains’ (Foucault, 1991: 103).

Moreover, the institutions and the legal system also needs to be restructured in order to be able to set a framework ‘in which every economic actor can decide in full freedom and knows that the legal framework is set for his actions and will not change’ and the market mechanism can function efficiently and the price of the commodities continues to be determined in the market as a result of the competition maintained through the anti-monopoly regulations (Tuncer, 2011: 91-92). Different strategies are applied in order to create and sustain a sphere of economic activities that function in line with the market principles, the ‘most visible strand of such strategies’ are probably privatization and liberalization programmes (Rose & Miller, 1992: 31).

The third rationality to be mentioned is neomercantilism, which owes its main principle of protectionism to the mercantilist policies of 16th century and aimed to store national power or wealth, or both, by having a surplus of trade, therefore; tried to maximize the revenues (which was measured with gold at that time) from external trade and restricted imports (H. & M. Schmiegelow, 2009: 369). Buzan (1983) defines the idea behind mercantilism as follows:

‘[Mercantilists] seek to make the international economy fit with the patterns of fragmentation in the political system by reducing the scope of the global market. They emphasize the integrity of the national economy and the primacy of state goals (military, welfare, societal). They advocate protection as a way of preserving integrity, but may be attracted to the construction of their own economy dominating at the centre’ (Labarre, 2007).

Although some certain policies such as the heavy focus on trade policy, gold and import restrictions had to be adapted according to the liberal structures of the 20th century; the essential role given to the state stayed the same. To illustrate, the advocates of neomercantilism in European Common Agricultural Policy (CAP) perceived state as the safeguard of the productive capacity and improve the export potential (Potter & Tilze, 2005: 591). Similarly, Apeldoorn (2001) also expresses that ‘the protective shield’ of the state was one of the important pillars of the neomercantilist project of the Europe which aimed to create first a European home market to prepare the companies or farmers before opening up to compete with the world market. Therefore, the former national big businesses and potential ‘European champions’ perceived the increasing competition in the world markets that resulted from the globalization rather as a threat.

Neomercantilism offers protectionism as a shield to prosper the economy. In the case of European Union, the neomercantilist project proposed to solve the problems of fragmented markets, which were blamed as the reason of the loss of competitiveness against the USA and Japan, by the regionalization strategy and industrial policies that promote ‘European champions’ (Apeldoorn, 2001: 75).

Neoliberalism was first seen as the dominant art of government in the 1950s’ Germany and then later started to spread to other countries at the global level starting with 1970s (Thorsen & Lie, 2006). Especially in the 21st century has become to be the dominant discourse determining the world order as a result of the historical and dynamic relations among world order, social forces and the institutions. In the contemporary politics, it is important to remind that despite the differences in the dynamics of the state and society relations of the countries and policies in concern, the borders of the framework within which developmentalist and neomercantilist rationality are influential are mainly determined and shaped by neoliberal art of government. However, still being the dominant discourse, neoliberalism has evolved in the past 30 years ‘from a relatively dogmatic enforced laissez faire⁶ doctrine into a kind of common sense for the 21st century’ (Cerny, 2008: 39). Therefore, the terminology of ‘embedded neo-liberalism’ is used to express the feature of neoliberalism being the dominant discourse ‘while at the same time appealing to a wider set of interests and identities’ (Apeldoorn , 2001: 83). In general terms embedded neoliberalism is used to refer to the inclusion of other social forces:

‘Embedded neoliberalism involves first of all an acceptance of living in a multilevel, more open and market-like globalizing world in which informal and negotiated policy process do not merely complement relations among nation-states but constitute a complex, fungible, pluralized political game that is drawing in ever more actors (Cerny, 2008: 39).’

To illustrate, after examining the transnational social forces in making new European social-economic order in 1980s when the European integration was revived, Apeldoorn (2001) concludes that embedded neoliberalism is neoliberal as long as it

⁶ A definition of Laissez Faire (let it be or leave alone in French) in term of its economical meaning is done by Merriam Webster Dictionary as a doctrine opposing governmental interference in economic affairs beyond the minimum necessary for the maintenance of peace and property rights.

prioritizes the global markets and transnational capital and reflect the view of globalized parts of European capital, on the other hand, 'embedded' to the extent that it accepts some limits to *laissez faire* and the need to compromise and try to accommodate other social forces (Apeldoorn, 2001: 71, 82).

3. Renewable Energy Market and the State Support Mechanisms

3.1 Denaturalizing Alternative and Renewable Energy

With the help of the images created some of the first things that come to the mind when the word 'renewable' is heard are green, climate change, saving the planet and better future etc. Many people use the words of 'renewable energy' interchangeably with clean and alternative energy sources, whose R&D activities as well as investments are expected to be supported by the state in order to fight with the environmental problems awaiting the world in the future such as climate change, peak oil or nuclear power plant accidents. Looking from the lenses of critical theory, not only the unity of the state but also the general understanding about the needs to support alternative energies and renewable energy sources for environmental concerns are questioned. What is alternative and renewable energy sources? Why are they supported by the state?

As stated before, one big mistake of the problem solving theories is 'taking a form of thought derived from a particular phase of history (and thus a particular structure of social relations) and assuming it to be universally valid' (Cox, 1981: 133). Consequently, it is possible that renewable energy source are seen as universal and ahistorical realities accepted as if they were the best alternative energy sources against the fossil fuels to save the future. Therefore, we would also like to 'denaturalize'⁷ some of the concepts in the contemporary discussions that are most of the time taken for granted.

⁷ The idea of denaturalizing the preconceptions about some certain topics was used by Walters & Haahr (2005) as a starting point for their book titled 'Governing Europe' (Op. cit.). It is aimed to make the reader aware of some assumptions that became to be accepted as reality as a result of being exposed to them frequently, by asking questions about the content and real world existence of some of the most frequently used words such as Europe, European Union and European identity.

Having been members of the generations that are born into a world, where fossil fuels are named as ‘conventional energy sources’; it is important to remember that today’s ‘alternative energy resources’ such as water, wind, solar and geothermal were actually the only available energy sources before the Industrial Revolution. Although the Chinese have already made use of coal as a source of energy as early as 2000 BC, the dominance of fossil fuels over other energy sources did not occur until the beginning of 18th century.⁸ The definition of alternative energy is controversial and has changed a lot depending on the changes in the content of traditional energy sources, against which alternative energy was defined. To illustrate, alternative energy source of the medieval times was coal that started to be used against the traditional energy source of wood. Therefore, it is interesting to observe the change of the definition of alternative and traditional energy sources in the case of wood, which was once the traditional energy source of the 16th century and now named under the category of alternative energy sources as an important renewable energy source (biomass). Therefore, it is important to first understand that both of the ‘conventional’ or ‘traditional’ as well as ‘alternative’ energy sources are historically defined concepts.

Today alternative energy is defined in Oxford Dictionary as ‘energy fuelled in ways that do not use up the earth's natural resources or otherwise harm the environment, especially by avoiding the use of fossil fuels or nuclear power’ Therefore, what is meant by alternative is defined as being mainly alternative to the fossil fuels (the traditional energy sources of our century) whose prices are increasing and has the risk of being depleted. Therefore, due to the nature of the traditional energy sources of the 21st century, mainly fossil fuel and nuclear energy, the definition of alternative energy sources has changed to include the missing environmental sensitivity. However, it is important not to presume that the alternative energy sources are always environmentally sustainable because despite being a substitute to the fossil fuels some of them are later discovered to be more harmful to the nature even more than the fossil fuels, as in the example of palm oil⁹ that is used as bio diesel.

⁸ For more information about the history of energy sources, please see the Geography of Transport Systems titled book by Rodrigue, J-P et al. (2009), Op. cit.

⁹ For more information about palm oil production and its challenges in Indonesia, please see Jurgens et al. (2010), Op. cit.

Actually the history of using from the sun, water, wind and wood as an energy source dates back to centuries ago when even fossil fuel was not available. However, it was not until the second half of the 19th century, when different technologies were developed in order to benefit from renewable energy sources for commercial purposes.¹⁰ What is today meant with the usage of the word ‘renewable energy sources’ is the commercial usage of them to generate electricity from solar, wind, biomass and hydropower. Even the word renewable energy sources are most of the time enough to understand and follow the energy policies, more specific definitions according to their technologies may be needed at some cases. International Energy Agency defines three categories as generations of renewable energy technologies. The first generation technologies are hydropower, biomass combustion and geothermal power and heat whose emergence date back to the industrial revolution, whereas; second generation technologies include solar heating and cooling, wind power, modern forms of bioenergy and solar photovoltaic have been entering the markets as a result of the research and development studies supported by governments since 1980s (IEA, 2007: 7, 24). The third generation renewable energy technologies, which are namely concentrating solar power (CSP), tide/wave/ocean energy, enhanced geothermal systems, integrated bioenergy systems (BIG/GT) are relatively new and still being developed (ibid.). The further discussions about the promotion of renewable energy sources mainly refer to the period after 1970 and 1980s, when the research and investment of first and second-generation renewable technologies have been supported by public incentives.

What is referred by the common usage of alternative energy sources are, environmental friendly energy sources such as renewable energy sources. Thus, renewable energy sources are also strongly associated with the environmental concerns, especially with the fight with the climate change. Moreover, as it was also mentioned in the introduction, due to the recent accidents in nuclear power plants, renewable energy sources again faced the increasing interest of public authorities and private sector mainly due to environmental concerns. However, in contrast to the general expectations, the texts of neither the Convention and nor the Kyoto Protocol was full of references to renewable energy sources (RES). On the contrary, it was only once named in the Kyoto

¹⁰ For more information about the first wind mill, solar power systems to generate power as well as electricity, please see the internet site of Alternative Energy, Op. Cit.

Protocol (Hirschl, 2009: 4409-10). The reason is the fact that international climate policy focused initially on ‘the output side’ i.e. to decrease the emission levels of greenhouse gasses in certain ways rather than tackling with the question of how the gasses are produced (ibid.). However, it is an important point for our analysis because it reminds that fact that, although the obligation of reducing the emission levels can be a good reason for governments to support the RES, increasing the use of renewable sources is not the one and only way of fighting with the climate change. There are also some other strategies proposed such as increasing the energy efficiency and using low-carbon technologies such as carbon capture and storage (CCS) technologies¹¹ (Saygın & Çetin, 2010: 108). It is important to remember that renewable energy sources are only one of the various energy sources and technologies that can be used as an alternative to replace the conventional energy sources of fossil fuel and nuclear power.

To summarize, it is important not to assume an automatic link between renewable energy sources and environmental problems. The next section aims to reconstruct the direct relationship between the rising environmental concerns and the government supports given to the RES by searching for the rationalities behind the support and interest in renewable energy sources. As stated in Chapter 2, examining how a problem is formulated out of a situation or event is one of the best ways to find the rationalities of government due the fact that ‘government is a problematizing activity’ (Rose & Miller, 1992: 181). Therefore, the next section will deal with the question of what were the reasons and rationalities of governing the renewable energy issue in different countries at different time periods.

3.2 Reasons Behind the Interest in Supporting Renewable Energy Technologies

There are many different reasons behind the motivation of national and international policy makers for promoting the development of renewable energy technologies and investments. There were some general trends within which state support to renewable energy technologies and investment was problematized and shaped. However, as Reiche & Bechberger (2004) stated, other than some cases of international level policy

¹¹ For more information about Carbon Capture and Storage (CCS) technologies that are proposed as a solution to decrease CO₂ levels, please see Anderson & Newell (2003), *Op. cit.*

making, every country has their own targets and policies developed in line with their own reasons to support renewable energy due to the specific energy supply conditions as well as historical variances in political, institutional and socio-economical structures.¹² Therefore, renewable energy policies can be imagined as battleground at which the social forces are trying to institutionalise their state projects within the framework of the world order.

Actually, the history of scientific researches on the usage of renewable energy sources for energy generation dates back to the 19th century. However, the research and investment on renewable energy sources for commercial purposes started to be promoted through the state incentives only since the 1980s and early 1990s (REN21, 2010: 9). One of the oldest reasons why renewable energy sources are promoted by the states is to find a solution to the problem of energy supply security. It is aimed to increase the diversity of the energy sources of the countries through the usage of renewable energies (Lipp, 2007: 5483). It was also one of the reasons why Germany happened to be among the first and strongest supporters of the development and spread of renewable energy technologies (Jacobsson & Lauber, 2006: 271). Being a country that depends mainly on domestic coal and nuclear power, the concerns after the oil crisis of the 1970s and the strong anti nuclear movements created a pressure over the German governments for promoting renewable energy (ibid.). However, RES were supported reluctantly and they were not encouraged for the domestic use at the beginning (ibid.).

Secondly, the renewable energy debate gained an environmental dimension in 1980s, after the life threatening experiences with the effects of conventional energy sources such as acid rains and the nuclear accident in Chernobyl (ibid.). Starting with the 1990s, rising levels of greenhouse gases and climate change began to be the main focus of the environmental policies both in national and international level. Consequently, the rising concerns resulted with the formation of an international climate policy, whose legal settings were set in 1992 with the signing of the United

¹² Although there are some targets set by the European Union such as providing (20-20-20 targets) 20% of the EU energy from renewable sources until 2020, there exists no binding renewable energy policy at the international level. For more information about the discussions regarding the differences in promoting the renewable energies in the EU member states, please see Reiche & Bechberger (2004), Op. cit.

Nations Framework Convention on Climate Change (UNFCCC) by more than 160 countries in Rio de Janeiro and then the addition of limits on greenhouse gasses with the approval of the well-known Kyoto Protocol¹³ in 1997 (Hirschl, 2009: 4409 and Breidenich et al., 1998). At that point, the interest in renewable energy technologies rapidly increased as a solution to the challenges faced by developed and developing countries. Being a part of the environmental problematic, renewable energy was a good alternative to reduce the usage of fossil fuels in order to meet the emission targets set by international agreements without jeopardising the maintenance of the high level of energy consumption. Another reason of the state support to promote renewable technologies was to encourage technical innovation and knowledge in order to increase the competitiveness and export potentials of the countries by developing new technologies of renewable energies that could be later exported to the other nations (Lipp, 2007: 5483).

The final reason behind the motivations of RE policies is contributing to the local and regional development through the creation of new industries and millions of jobs in relation to the renewable energy sources (Lipp, 2007: 5483). To illustrate, Lund (2007) elaborates on the opportunities of industry expansion that can be benefited by countries with both small and big scale economies which invest in renewable energies with the help of their state incentives. Similarly, Oksay & Iseri (2011) presents an overview of the network of new sectors and jobs that can be created by the investments in electricity production from renewable energy sources (Appendix, Figure 1). Currently around 3 million people are estimated to be employed directly in renewable industries, a number which can dramatically increase when the jobs in indirect sectors would be included too (REN21, 2010: 9). The investments in developing countries have been mainly financed by some development banks, which are namely the World Bank Group, KfW Banking Group, Inter- American Development Bank, Asian Development Bank, Global Environment Facility and European Investment Bank (Akça, 2008: 70-73).

¹³ The parties to the Framework Convention on Climate Change (UNFCCC) that was signed in 1992 also approved the addition of Kyoto Protocol in 1997. However, it was not until 2005, when the Protocol entered into force and the legally binding limits for industrialized countries on their CO2 emission levels started being implemented. For more information about the content of the Kyoto Protocol, please see Breidenich et al. (1998), Op. cit.

Especially after the global financial crisis in 2008, investing in renewable energy sources started to be formulated more and more within the problematic of their advantages for the economies beyond the energy security and environmental policies for climate change. The rising interest in RES investments can be observed by looking at the rise in the flow of money through the development assistance funds given by above-stated national and international credit institutions that increased from \$2 billion in 2008 to reach an amount of \$5 billion in 2009 (REN21, 2010: 9).

More importantly, governments started to consider promoting renewable energy investments as an important part of their economic recovery plans that aim to stimulate the economies as a result of the potential multiplier effect. The idea of using investments in green technologies to trigger a stimulus in the economies through the creation of new industries, sectors and employment is brought forward in a lot of countries. The total budget of funds devoted by world's major governments to be spend for renewable energy and energy efficiency through 'green stimulus' packages starting with 2008 is around \$188 billions (REN21, 2010: 27). There are a lot of studies published in order to present the estimated impacts of packages and policies promoting investments in renewable energies, such as the impact of the renewable energy policy of the EU on economic growth and employment levels (Ragwitz et al., 2009).¹⁴ Similarly, having been influenced from the 'courageous programme' of public spending launched by Franklin D. Roosevelt after the Great Crash in 1929, Green New Deal is proposed by a group of economists, politicians and businessman in UK in order to escape the effects of financial meltdown, climate change and peak oil¹⁵ (Green New Deal Group, 2008). In addition to a structural changes in financial and taxation systems, a sustained programme for investing in energy saving and low carbon energy systems as well as renewable energies are foreseen (ibid.).

¹⁴ In January 2008 European Commission proposed legally binding legislation to implement the Climate and Energy Package which includes the well-known '20-20-20' targets. The target has three pillars. Until 2020 it is aimed to decrease the greenhouse gas emissions of at least 20% below 1990 levels, providing 20% of the energy consumption of the EU from renewable resources and finally 20% reduction in primary energy use by improving energy efficiency (European Commission, 2010).

¹⁵ Although being a controversial issue due to the impossibility of making an exact estimation about the amount of fossil fuel reserves left, it is claimed that the point of peak oil when the expansion of oil production will not be possible is very soon. For more information about the peak oil and oil crunch discussions, please see the report of Green New Deal Group (2008: 18-22), Op. Cit.

It should not be not surprising to see that out of \$787 billion valued American Recovery and Reinvestment Act of 2009 (also known as Stimulus or Recovery Package), there have been nearly \$60 billion separated to be spend on alternative and clean energy, scientific research, and various environmental projects (Merchant, 2009). Nearly half of this ‘green’ spending is directed to renewable energies through direct and indirect incentives such as the \$16,8 billion provided for direct spending on renewable energy and energy efficiency programs and \$6 billion for renewable energy loans in order to fund renewable energy projects (ACORE, 2009). Moreover, \$500 million is devoted to train workers in the green energy sector and Investment Tax Credits (ITC) are prepared to be given to all kind of renewable energy investments (ibid.).

Although having been supported by the state incentives since the 1980s, the investments in electricity and energy generation from RES for commercial purposes boomed mainly in the 21st century (REN21, 2010: 27). Total investment numbers in renewable energy sources (even when the large hydro investments are excluded) reached \$150 billion in 2009 (ibid). Unsurprisingly, parallel to the rise of investments in RES, there was an increase in the number of states with policies and strategies for increasing the shares of renewable energy sources in their energy mixes. Similarly, the number of national governments with renewable energy policies and/or targets all around the world has increased from 55 countries in 2005 to more than 100 countries in early 2010 (REN21, 2010: 9). Moreover, the renewable energy policies renewable energy politics and policies began to be institutionalized not only in the national, but also in the international level. The foundation of International Renewable Energy Agency (IRENA) in 2009 with the aim of supporting the governments all around the world that want to increase their capacity, policy or knowledge levels about renewable energy as well as helping to improve the finance flow and know-how among the existing organizations can be a good example of such an institutionalization in the global level (REN21, 2010: 36).

Having a look at the reasons of the state support for promoting electricity production from renewable energy sources, the next step would be to pay attention to the rationalities of government for renewable energy investments and technologies. The following quote taken from the speech of the current US President Barack Obama about

making the renewable energies ‘profitable’ for not only environmental and security but also economic reasons can be useful to show the emphasis on RES as a business:

‘To truly transform our economy, protect our security, and save our planet from the ravages of climate change, we need to ultimately make clean, renewable energy the profitable kind of energy.’
Barack OBAMA
(Address to Joint Session of Congress, Feb. 24, 2009 cited in 25.02.2009 dated the Guardian Newspaper)

It is important to notice the fact that, although investments in renewable energy technologies are supported by the states, the investment decisions are not taken by the states in opposition to the developmentalist rationality; but rather by the private sector in line with the neoliberal art of government. Therefore; the renewable energies as well as other green energies, which are presented to be a solution for the problematic of energy security, environmental concerns, fostering technological innovation and economic benefits, were new areas to introduce the market logic as the regulatory principle. As it is discussed in Chapter 2, the state had the role of setting the legal frameworks and rules for these new markets to be formed. That is why; making policies to support renewable energy can be also seen as a battleground in which different rationalities and forces are trying to be influential to create and shape those new markets. This situation is actually valid not only for the politics of renewable energy policies but also in other cases of new technologies diffusions, where ‘the firms compete not only in the market for goods and services but also to gain influence over the institutional framework’ (Van de Ven and Graud, 1989; Davies, 1996 cited in Jacobsson & Lauber, 2006).

3.3 Incentive Mechanisms to Support RES Investments

It is also important to understand how the incentive mechanisms of the states function and what kind of tools are used to create and shape the renewable energy markets which will emerge as a result of the promotion of the investments in RES. This section aims to provide some basic information about the mostly preferred incentive mechanisms in order to be able understand the options for that Turkish policymakers had while designing the country’s renewable energy policies.

a) Feed - in Tariffs (FIT) and Premium

Feed-in tariffs are one of the main instruments preferred by European governments to promote the investments in renewable energy sources (Ackermann et al., 2001: 198). The main working principle of FIT is to give confidence to the investors by providing purchasing and price guarantee for the electricity to be produced from RES for relatively long term such as the first 10 to 20 years after the power plant starts to operate (Deloitte, 2011: 3). The purchasing guarantee is given as a result of the obligation introduced for power utilities to buy the electricity generated from renewable energy sources (Akça, 2008: 81). However, the tariff rates need to be set correctly in order not to have unexpected results such as more or less investments than wished by the governments. Moreover, the rates needs adjustment from time to time in line with the fall in investment costs due to the technological advancements (Deloitte, 2011: 3). Feed-in tariffs are especially suitable to promote the spread of new technologies, for example, the emergence of largest market for wind turbine generators in Germany was mainly due to the high tariff rates set (Ackermann et al., 2001: 199).

If wanted, it is possible to introduce competition to the incentive systems by paying a fixed premium rate over the market price of electricity rather than proposing a fixed price for a long time period (Akça, 2008: 81). The burden of the difference between the paid price and the market price, in other words the premium level, which varies depending on the technology and capacity of the power plant; can be shared among all consumers, among the consumers of utilities which are obliged to buy the electricity generated from renewable energy sources or by all tax payers (ibid.).

b) Quota Systems and Green Certificate Markets

Instead of a certain price level, a minimum share of compulsory capacity within the total capacity is determined for the utilities which has to buy the electricity generated from RES (Akça, 2008: 85). This amount of electricity generated from RES can be produced by the utilities themselves as well as being bought from other producers and the price of electricity is totally defined at the electricity market (ibid.). There are also 'green certificates' or similar type of legal documents introduced in order to differentiate the producers that fulfil the requirements and proved that they generate

electricity from the RES (Deloitte, 2011: 3). These certificates can be later sold or purchased in the Tradable Green Certificate (TGC) Markets, meaning that the price of the electricity generated from RES depends not only on the price determined at the electricity market but also on the cost of certificates determined at TGC market (Akça, 2008: 88-9).

The British government has been one of the countries which preferred to use quota systems in order to provide ‘maximum levels of competition’ while promoting the renewable energy (Toke & Lauber, 2007: 681).¹⁶ A market-based scheme called ‘Renewables Obligation’ (RO) was announced in 2002, which introduced some increasing targets for the electricity suppliers to provide a share of their electricity from RES as well as some penalties for the electricity suppliers to be paid in case of not being able to meet these targets (ibid). Despite being one of the most common incentive mechanisms like feed- in tariffs, there are some discussions about the effectiveness of quota and green certificate systems in stimulating the investments when they are not combined with other incentive instruments (Deloitte, 2011: 3).

c) Tax Incentives

There are various types of tax incentives that are used as financial instruments to promote renewable energy investments (Akça, 2008: 94). The tax incentives can be categorised mainly as investment tax incentives, production tax incentives and other tax incentives such as property tax incentives (ibid.). Especially investment tax incentives can be used in making investments in renewable energies more attractive by reducing the investment costs (ibid.). However, if no differentiation is done among the tax incentive levels for different technologies, an unwanted result of tax reductions or incentives given to renewable energy investments could be to cause a tendency towards the investments with only the lowest cost technologies (Deloitte, 2011: 7). Secondly, the incentives are expected to create a bigger the burden on the public budget compared to the feed-in tariff and quota systems (ibid.).

¹⁶ In order to have more insight into the differences in Anglo Saxon and German neoliberal art of governing the incentive mechanisms for financing renewable energy investments, please see Toke & Lauber (2007), Op. cit.

d) Tendering Systems

Tendering is a ‘competitive bidding procedure’ applied in order to determine who is going to invest in a certain region (Akça, 2008: 87). The potential investors gives offers for a region whose capacity or feasibility studies are completed and the lowest offer wins the right to make the investment in that region/area (Deloitte, 2011: 7). The winner of the tender is generally given a fixed price guarantee for long periods such as 10 or 25 years in return of the electricity they would generate from RES (ibid.). The system aims to maintain the competition in the renewable energy investments while enabling the lowest investment costs (ibid.). Although European Union countries, which have a relatively older history with renewable energy, are abandoning the tendering systems; Turkey still prefers to open tenders in order to determine the investors in case of the existence of multiple license applications for the same regions (ibid.).¹⁷ It is seen that if the penalty mechanisms for the winners who did not realise their investments within a certain period of time are not set and implemented clearly, the tendering systems could not succeed in creating the desired impact for prospering the investments in RES (ibid.).

To summarize, it is possible to say that there are different incentive mechanisms for promoting private sector investments in RES implemented by different countries, depending on the initial position of the private sector investments and the type of technologies that are aimed to be supported, but most importantly; the struggles and compromises of the social forces about the renewable energy policies in line with the unique characteristics of the (neoliberal) art of government dominating in that country.

4. Some Background Information about Turkey

Having been elaborated on some key concepts such as traditional and alternative energy sources, the problematizations of renewable energy and the support mechanisms of the states; this chapter first provides an insight to the politics of Turkey by making brief definitions of some rationalities detected to be influential in Turkish politics in general, whose influences on shaping the renewable energy policies are later going to be discussed in detail. Additionally, important facts regarding the energy supply mix of

¹⁷ For more information about different types of incentive policies implemented by different countries in order to support investments in RES, please see Appendix (Table 1).

Turkey, energy consumption patterns, bilateral or international agreements as well as the liberalisation of the Turkish electricity market will be given in order to be able to better understand the material capabilities, ideas and institutions that are shaping the Turkish energy policies.

4.1 Turkish State as the Playground of Different Rationalities

Starting with the foundation of the Turkish Republic, there have been different rationalities of government influential in determining the dynamics of the Turkish state according to the state and society relations at that time (Tuncer, 2011). As stated in Chapter 2, states are not monolithic but rather like battlefields in which the state policies are shaped according to the competing strategies and state projects of certain rationalities. Sometimes one of those state projects starts to be more dominant; however, it does not mean that neither the social forces having other rationalities vanish nor the impact of the other rationalities in directing the state policies disappear. The scope and borders of the impact of the dominant discourse and other rationalities in each policy area is shaped according to the struggles of the different state projects of different social forces. It is important to note that this section pictures only the general framework of not all but only three of the rationalities that have been influential at the Turkish state until today and saves their struggle during the formation of renewable energy policies to the next chapter.

Developmentalism is the first rationality of government for our concern which has been dominant in directing the state policies in Turkey for many years starting with the military coup of 1960 (Tuncer, 2011: 121). As it is correctly stated by Adaman & Arsel (2005), developmentalism in Turkey has its roots in the Kemalist goal of ‘catching up’ with the level of Western civilizations and is used ‘an indispensable tool for the legitimization of the state’ (Adaman & Arsel, 2005: 293-94). The goal of economic growth was not seen as an end in itself but rather as one of the necessary conditions to maintain the political independency of the nation and to close the gaps between the ‘the ideal models’ (e.g. the European Union) (ibid.). It is important to note the nationalist element of the developmentalist rationality in Turkey; however, it differentiates itself from the ultra-nationalist movement mainly due to the flexibility and openness of the

developmentalists for the changes in the world in order to be able to reach the level of modern civilizations (ibid.).

In addition to the important role of the bureaucracy in developmentalist rationalities mentioned in Chapter 2, Adaman & Arsel (2005) underlines the elitist and etatist characteristics of the ‘father state’, which has its roots in the Turkish modernization.¹⁸ Moreover, the developmentalists put great emphasis on the usage of central state as an essential tool to lead the poor and uneducated Turkish ‘society’ out of the bad times by providing the infrastructure and helping the formation of national bourgeoisie through the public investments (Adaman & Arsel, 2005 and Erensu, 2011). Therefore, state planning was also a crucial element of the developmentalist state project which is stabilized in the Turkish state with the foundation of the State Planning Organisation in 1960 as well as the Import Substitution Industrialisation (ISI) strategies implemented to organise the trade and production of the country (Altunışık & Tür, 2005: 73 and Tuncer, 2011: 128).

The second rationality of government whose footprints on the Turkish state will be traced is neoliberal rationality. Altunışık & Tür (2005) mentions that the private sector was given an importance as a part of the mixed economy model of the Turkish state as well as the state and private sector cooperation established during the implementation of ISI strategies of the developmentalist rationality as stated in Chapter 2. However, the role of private sector in taking the investment decisions has increased dramatically when the neoliberal state project dominated over the developmentalist rationality in Turkey starting with the end of 1970s, mainly due to the influence of the external actors and the globalization of the neoliberalism, (Tuncer, 2011: 140). The previous state restrictions on the topics such as production as well as private and industrial consumption of the electricity and oil was criticized by the Prime Minister Turgut Ozal and export- led growth through the private sector contribution was promoted instead (Tuncer, 2011: 148 and Waterbury, 2012). Therefore, the first steps towards the institutional stabilization of the neoliberal rationality of government through the first liberalization and privatization attempts have already been taken in 1980s, but it was in

¹⁸ For more information about the characteristics of the Turkish modernization, please see Eisenstadt (1984), Op.cit.

the 1990s when the market formation process in finance and energy sectors speeded up (Cizre-Sakallioglu & Yeldan, 2000: 484).

Turkey's transition to the neoliberal form of government gained another dimension when it started to dominate the political power relations after the Justice and Development Party (AKP) came to the power in the 2002 elections (Tuncer, 2011: 11). Accordingly, under the leadership of the ruling party Turkey has been experiencing a unique transformation through the rapid structural reform process done in order to integrate itself to the European Union and the world markets in line with the political project of neoliberal globalization. (ibid: 13).¹⁹ Perhaps the best summary of the emergence of neoliberal rationality of government as a state project in Turkey can be found at the following sentence of the former Minister of Energy and Natural Resources:

‘Turkey is following a restructuring process aimed at instituting competitive markets, primarily as it is per the norms of the European Union (but also) because of the necessities of economics development and integration with the global economy.’

Hilmi GÜLER

(Untitled speech at the Turkish Parliament, 10.11.2004, cited in Yüksel, 2010: 1470)

The final rationality of government is neomercantilism, whose examples can be found at the post-war monetary policy of France or trade and agricultural policy of the European Union (Schmiegelow et al., 2009 and Raza, 2007). After the global economic crisis in September 2008, there has been a rise in the impact of the neomercantilist rationality all around the world despite staying within the framework of neoliberalism and the neomercantilist projects were included in certain state policies in line with the characteristics of the embedded neoliberalism. The protectionist and nationalist elements can be found at the recovery policies of the USA, United Kingdom and France as well as the rising import tariffs of some countries such as Russia and India despite their G20 memberships (Hic, 2009:52). Although it has never been the dominant rationality of government in Turkey, it is still possible to observe the slight reflections

¹⁹ For more information about the globalization of neoliberal government technology and the changes in the state and society relations in Turkey after the AKP becoming the ruling party, please see Tuncer (2011), Op. cit.

of neomercantilist rationality at some certain policy fields of the Turkish government in the last few years.

To illustrate, there was a notice issued by the Prime Ministry about not making any regulations that forbid the purchase of domestically produced goods or offer any other countries products in the public procurements (Aktifhaber, 2011). Moreover, there is an emphasis on Turkey's strategy for export-oriented production as well as the focus on domestic production. Due to the increasing import levels in automotive industry in 2011, which contribute to negative trade balances and the foreseen shrinkage in the import demand of the European markets, there has been a pressure of the Prime Minister Tayyip Erdogan on the Turkish businessman to start producing '100% domestic auto' (Hürriyet Newspaper, 2011). The rising voice of the social forces having neomercantilist rationality can be better seen at the reply of Anadolu Holding President of the Board Tuncay Özilhan to the Prime Minister's wish by stating that land or R&D incentives will not be enough for the production of the domestic auto, either capital/credit support of the state or import prohibitions for autos should be implemented (Vatan Newspaper, 2011).

4.2 Energy Resources and Energy Politics in Turkey

Having mentioned the struggles of the developmentalist, neoliberal and neomercantilist rationalities since the 1960s to shape the state policies and the state formation process in Turkey, the next section will give an insight into the current energy policies. It is possible to observe the reflections of the same trends of rising interest in renewable energy sources in Turkey too. However, there are different reasons behind the problematization of the state support schemes for the electricity generated from RES due to the differences in the material capabilities (e.g. owned and imported energy sources), ideas (e.g. environmental concerns, economic growth targets) and power relations among social forces (e.g. lobbies).

Although Turkey has a wide range of natural energy resources; the main energy resources can be narrowed down to coal, lignite, asphaltite, petroleum, natural gas,

hydro and geothermal energy (Kiliç & Kaya, 2007: 1313).²⁰ There occurs a problem while the main energy resources of Turkey are coal and lignite; whereas, the type of energy source with the biggest share in the primary energy consumption is oil (43,8% in 2000) and natural gas (17,6% in 2000) (Oğulata, 2003: 472).²¹ Therefore, the types of Turkey's major primary energy supplies and the types of main primary energy consumption do not exactly match. Moreover, the energy demand is expected to expand even more for the next 10 years²² considering the heavy focus of the current government on economic growth (AKP, 2012). When the mismatch of the types of energy supplies and demand is combined with the growing energy consumption of the country due to the growth oriented policies, it leads to an increasing import dependency for energy supplies, especially to oil and natural gas producer countries in the Middle East and Russia (Erdem, 2010: 2711).

The share of energy supplies imported from other countries to meet the Turkey's energy consumption has increased rapidly since 2000s and the energy dependency levels have always been as high as 70% since 2003 and even around 75% in 2010 (Deloitte, 2011: 7).²³ If we look at the content of the imported energy sources, it will be seen that in 2009 Turkey provided 98% of its oil demand, 91% of natural gas demand (in total %72 of its energy demand) from other countries (EÜAŞ, 2010: 7). Therefore, Turkey is a party of not only various long term bilateral energy agreements with Russia, Iran and Azerbaijan; but also international agreements as a hub between Russian Federation, Caspian Region, Middle East and the European Union countries (Bilgin, 2010: 83-4).

Another important point about the energy consumption patterns of Turkey is about the transformation of primary energy sources into secondary energy types, which means that most of the natural gas, coal or hydropower are used to generate electricity. To

²⁰ In order to have a better idea about the shares of Turkey's primary energy supplies, please see Appendix (Figure 2).

²¹ In order to find out more about the changes in the share of the different energy sources in Turkey's primary energy consumption between 1985-2000, please see Appendix (Figure 3).

²² In order to have more detailed information about the current energy mix of Turkey and the primary energy consumption projections for the period between 2000 and 2020, please see Erdem (2010), op. cit.

²³ In order to see the rising trend of the import dependency levels of Turkey in energy supplies, please see Appendix (Figure 4).

illustrate, there is a continuous increase in the share of electricity in final energy consumption of Turkey from 9,3% in 1990 to reach a rate of 16,5% in 2000 (Yüksel, 2010: 1470-71).²⁴ Nearly half (45,9% in 2010) of the total electricity production is obtained from natural gas, causing a rise at the energy import levels every time when the electricity consumption increases (EÜAŞ, 2010: 7). Previously, Turkey has experienced many examples of energy shortages, and due to the urgency of the situation, the electricity demand had to be met with the electricity purchased at relatively high prices from the power plants done with the state guarantee under the Built- Operate- Transfer (BOT) schemes (TBMM Session No: 96, 2005: 32).

Having been a country that is heavily dependent on fossil fuels such as crude oil, coal and natural gas for nearly 90% of its energy demand, Turkey is facing problems related to the rising oil prices and environmental problems like other countries (Akça, 2008: 87). But the main challenge in the field of energy for the current Turkish government is how to meet the rising energy demand, given the facts about already high import dependency rates of energy resources. Therefore, the main aim of the Turkish energy policy is to maintain the energy supply security (MFA, 2009). After that, ‘increasing the share of renewable energy resources within the energy supply’ ranks at the second place at the aims listed at the 2010-2014 Strategic Plan of the Turkish Ministry of Energy and Natural Resources (MENR, 2010: 16). There is also an ambitious target set for the country such as providing 30% of its electricity production from renewable energy resources until 2023 (ibid.). However, increasing the share of renewable energy sources in the energy mix is not the only solution proposed by the AKP government to provide the energy supply security. Beside its long-term agreements for the oil and natural gas imports; despite all the discussions after the Fukushima accident, the Turkish government took its first step in order to add the nuclear energy to Turkey’s energy portfolio and signed an agreement on 21. 07. 2010 with the Russian Federation for the construction and operation of a nuclear power plant in Akkuyu, in southern Turkey (EÜAŞ, 2010: 8).

²⁴ For more information about the shares of different energy types in final energy consumption of the Turkey between 1990 and 2000, please see Appendix (Table 2).

Nevertheless, those are not the only agreements that should be taken into consideration while trying to understand the determinants of the Turkish energy policies. Not only in Turkey but also in many other national and supranational political bodies i.e. the EU; energy and foreign policy are two closely connected areas, which does not always have clear-cut borders in between. Therefore, it is very likely that energy policies are used as a tool for foreign affairs as well as them being shaped by the results of the foreign policies. Consequently, as a result of ratifying both of the main agreements of the climate policy, i.e. the Framework Convention of Climate Change (UNFCCC) in 2004 and Kyoto Protocol in 2009, Turkey now has to adjust itself to the frameworks drawn by international agreements by forming its national energy policies, such as fulfilling certain responsibilities regarding its CO₂ levels etc. (Toklu et al., 2010: 1178).

To summarize, not only the concerns regarding energy supply security but also the obligations resulting from the international agreements affected the development of renewable energy policies in Turkey. Turkey is said to have a considerable potential of RES that can be used for different purposes such as thermal heating from geothermal energy as well as electricity production from hydro, solar, wind and biomass (Toklu et al., 2010: 1174). Hydropower is the most widely used renewable energy source in Turkey for electricity generation. Hydroelectric ranks the second with 24,5% of the total electricity generation and the rest of the electricity production comes from domestic as well as imported coal, fuel oil and partly from wind, geothermal and biogas power (ibid.). Despite having been benefiting from some of the renewable sources for electricity generation; according to a report published by Deloitte, Turkey is far away from fully enjoying its potential power from renewable energy sources (Deloitte, 2011: 15).²⁵ Energy experts are said to have calculated Turkey to be in need of 200.000 billion Euro investments in order to realise its renewable energy potential (Gelecegin Enerjisi, 2011). Looking at the fact that Turkey has increased its position by three points in the last three months and gained the 24th place in the list of May 2011 dated issue of Ernst & Young's Renewable Energy Attractiveness Index, it is possible to conclude that

²⁵ For more information about the potential and installed powers of different renewable energy sources in Turkey, please see Appendix (Figure 4).

Turkey is becoming more attractive for renewable energy investors day by day, which makes the topic of renewable energy policies even more important (Ernst&Young, 2011: 15).

4.3 Liberalization of the Turkish Electricity Market

The final type of energy that is going to be generated as a result of the discussed state supports for the commercial usage of renewable energy sources is neither heat nor the stream power, but rather electricity. That is why; electricity market is directly affected from any changes in renewable energy strategies, policies or laws while electricity generation and purchase are the final output of the RES usage. Before starting to talk about the legal developments regarding the renewable energy policies, it is necessary to have an insight into the structural transformation that the electricity market in Turkey has undergone in order to be integrated to the world markets as a result of the institutionalisation of the neoliberal rationality in Turkey (Tuncer, 2011: 224).

As Kaya (2006) stated, after the independence in 1923s, state has been the main actor which governs the development of the energy sector through the public investments. However, the dominant role of state in energy issues as a result of the developmentalist rationality started to change in 1980s due to the electricity market liberalization and privatization waves that were put forward by the neoliberal rationality which started to spread at the global level and dominate the world order as mentioned in the previous Chapters. Therefore, Turkey has made several privatization attempts not only in electricity sector but also in other energy sub-sectors such as oil, gas, and coal (Çelebi, 2006: 16). However, most of the privatization attempts in electricity sector during 1980s and 1990s failed to create the desired competitiveness at the electricity markets (Akça, 2008: 141). The first law which aimed to provide private sector participation in the energy sector was enforced in 1984 and enabled the purchase of electricity from new facilities to be built by private investors under a contract of Built Operate Transfer (BOT) (Cetin & Oguz, 2007: 1763). Existing generation and distribution assets could be also operated by a private enterprise with a contract of Transfer of Operating Rights (TOOR) (ibid.). However, it was only after 1994 that the energy sector became highly attractive for the private investors when the treasury

guarantees and tax exemptions were given to BOT projects (ibid.). Moreover, in 1997 it became possible to hold the ownership of the new thermal power plants that were built according to the licensing agreement of the Built Operate Own (BOO) model (ibid.).

It is possible to see that in line with the discussions about governmentalization of the state, during that transition period, the role of Turkish state in the field of energy investments did not decline but rather changed from being the only authority to take investment decisions into being a tool for supporting the private sector development. To illustrate, in addition to financing huge power plant investments with treasury guarantees; the state has undergone huge obligations in order to cover the market risk as a result of the ‘take or pay’ contracts signed among the private parties of BOT, BOO or TOOR models and the state institutions of TEAS and TEDAS for fixed quantities and prices over a time period of 15 to 30 years (Cetin & Oguz, 2007: 1763 and Toklu et al., 2010: 1181).

However, due to the financial crisis and the pressures of the International Monetary Fund (IMF) for the public spending cuts, the enforcement of treasury guarantees came to an end in 2000, except for 29 projects whose contracts were still valid.²⁶ If we have a look at some of the financial burden of the privatization attempts in Turkish energy sector on the public budget, it would be seen that the public loss of only those 29 power plants that continued to be operated was about \$ 2.3 billion in 4 years (SAYIŞTAY, 2004 cited in Akça, 2008: 141).

Remembering the triangular configuration of the forces that is mentioned by the Cox (1981), it is important to note the influence of the changes in *world order*, which can influence *the forms of state* through different *social forces*. After the introduction of the notion of privatization to the Turkish constitution, the structural changes to accomplish Turkey’s integration to the international markets continued with some other series of reforms such as the ones undergone to adapt the legal and institutional structures of Turkey to European standards (Kaya, 2006: 156). Moreover, in the case of Turkish energy market reform, there was a considerable influence of the

²⁶ Turkey signed several stand-by agreements with IMF some of them being in 1994, 2002 and 2005. Therefore, during that time periods, IMF has always been one of the actors actively involved in the Turkish economy. For more information about state-led energy policies and the change towards free market orientation, please see Chapter 2 in Çelebi (2006), Op. cit.

intergovernmental organizations such as IMF, World Bank and OECD as well as the EU, especially after the recognition of Turkey for the full membership candidacy in 1999 (Erdogdu, 2007: 986 and Cetin & Oguz, 2007: 1761).

Finally, the neoliberal rationality of government was officially introduced to the electricity sector with the enforcement of The Electricity Market Law (EML) (Law No: 4628, enactment date: 20.02.2001) in 2001, whose aim is stated as ‘establishment of a financially viable, stable and transparent electricity market under private law in a competitive environment and providing an independent regulation in this market’ (Akça, 2008: 142). A senior officer in Ministry of Energy and Natural Resources, who has taken part in the formation of renewable energy policies since 2000s, has stated that Turkey’s candidacy for the European Union membership has been one of the important drivers of the institutional changes, which later constituted the legal framework of the Turkish renewable energy market (Interview: MENR, 08.07.2011). He stated that harmonization with the EU was the main idea behind the Electricity Market Law in 2001 which aimed to form the market structure in the energy sector (ibid.).²⁷ Electricity market reform is a good example of the reflection of the changes in the world order, in line with the globalisation of the neoliberal rationality of government, on the forms of state in Turkey, through the influences of the social forces such as the EU that helped to the transformation of the state and society relations in order to be better integrated to the world markets (Tuncer, 2011: 188-189).

On the grounds of our discussion in the previous chapter about the different state projects, the repercussions of the neoliberal state project on electricity sector could be easily observed by searching for the key words such as ‘market’, ‘competition’ and ‘regulation’ at the aims section of the EML. Erdogdu (2009) mentions an important point regarding the change in the rationality governing the energy issue by stating that before the introduction of market logic with the EML, the price of the energy was determined only through the negotiations done for the bilateral contracts between the state and energy producers in line with the developmentalist rationality of government (Erdogdu, 2009: 1366). However, there were some institutional changes introduced in

²⁷ In order to have a look at the market structure of the Turkish electricity market after the liberalization of electricity market with the enforcement of EML, please see Appendix (Figure 6).

EML aiming at market liberalization such as the formation of (public owned) companies for electricity transmission, trading and generation (ibid.). Finally, the institutionalisation of the neoliberal rationality was complemented with the foundation of an independent authority for market regulation, Energy Market Regulatory Authority (EPDK) in order to regulate the competition of the newly formed energy market.

The foundation of EPDK was also the most important part of the Turkish Energy Market Reform concerning the steps towards the emergence of renewable energy policies in Turkey. Beside its main responsibilities of giving licenses for energy production, determination of tariff criteria and preparation of standards, EPDK was also given the responsibility of promoting renewable energy sources in the electricity market according to the Electricity Market Licensing Regulation (Erdogdu, 2009: 1366). As one of the officials in EPDK stated, since its foundation, their aim is to help Turkey adopt the renewable energy sources without causing any price discrimination for the other players in the electricity market (Interview: EPDK, 11.05.2011).

Hence, it is possible to conclude that the neoliberal rationality was stabilized in the institutional structure of the Turkish electricity sector and the market logic was introduced as the regulatory principle instead of the previous state-led investments of the developmentalist rationality as a result of those changes in the legal framework. Therefore, the policies of renewable energy are also formed within the borders of electricity market, whose legal framework was set according to the neoliberal rationality of government.

5. Renewable Energy Policies in Turkey

After having a look at the neoliberalist, developmentalist and neomercantilist rationalities of government, which were effective in shaping the state policies of as a result of the historical power configurations of the state and society relations, this chapter aims to go one step further by examining the formation of the policies regarding electricity generation from renewable energy sources in Turkey in the last decade. However, it is not preferred to follow the common path of perceiving the supports for renewable energy technologies and investments as a duty of the state for better futures with ecological and economical safety and making some recommendations for better state policies after listing the laws and legal developments in a chronological order.

Rather, the important points of the legal developments would be depicted together with the findings about the interaction of the historical structures and different rationalities of government that were influential in shaping the renewable energy policies in Turkey and some clues to understand the formation process and content of the latest Amendment to REL in 2010 would be collected.

5.1 Rising Interest about RES Investments in Turkey

Investing in renewable energy sources is not a brand new topic for a country like Turkey, because of its history with the hydropower, which is one of the first generation renewable energy technologies.²⁸ Due to the ambitious state dam construction programs since the 1930s, Turkey has become one of the world's most active hydro plant building countries in 2010 and some of that dams operate as hydroelectric power plants (HEPP) (Yüksel, 2010: 1473 and Rivers International cited in Erensu, 2011: 2). As stated before, the investments to the hydro power plants were done by the state in line with the developmentalist rationality of government. To illustrate, the huge networks of dams and irrigation channels done for Southeastern Anatolia Project (GAP) was an example of the developmentalist state projects due to its 'techno-scientific optimism, belief in mega projects and willingness to put economic development over other policy objectives' (Yüksel, 2010: 1473). An officer of Ministry of Energy and Natural Resources (MENR) summarized the first renewable policies by stating Turkey has tended to make investments in hydroelectric plants 'with the influence of the world trend' that from 1980s until the beginning of 2000, but the investment decisions were 'monopolized by the state' (Interview: MENR, 08.07.2011) Therefore, it is again important to remember the denaturalization of renewable energy sources in Chapter 3 and note that RES was used in Turkey even before the neoliberal state projects started to dominate the renewable energy policies.

However, the renewable energy sources that are promoted by state policies generally refer to the second-generation renewable energy technologies such as wind, photovoltaic and biomass. Despite the existence of some incentives after 2001 when EPDK was given the duty of promoting renewable sources, there were no national

²⁸ For more information about the categorisation of RES technologies, please return to Chapter 3 (Section 3.1).

policy for the promotion of electricity generation from renewable energy sources, especially through the private sector involvement (Toklu et al., 2010: 1181). That is why, the year 2003 is marked by scholars such as Erdogdu (2009) and Akça (2008) as the beginning of the policies for promoting renewable energy sources in Turkey when renewable energies were defined and some incentives for RES investments were introduced through the amendments to the Electricity Market Licensing Regulation.²⁹ Some of those incentives were 1% reduction of the construction licensing fees, exemption from annual licensing fees for the first 8 years or prioritizing the connection of renewable plants to the transmission (TEİAŞ) and/or distribution companies rather than introducing one of the support mechanisms mentioned in Chapter 3 (Akça, 2008: 146 and Erdogdu, 2009: 1366).

Not only the previously mentioned institutional changes in the electricity market resulting from the globalisation of the neoliberal rationality, but also the rising interest in green and sustainable economy in the world had its repercussions in Turkey. To illustrate, in a report by Price Waterhouse Coopers it is stated that, due to its energy shortages and high renewable energy potential, Turkey has become very attractive for the once international investors, especially for the once ‘national champions’, such as Edf, RWE, CEZ and Statkraft that were in search of new emerging markets to expand after the liberalization of their home markets (PWC, 2009: 9). Secondly, the rising interest of energy companies was combined with the increased capital flow from energy investment braches of international financial institutions such as Cogentrix and Goldman Sachs, especially for wind and hydro investments in Turkey (ibid.).

Moreover, as mentioned by Erensu (2011), Turkey’s ‘embrace of green energy solutions’ can not be considered independent of the ‘green’ and ‘sustainable’ changes in the policies and discourses of intergovernmental organizations such as OECD, World Bank and the European Union.³⁰ It is not surprising to see that Turkey also took its

²⁹ Electricity Market Licensing Regulation (No. 24386 date: 04.08.2002) was issued by Electricity Market Regulatory Authority (EMRA) after the enforcement of Electricity Market Law and it has been frequently changing through the amendments since then (EPDK, 2012).

³⁰ In order read a critical analysis of the World Bank’s involvement in spreading the green neoliberal logic through the tools of loans and expertise knowledge as well as development projects, please see Goldman (2005), Op. Cit.

share from that changes in the world order and received a US \$ 202.03 million loan from the World Bank in 2004 in order to be distributed as credits through intermediary banks to the investors who want to invest in facilities to generate electricity from renewable energy sources (Toklu et al., 2010: 1181). It is possible to see that the Renewable Energy Project of the World Bank aimed at deepening the existence of private sector and establishing the market logic at the emerging Turkish renewable energy sector ‘in a manner that is consistent with the electricity market liberalization program that Turkey has initiated’ (Andrew Vorkink, Country Director for Turkey cited at The World Bank, 2004) :

‘The project ties into the priorities of the Turkish Government including the development of indigenous and renewable resources, as well as the expansion of the private sector generation within the new market structure without requiring government guarantees. In line with the focus of the World Bank’s assistance program in Turkey, the project would support: convergence with the EU on environmental and renewable energy targets; and fiscal stabilization by spurring private sector investment in power generation without the government having to take on additional liabilities’ (The World Bank, 2004).

Therefore, private sector investments in the renewable energy technologies within the electricity market structure, whose foundations were laid during the EU harmonization process, was promoted with the financial support given by various international institutions some of which are the World Bank (WB), German Development Bank (KfW Bankengruppe), International Bank of Restructuring and Development (IBRD), Council of European Development Bank (CEDB), Agence Française de Développement (AFD) and Japan Bank for International Cooperation and International Finance Corporation (JBIC) (PWC, 2009: 10).

On the other hand, the renewable energy sector was also attractive for the local companies who were motivated by the profits gained from RES investments in Europe. However, it is stated that the Turkish companies established a lot of joint ventures with the foreign companies in order to be able to get the credits given by international finance institutions (Interview: TÜREB, 08.07.2011). Moreover, the banks to provide the financial support for the renewable energy projects were generally chosen by the local companies from the same countries where the renewable energy technologies are

going to be imported (Interview: BiyogazDer, 13.07.2011). As a result of the increase in financial supports given by international institutions, the national banks were also encouraged to give credits to the investments in renewable energy sources (PWC, 2009: 10). In the end, the ‘simple bilateral desk of asset sales’ was turned into a ‘multiplayer arena’ where a lot of different actors are involved in the renewable energy projects (ibid.).³¹

As stated in the previous Chapter, Turkey has signed the Framework Convention of Climate Change (UNFCCC) in 2004; however, a representative of TÜREB mentioned that the pressure of the private sector, meaning foreign and domestic investors interested in the RES sector, on the Turkish government to prepare a renewable energy law was greater than the impacts of the international agreements about the climate change. Likewise, the representative of BiyogazDer mentioned that the private companies were the ones to force the state officers to promote RES by saying that they will bring international funds from the EU, the WB or the Islamic Development Bank to Turkey. Otherwise, the state officers did not want to undergo the responsibility of financing the RES investments by making laws to promote renewable energy sources (Interview: BiyogazDer, 13.07.2011).

Therefore, it is possible to conclude that as a result of the rising interest in renewable energy investments in Turkey, the RES market started to emerge in line with the neoliberal rationality of government and the state was expected to set the legal framework of that emerging market. Remembering the discussions about the governmentalization of the state and the neoliberal state in Chapter 3, the withdrawal of the Turkish state from the energy sector through liberalization and privatisation practices should not constitute a contrast with the important role given the state in order to regulate the renewable energy market.

5.2 Towards the Renewable Energy Law

Due to the pressures coming from domestic and foreign investors, or social forces in other words, and the reflections of the changing world order on the forms of state, the

³¹ For more information about the actors of renewable energy projects, please see Appendix (Figure 7).

first step towards the formulation of a law to promote renewable energy investments was taken by the Turkish government. Ministry of Energy and Natural Resources started to work on the draft of Law Concerning the Use of Renewable Resources for the Generation of Electricity Energy (Renewable Energy Law) in 2004. Afterwards, the Minister of Energy and Natural Resources Hilmi Güler brought the draft Law to the Turkish Grand National Assembly (TBMM) in order it to be discussed at the relevant Expertise Commissions.³²

The former President of the TBMM Expertise Commission about Industry, Trade, Energy, Natural Resources, Information and Technology explained the period after the draft Law started to be discussed at the Expertise Commission as follows: ‘Minister of Energy send a draft, which we thought to have been spoken with the government. We thought that it would pass easily. We did the arrangements regarding the prices. Arguments occurred. Hilmi Güler was the Minister (of Energy). The government withdraw (the law) from the plenary session. Through Ali Babacan, the prices are told to be high’ (Interview: President of TBMM Commission, 07.07.2011).³³ He also added that the reason why the draft Law was withdrawn for one year was the ‘allergy’ of some groups against the renewable energy (ibid.). Whereas, the official reason of the withdrawal was the opposition of the State Minister in charge of Economy Ali Babacan who is told to have found the levels of the FIT prices very high (Gürbüz, 2009 and Interview: President of TBMM Commission, 07.07.2011). However, in the light of all the previous discussions about the historical configuration of forces and rationalities of government, we hope to be able to provide a better and analytical insight of the politics of renewable energy policies in Turkey.

Approval of a law about renewable energies in Turkey did not only mean to regulate an emerging *market* but also to promote the electricity generation from first and second generation renewable energy technologies through the *state support schemes* given to the investments in RES. As soon as the preparations of a draft Law to promote

³² For more information about the stages of law making process in Turkey, please see Appendix (Figure 8).

³³ The original text in Turkish is as follows: ‘Enerji Bakanı hükümetle görüşüğünü sandığımız bir tasarı gönderdi. Biz kolayca geçecek zannettik. Biz fiyatlarla ilgili düzenlemeler yaptık. Tartışma oldu. Hilmi Güler bakandı. Genel Kuruldan hükümet geri çekti. Ali Babacan aracılığıyla fiyatlar yüksek denildi’ (Interview: Former President of TBMM Expertise Commission, 07.07.2011).

electricity generation from renewable energy sources was launched in 2004, there have been a lot of associations founded related to renewable energy sources (Interview: President of TBMM Commission, 07.07.2011). The former President of the TBMM Expertise Commission also added that he was paid a lot of visits by those associations (ibid.). The word ‘allergy’ is probably used to refer the unhappiness of domestic and foreign companies, which then had to share their markets in the Turkish energy sector with a new type of energy source and technology.

As it is stated in the previous Chapter; coal (both domestic and imported), oil and natural gas are Turkey’s main energy sources and according to the information gathered from the minutes of the discussions at the plenary sessions of TBMM and the interviewees, they have a well-established and strong lobby power (Interview: President of TBMM Commission, 07.07.2011 and TBMM Session No: 95-96, 2005). According to the information gathered from the visual media and one of the interviewees, the State Minister in charge of Economy Mr. Babacan, who is told to be against the draft REL because of its possible financial burdens on the state budget, openly mentioned his contact with fossil fuel companies in a meeting with the Turkish businessman (Gürbüz, 2009). Mr. Babacan stated that during his meetings in the USA with the presidents of some companies such as Shell, BP and American Energy Agency he was told that ‘the renewable energy is unnecessary’, which causes some doubts about the real reasons behind his opposition to the Law (ibid.). That is why, many people named lobbies as the actual reason of the delay in Law during the interviews (Interview: TEİAŞ, 11.05.2011 and BiyogazDer, 13.07.2011). The activities of the lobbies against renewable energies were also mentioned by the Minister of Energy and Natural Resources Hilmi Güler himself during the plenary session of the TBMM in 2005, when the Renewable Energy Law was discussed for the second time:

‘Renewable energy is a law, which has been accepted by all the world and tried to be hindered, one way or the other, by certain lobbies. However, we continued our decisive

attitude in a brave and conscious way and we are making this law even if it has been late' (TBMM Session No: 95, 2005: 36).³⁴

Within our analysis, the above mentioned lobby activities are seen as a part of a struggle among different social forces with different material capabilities and ideas during the institutionalization of state supports to renewable energy sources. Jacobsson & Bergek (2004) summarizes the dynamics of such struggles, especially, in the case of the diffusion of renewable energy technologies as follows:

'... the proponents of the established system often attempt to block the diffusion of renewables by influencing the institutional framework so that it continues to be to their advantage. Indeed, the current debate over the future of the energy system involves intense lobbying over both policy goals and design of the institutional framework. Policy making is thus a highly political business' (Jacobsson & Bergek, 2004: 816-817).

The same fact about the formation of renewable energy policies being not only a technical but also a political business was also emphasized by the officials of MENR by saying that 'energy sector have to take politics into consideration' (Interview: MENR, 10.05.2011). Therefore, it is possible to trace the influences of not only the foreign and domestic investors but also the rival lobbies, which do not want the diversification of energy sources in electricity market and energy sector, such as the privileged groups that have done profitable agreements in the case of energy shortages through BOT model³⁵ or advocates of conventional technologies such as imported coal, imported natural gas and nuclear santral (TBMM Session No: 96, 2005: 44 and Interview: BiyogazDer, 13.07.2011). Consequently, the concerns of other actors in energy sector was also reflected by the politicians to the plenary sessions of TBMM with the questions about why the domestic coal production is not given any state support which could actually play an important role in providing Turkey's energy security (TBMM Session No: 95, 2005: 45 and Interview: MENR, 08.07.2011).

³⁴ The original text in Turkish is as follows: 'Yenilenebilir enerji, bütün dünyanın kabul ettiği ve birtakım lobilerin engellemeye çalıştığı - şu ya da bu şekilde- bir yasa. Ancak, biz burada kararlı tutumumuzu gayet cesurca ve bilinçli bir şekilde sürdürdük ve geç de olsa bu yasayı çıkarıyoruz' (TBMM Session No: 94, 2005: 36).

³⁵ For more information about the natural gas and BOT agreements that Turkey has undergone, please return to Chapter 4 (Section 4.2).

When new social forces having material capabilities of renewable energies such as wind, hydro and solar emerged with the ideas such as energy independency, clean and sustainable energy to problematize the current situation and asked for the state support to RES, the old social forces such as coal, oil, natural gas that had shares in the Turkish energy sector replied with the argumentations of renewables being unnecessary and RES supports causing burden on the state budget. To summarize, the first emphasis of the discussions before and during the formation of the REL in Turkey was about the question of whether and to what extent the energy sector can be opened up to the competition with renewable energy sources through the proposed REL.

One year later, the draft Renewable Energy Law to introduce state supports for electricity generation from renewable energy sources was sent to TBMM again (Interview: President of TBMM Commission, 07.07.2011). Finally, the Law on Utilization of Renewable Resources for the Purpose of Generating Electrical Energy (Law No. 5346, aka Renewable Energy Law (REL)) was ratified on 10 May 2005 and published in the Official Gazette on 18 May 2005. Although it is not aimed to get into the details of all the articles of neither the REL nor the Amendment Law, it is necessary to mention some of the important points that are relevant for our analysis. Some of the topics proposed at final version of the REL are as follows:

- a) The renewable energy resources are defined to be ‘non-fossil energy resources such as hydraulic, wind, solar, geothermal, biomass, biogas, wave, current and tidal energy’ (REL, 2005). Therefore, the run-of-river type hydroelectric plants with a reservoir areas of less than 15 km² were also supported within the scope of the Law as the renewable energy plants (Akça, 2008: 148).
- b) The state support scheme to be implemented until the end of 2011 for the purchase of electricity generated from all types of renewable energy sources was chosen as a type of *feed in tariff (FIT) system* (Akça, 2008: 148). Although the FIT price proposed for the purchase of electricity from RES in the first version of the draft Law was written as not less than 5 € cent/kWh, these parts were later removed and replaced with the expression of ‘the Turkish average wholesale price in the previous year determined by EPDK’ (Öztürk & Ergün, 2005: 5 and REL, 2005).

- c) *RES Certificate* must be obtained from EPDK if the legal entities holding a generation license want to feed the electricity generated from renewable energy sources to the grid in return for the wholesale price in the previous year, or in other words the fixed feed in tariff rates (REL, 2005).³⁶
- d) Each retail license holder has to purchase RES certified electrical energy at the amounts announced by EPDK according to the share of the energy amount he has sold in the previous calendar year to the total energy amount sold by all retail companies nation- wide (REL, 2005 and Akça, 2008: 148). Therefore, a *purchase guarantee* was given to the RES certified generators that produce electricity from renewable energy plants not older than 7 years (REL, 2005 and PWC, 2009: 8).

After it was seen that the formation of the renewable energy sector in Turkey was inevitable when the REL was discussed at the plenary session of TBMM again in 2005, the main point of the discussions started to focus on the principles of the renewable energy sector which was to be shaped by the state supports in the Law. Although all of the parties in the TBMM agreed on the need to promote the RES, there were a lot of debates about the support mechanism to the electricity producers with RES certifications. Not only the purchase guarantee but also the price guarantee was questioned by the deputies in the plenary sessions of TBMM (TBMM Session No: 95, 2005:45 and TBMM Session No: 96, 2005: 37).

Moreover, the struggle between the developmentalist and neoliberal rationality of government was seen obviously during the discussions about the private sector involvement in the usage of renewable energy sources. The deputies from the main opposition party (Republican People's Party (CHP)) criticised the draft by stating that the public authorities are left out of the renewable energy sector and their roles of directing, organising and regulating to maintain more social utility are excluded, which has left the natural resources in the hands of the profitability concerns of private sector and foreign capital (TBMM Session No: 96, 2005: 27). It is stated that the Law would

³⁶ For more information about the path of electricity generated by autoproducers (including RES plants) until it is sold to the eligible and non-eligible customers through one of the depicted market mechanisms, please see Appendix (Figure 6).

contribute to the transfer of the sources from the public institutions to the private sector which had already been given some incentives (ibid.).

The change in the role of the state from being the sole owner of the investment decisions into being a legislative power creating competitive markets, in which everyone can take part in within the rules determined by the regulatory state, can be best traced in the following sentences:

‘Previously water belonged only to the state as a result of the etatist understanding. Demirel (former Prime Minister and 9th President of Turkey) used to make 1-2 dams through the General Directorate of State Hydrolic Works (DSİ) and became ‘King of the Dams’. We have changed the regulations and said that water did not belong to the state but the nation and everyone can produce electricity. However, we said that it is needed to get permission from EPDK. They have built hydroelectric power plant (HEPP) over every river. The people in Anatolia got into the renewable energy business, everyone has 2-3 HEPP at the moment’ (Interview: President of TBMM Commission, 07.07.2011).³⁷

The replacement of the previously dominant developmentalist rationality with the neoliberal state project in the field of renewable energy policies was once more underlined when it was asked to the Former President of TBMM Expertise Commission, who is also a deputy from the governing party (AKP), whether it was not possible for the state to make investments to renewable energy sources. He stated that even if there were not enough level of private sector involvement in renewable energy sector, it is out of the question that the state makes the investments since the free market rules are valid (Interview: President of TBMM Commission, 07.07.2011). The main reason of the price guarantee given to the electricity from RES through the feed in tariffs is explained as increasing the credibility of the private sector investors during their credit applications to the banks (ibid.).

To sum up, it would not be wrong to conclude that, despite the struggles among different social forces and state projects about its formation and governing principles,

³⁷ The original text in Turkish is as follows: ‘Eskiden su devletçi anlayışla sadece devletindi. Demirel 1-2 baraj yapıp baraj kralı oluyordu DSİ kanalıyla. Biz yönetmeliği değiştirip su devletin değil milletindir herkes üretebilir elektrik dedik. EPDKdan izin almanız lazım dedik ama. Bütün nehirlerde HES kurdular. Herkesin 2-3 HESi var, Anadoludaki insanlar YEK işine girdi’ (Interview: President of Commission, 07.07.2011).

‘renewable energy sources have taken their place as a player in the electricity market’ and the grounds of the renewable energy sector was laid by the REL in line with the neoliberal rationality of government (Interview, EPDK: 08.07.2012).

5.3 The Amendment Law

Unlike the expectations, there were not many investments in RES even after the REL came into force, because ‘the lowered prices (of the final draft) did not match the real world’ (Interview: President of TBMM Commission, 07.07.2011). The President of Wind Power Plants Investors Association (RESYAD) Salahattin Baysal mentioned that there were no investments in wind energy until the amendments done to the REL through some articles of Energy Efficiency Law in 2007 (Law No: 5627, Ratification date: 18.04.2007) (Yeni Enerji, 2009). The price of FIT was coupled to Euro cent rather than Turkish Lira and was fixed to be not less than 5 € cents/ kWh and not more than 5,5 € cents/ kWh (Akça, 2008: 150). However, the FIT level was the same for all types of renewable energy sources, regardless of the differences of their technologies and investment costs and 5,5 € cents/ kWh was not enough for solar and biomass investments to prosper (Interview: EPDK, 08.07.2011). It was one of the reasons why the Turkish renewable energy market consists mainly of electricity production from hydroelectric and wind. Those were the major renewable energy sources aimed at being supported by the renewable energy policies in 2000s since they were ‘more feasible, logical, trustable and profitable’ (Interview: MENR, 08.07.2011).

Although the investments in wind and hydroelectricity plants dramatically increased compared to their previous levels, the installed capacities corresponded to a very low rate of the potential power even at the end of 2010.³⁸ The reasons of lower levels of investments were not only about the FIT levels but also due to the problems in functioning of the system that was proposed in REL. To illustrate, the applications for the wind licenses were accepted by EPDK only on 1st November 2007 and only 1/10th of those 71,4 GW applications for wind energy licenses could be realised due to the low connection capacity of the grid (PWC, 2009: 16). Moreover, there were a lot of

³⁸ For more information about the installed and potential power of RES in Turkey, please see Appendix (Figure 5).

overlapping applications for the same connection point and a tendering process was launched to find the bidder with the lowest price (ibid.). However, it is estimated that most of the investments that won the tenders are not realised because of unrealistically low prices given (Interview: RESSIAD, 11.05.2011). Therefore, as the president of Wind Power and Hydropower Plants Businessman's Association (RESSIAD) summarized, 'the system was stuck for 1-2 years and there was a pressure on the government' (ibid.).

There was another reason of the pressures on the government for an improvement in the legislations regarding renewable energies. Being a newcomer to the global renewable energy market which was dominated by the neoliberal rationality of government as it is explained in Chapter 3, Turkey had to compete with other countries such as Eastern European markets in order to attract the investment flow (PWC, 2009: 8: 21). Although there were a lot of funds directed to the renewable energy investments after the global financial crisis in 2008, as a part of the recovery packages in developed countries, most of these recovery funds were allocated to the development of green jobs and clean technologies in their countries (Chapter 3). Whereas, the power markets of emerging countries has higher levels of volatility and necessitate contracts for longer term and more visible market share targets to attract the attention of multinational investors (PWC, 2009: 8: 22). Especially after the crisis, there was a general 'concern more about the return of capital' which caused the project financing institutions to assign high coefficients for the regulatory risks in their cost calculations (PWC, 2009: 8: 21). Even under normal conditions, where the market risks were more manageable, 'regulatory stability with a special focus on a sound and reliable tariff structure' was one of the important conditions for a renewable energy markets to prosper (PWC, 2009: 8: 21). As it is stated by a business development manager at a Turkish consultancy company in the following sentences, the expectations of the domestic and foreign investors from the Turkish government was to provide the necessary conditions for renewable energy investments through the legal changes and institutions established within the scope of neoliberal state project:

"Abroad, renewable energy tends to be more advanced, as there are incentives and more developed legislation in place. Without a proper legal framework, it will take time for the

sector to evolve in Turkey. It is therefore of utmost importance that the law is passed soon" (HurriyetDailyNews, 2009).

After the shortcomings of the Renewable Energy Law in promoting the private sector investments for renewable energy sources was revealed, the preparations of an Amendment to the Renewable Energy Law was started in 2008 by the Minister of Energy and Natural Resources as well as the former President of TBMM Expertise Commission and current AKP Deputy (Interview: President of TBMM Commission, 07.07.2011). The FIT levels to be paid by the state to purchase the electricity generated from RES were this time tried to be kept as a secret in order to prevent the possible negative campaigns of lobby groups (Alternaturk, 2009). The new prices proposed at the first draft of Amendment Law in 2009 were announced not to be lower than the European levels of 7-8 € cents/ kWh for wind and hydro (ibid.).³⁹ Yet, these measures could not prevent the same discussions about the level of FIT to occur again due to the oil and natural gas lobbies as well as the increasing role of nuclear power at the Turkey's energy agenda⁴⁰ (TBMM Session No: 44, 2010: 38). Consequently, the draft of the Amendment Law was again withdrawn because of the negative opinions of the Undersecretariat of Treasury in June 2009 (Zaman Newspaper, 2009). The President of the TBMM Expertise Commission about Industry, Trade, Energy, Natural Resources, Information and Technology, who was unseated five months after the withdrawal, expressed that he was astonished by such an opposition coming from an institutions that was involved in the law making process from the beginning (ibid.). The longer the law making process took, the more 'pressure from the investors' was exercised on the government to provide 'certainty in tariff levels', so that the renewable energy market can function properly (Interview: MENR, 08.07.2011).

Having been mentioned the delays and problems in the law making process, it is necessary to repeat our claim about the state supports given to the renewable energy sources not being a simple decision about promoting the renewable sources for better, safer and clean futures; but rather a matter of state formation process shaped by the

³⁹ For more information about the first price levels of FIT proposed at the draft Amendment Law in 2009, please see Appendix (Table 3).

⁴⁰ For more information about the recent developments related to the nuclear power in Turkey, please return to Chapter 4 (Section 4.2).

struggles of different rationalities of government. The focus of the discussions during the preparation of the Amendment Law was more about regulating this new market rather than questioning its emergence whose grounds were laid in 2005 in line with the neoliberal state project.

At the end of a two year-long process, the Law No: 6094 Amendment of the Law Concerning the Use of Renewable Resources for the Generation of Electricity Energy (the Amendment Law) was finally ratified on 29th December 2010. Some of the important changes to the Renewable Energy Law are summarized as follows:

a) The definition of RES are expanded to include the gasses from biomasses, especially from landfill wastes (Güner Law Office, 2011: 1). The prices to be paid for the electricity generated from renewable energy sources are determined in ‘\$ cents’ instead of ‘€ cents’ and are differentiated according to the type of the RES that are used to generate electricity (Amendment Law, 2010).⁴¹ The FIT levels, which are introduced at Table I of the Amendment Law, will be valid for 10 years for the RES certificate owners which have/will start operation between 18 May 2005 and 31 December 2015 (ibid). The rates for the facilities that will commence after 31 May 2015 will be determined by the Council of Ministers within the limits of previous FIT rates (Güner Law Office, 2011: 1).

b) Additional incentives (aka *local content bonus*) are introduced at Table II for a period of 5 years for the generation facilities that will start operation before 31 December 2015 and will use mechanical or electromechanical components that are domestically manufactured in the Republic of Turkey in their power plants (Amendment Law, 2010).⁴²

c) Each suppliers of electricity must pay Payment Obligation Ratio into a pool to be managed by Market Financial Settlement Centre (PMUM). PMUM will announce and invoice the amount they are obliged to pay each supplier providing electricity to the consumers, meaning that not only retailers but also wholesalers and generators are

⁴¹ For more information about the FIT levels introduced in the Amendment Law, please see Appendix (Table 4).

⁴² For more information about the local production bonus introduced in the Amendment Law, please see Appendix (Table 5).

included (Güner Law Office, 2011: 2). Through this mechanism, the FIT incentives given to renewable energy will not be paid from the Treasury, but rather they will be paid by the consumers as a result of being reflected to the PMUM prices (Interview: EPDK, 08.07.2011).

In order to understand how and why the changes to the REL were shaped, we would like to follow the traces of different rationalities of government that tried to be influential during the struggle for renewable energy policies in Turkey through the state projects. First of all, there were a lot of criticisms directed to the rationality of support mechanisms introduced with the REL and it is said that the system which is built on an understanding of ‘‘I will give the support and the private sector will do the investment’’ does not function (TBMM Session No: 15, 2010: 30). Furthermore, some deputies of the main opposition party questioned the crucial role given to the private sector for the diffusion of renewable energy and instead proposed a developmentalist state project:

‘It is necessary that the field of energy is approached more seriously and (it) is planned, investment and production programs are formed under the leadership of the state. A structuring that is left to the initiative of the private sector for the utilization of the renewable energy resources could be an obstacle in front of Turkey to realise its own power’ (TBMM Expertise Commission, 2009b: 6).⁴³

Not only the opposition party but also the Union of Chambers of Turkish Engineers and Architects (TMMOB) was in favour of developmentalism for the renewable energy policies as it can be seen at the press statement published about the Amendment Law in January 2011. The necessity to accept the need for planning in energy sector, which should include some principles such as decreasing the energy import dependency, making use of domestic and renewable energy sources and minimizing the environmental damages is emphasized (TMMOB, 2011). Furthermore, it is demanded that the privatization process is stopped and the electricity generation investments are done by the public sector due to the importance of energy security (ibid.).

⁴³ The original text in Turkish is as follows: ‘Enerji alanının daha ciddi şekilde ele alınarak planlanması, kamu öncülüğünde yatırım ve üretim programlarının oluşturulması gerekmektedir. Yenilenebilir enerji kaynaklarının değerlendirilmesi konusunda özel sektör insiyatifine bırakılmış bir yapılanma Türkiye’nin bu alanda kendi öz gücünü devreye sokması önünde bir engel olabilir’ (TBMM Expertise Commission, 2009b: 6).

On the other hand, supports to the renewable energy sources was and is most of the time seen as a part of the necessity to adapt to the new world order of ‘green economy’ and ‘low carbon economy’ by increasing the competition. (TBMM Session No: 15, 2010: 38). The importance of ‘providing effective financial and political atmosphere for the investors within the free market rules’ is also mentioned many times during the discussion at the plenary sessions of TBMM (TBMM Session No: 44, 2010: 18). Unlike the suggestions of the developmentalist project, the neoliberal project gave importance to the demands of the private sector during the formulation of the Amendment Law as it can be seen from the sentences of Minister of Energy and Natural Resources Taner Yıldız at TBMM Expertise Commission:

‘We are going to make preparations for a draft law to be approved, in which the private sector can not find any missing points’ (TBMM Expertise Commission, 2009a: 4).⁴⁴

Moreover, Minister of Energy and Natural Resources mentioned that the public sector will not take the blame, if the private sector still does not make investments despite all the easiness that are provided for the utilization of renewable energy sources by the free market (TBMM Session No: 44, 2010: 18). Actually one of the main aims of the Amendment is mentioned as solving the problems of the investors who complain about not finding the necessary financial sources, especially from abroad (TBMM Session No: 44, 2010: 21). Due to the low FIT levels, longer periods needed for the return of investment (ibid.). However, the final FIT levels of the Amendment were lowered after the withdrawal of the first draft in 2009 and were even changed into \$ cents upon the request of the Prime Minister, as we have learned during our interviews (Interview: MENR, 08.7.2011). Hence, the FIT levels did not manage to meet the expectations of the private sector (Radikal Newspaper, 2011). Nevertheless, the Amendment Law has fulfilled its duty of providing necessary conditions for the markets to ‘see the future’ even though the new FIT prices are found to be low by the investors as it is also mentioned the Minister of Energy and Natural Resources during his closing speech at the TBMM after the approval of the Amendment Law:

⁴⁴ The original text in Turkish is as follows: ‘Özel sektörün artık “Şu da kaldı” demeyeceği bir kanun teklifinin kanunlaşmasıyla alakalı çalışma yapacağız’ (TBMM Expertise Commission, 2009a: 4).

‘Our investors will invest with this prices, atmosphere is suitable, political stability is suitable, background is available; in this respect, all those investments will be done’ (TBMM Session No: 44, 2010: 93).⁴⁵

Despite the stability aims in order to be able to attract the foreign investments in line with the neoliberal state project, another very important aspect is the additional payments introduced with the Amendment Law to support the domestic production. In general, the 2008 global financial crisis triggered a change in the problematization of promoting the renewable energy sources which resulted them to be seen as an instrument to stimulate the economies through the creation of new industries, sectors and employment (Chapter 3). Moreover, as stated in Chapter 4, there has also been an increase in the influence of neomercantilist rationality in the state policies of Turkey in line with the abovementioned changes in the world order as a reaction to the neoliberal rationality. At this point, Turkey is told to have a big chance to prosper its medium industry since the global manufacturing companies were suffering from the crisis (Interview, RESSIAD: 11.05.2011).

As the president of RESYAD Salahattin Baysal mentioned, Turkey has a very high level of import dependency for renewable energy technologies (Yeni Enerji, 2009: 3). To illustrate, ‘19 billion Euros have to be paid abroad for the turbines of 19 MW wind plant’ (ibid.). Actually, the representative of TÜREB mentioned that they have already proposed to make some incentives for the development of renewable energy technologies in Turkey in 2004 during the preparation of REL, but the idea was rejected since ‘it would prevent the competition in the EU’ (Interview: TÜREB, 08.07.2011). However, the local content bonus is introduced five years later as one of the main changes to the renewable energy market through the Amendment Law, despite all the concerns about the restrictions resulting from international agreements (i.e. EU regulations, WTO requirements, Common Market) to which Turkey has also been a part during its integration to the neoliberal world order (Yeni Enerji, 2009: 4). As a result of

⁴⁵ The original text in Turkish is as follows: ‘Yatırımcımız bu fiyatlarla beraber yatırım yapar, iklim müsaittir, siyasi istikrar müsaittir, zemin müsaittir, o açıdan inşallah bütün bu yatırımlar yapılacaktır.’ (TBMM Session No: 44, 2010: 93).

the decline in foreign direct investments and rise of protectionism after the 2008 crises, a neomercantilist project for the renewable energy sector started to be promoted more openly by some social forces that own material capabilities such as medium industry in Turkey:

‘If (the local content bonus) could be included in the Law in 2004, the infrastructure would be ready now. Less money would go abroad. The fertility of RES happens (only) when you found a lot of sectors and employ people in your own country. ... We do not want to be the market of the foreigners’ (Interview: TÜREB, 08.07.2011).⁴⁶

Moreover, the same principles of not being ‘the market of the foreigners’ was emphasized many times during the plenary sessions of TBMM and it is added that opening a technology market, such as wind technology, for the foreigners to sell their technology will decrease the competitiveness of Turkey in the international markets (TBMM Session No: 44, 2010: 89). The officials of Ministry of Energy and Natural Resources mentioned that they do not want to discuss or change the FIT levels anymore and the regulation part is mostly finished (Interview: MENR, 10.05.2011). What can be discussed now is how to help the private sector and local manufacturers in order to be able to benefit from the local content bonus introduced at Table II of the Amendment Law (ibid.).

Therefore, it is possible to conclude that the dominant rationality of renewable energy politics in Turkey during the amendment of the Renewable Energy Law was still the neoliberal rationality of government, despite the criticisms raised about the involvement of the private sector by social forces with developmentalist rationalities. However, after the 2008 global financial crisis there has been a rise of neomercantilist rationality of government in Turkey, whose reflections can be also found at the new emphasis of incentives on domestic production. As it can be seen from the abovementioned discussions, the importance of competitiveness and market formation in renewable energy sector continued in line with the neoliberal rationality dominating the world order as well as the politics of renewable energy in Turkey; but the principles

⁴⁶ The original text in Turkish is as follows: ‘2004te kanuna soksaydık şimdi alt yapı kurulmuş olacaktı. Yurtdışına daha az döviz kaçıcaktı. YEK bereketi kendi ülkende bir sürü sektör kurup, insan çalıştırmanla olur. ... Yabancıların pazarı olmak istemiyoruz’ (Interview: TÜREB, 08.07.2011).

of other state projects, such as the neomercantilism in that case, are also tried to be included as a result of flexibility of the embedded neoliberalism.

6. Conclusion

Renewable energy is one of the most popular topics of energy policies in the 21st century. It is generally expected that the states give incentives to the renewable energy sources in order to help the development and spread of those clean energy technologies against the fossil based energy sources which are causing a lot of environmental problems. However, the renewable energy policies in Turkey is full of surprises for anyone who expects a lot of state subsidies to the RES in line with this way of thinking. Looking from the perspectives of critical theory, which constitute the theoretical background of the analysis conducted in that study, it can be seen that the state policies result from historical state and society relations and are not that simple to be explained by using the positivist approach of natural sciences and looking for linear reason and result relationships.

The starting point of thesis was actually to understand how the Amendment Law was shaped in that certain way, such as the local content bonus and lower FIT levels that came after two years delay. However it is found necessary to broaden the scope of the research to examination of the renewable energy policies in the world and in Turkey in order to be able to make a meaningful analysis. Going step by step, firstly it is tried to explain how the state policies are formed, then the problematics and reasons behind the renewable energy supports are examined and finally the analysis is narrowed down to the question of how renewable energy policies in Turkey are formed.

The theoretical tools such as historical structures, configuration of forces, governmentality, rationalities of government and state projects, which are borrowed from scholars of critical theory such as Michel Foucault (1979), Robert Cox (1981) and Bob Jessop (1990) as it is introduced in Chapter 2, are used to confute the presuppositions about state having the duty of subsidizing RES. It is argued that state does not have a predetermined and everlasting structure, borders and duties but rather it is a historical concept resulting from the crystallization of power relations according to the configuration of ideas and material capabilities as well as the influences of social

forces and world order. Moreover, it is stated that state is not a unified actor but rather a battleground of competing projects such as developmentalism, neoliberalism and neomercantilism, each of which arise from a certain way of thinking, in other words, rationalities of government.

Chapter 3 showed that the renewable energy sources have already been used as an energy source for centuries; however, their usage for commercial purposes has been promoted by state policies since the 1970s due to several reasons depending on the historical context. Similarly, it is explained that the renewable energy sources are not the only solutions to the climate change or energy security. Hence, the previously mentioned dominant discourse which takes the state support for new and clean technologies for granted and makes recommendations for higher subsidy levels was rejected. By denaturalizing this direct relationship established in our minds, some room was tried to be opened for other explanations about how the state policies about renewable energy are formed such as the struggles between different state projects or the changes in the world order etc.

On the other hand, it is concluded that, regardless of the way how the state supports given to the renewable energy technologies are problematized, the rationality of government behind the state support schemes was to promote renewable energy source through private sector involvement in line with the neoliberal rationalities rather than the public sector focus of the developmentalist rationality. Therefore, not only new sectors and jobs, but also new markets were created as a result of the renewable energy policies. The neoliberal state was responsible also from regulation of those renewable energy markets through the usage of different types of support mechanisms. The crucial point is the fact that there exist no certain formula about how those state policies are composed, and what kind of support schemes are preferred; because each country gives its own battle over the institutions and determines its own dynamics for the renewable energy policies within the borders of embedded neoliberalism.

Consequently, the dynamics of Turkish state and the energy policies was examined in Chapter 4 in order to be able to gain more information about the configuration of forces, rationalities and state projects which have been influential during the formulation of renewable energy policies in Turkey. It is found that the

developmentalist rationality of government that have been the dominant way of regulating the state and society relations in Turkey starting with 1950s has been also influential in energy politics. However, the ownership of investment decisions was later transferred to the private sector through privatization and liberalization process in line with the repercussions of the globalization of the neoliberalism on Turkey, which started in 1990s and accelerated in 2000s. The electricity sector was one of the sectors in which market logic was introduced and the relevant institutional as well as legal changes have also been done to regulate those new markets in line with the EU harmonisation process which is a part of Turkey's integration to the world markets.

After the crystallization of the neoliberal rationality of government in the forms of Turkish state, the renewable energy resources started to be promoted as a new actor of the electricity market. Despite the high import dependency levels of Turkey on oil and natural gas and the pressures of international agreements for the reduction of carbon emissions, the main interest in renewable energy investments started only in early 2000s as a result of the pressures of some social actors that reflected the globally rising interest in renewable energy investments on the Turkish government.

As it is stated in Chapter 5, the main rationality of government for the renewable energy sector in Turkey was already determined to be in accordance with the neoliberal way of thinking when the grounds of the electricity market was laid in 2001. Therefore, there was not much space for a struggle between the developmentalist and the neoliberal state projects in order to identify how the renewable energy sector should be governed. It is found that the biggest problem faced during the formulation of Renewable Energy Law was the lobby activities of the social forces that did not want to share their existence in energy sector with a new technology. That is thought to be the real reason of all the oppositions to the Law regarding the burden that the renewable energy sources subsidies are told to cause. Despite the delays and lowered feed in tariff levels, the REL was enacted in 2005 in line with the neoliberal rationality of helping the private sector to increase credibility while getting credits for their investments in electricity generation from renewable energy sources.

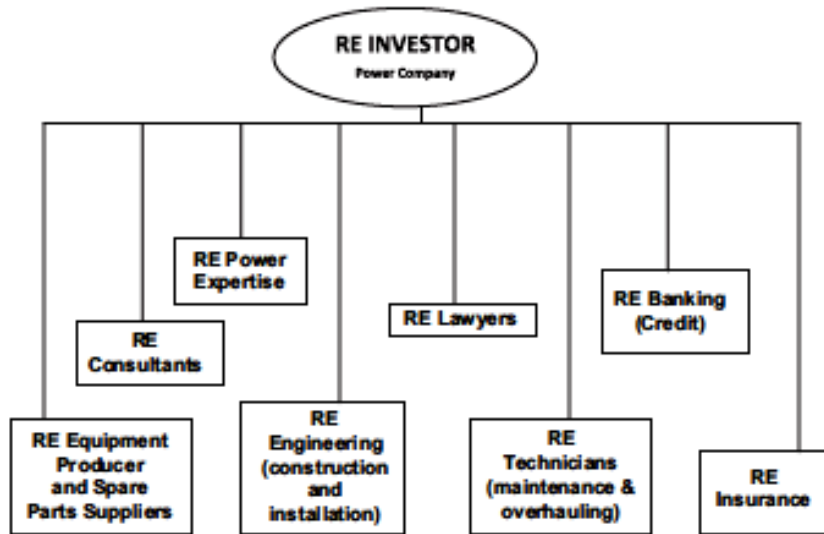
However, some other amendments to the REL were needed when the investment levels in RES did not prosper in contrast to the expectations. This time, the main focus

of the battle over renewable energy policies in 2008 was more about how to govern the renewable energy market, whose foundation was already started with the REL. There have been a lot of critiques from the social actors having the developmentalist rationality of government about the degree of private sector involvement in RES investments and it is proposed that the investments in that crucial sector should be planned and organized by the public sector. Although the proposals of the developmentalist state project could not find themselves a place in the Amendment Law, the protectionist tendencies of the neomercantilist project were reflected in the local content bonus introduced in the Amendment. It is important to note that the increasing influence of neomercantilist state project is not surprising after the fall in foreign direct investment amounts which occurred due to the 2008 global financial crisis. However, the battle over institutions is unique in each country and the existence of social forces with material capabilities such as the medium industry in Turkey helped to the spread of neomercantilist rationality of government too. Therefore, it is concluded that the principles of other social forces were included to the politics of renewable energy policies in Turkey as a result of the compromising and accommodating features of embedded neoliberalism.

Despite being very happy and contented with the new perspective that is tried to be adapted to the energy policy as well as the renewable energy policy studies in Turkey, there have been a lot of problems faced in finding literature and data good enough for the analysis aimed to be done within the thesis. However, this study is thought to be successful in terms of being a trial to depict the general picture of the politics of renewable energy policies not only in Turkey but also in the world. Despite using the critical theory, the aim of the study is not to criticize the activities or rationalities of any of the rationalities or social forces those were mentioned to be influential in policy formulation processes. But it was sometimes really difficult to find the right balance of information to be given for explaining the situation and discussions correctly because of the difficult nature of the energy politics that needs to combine a very technical topic (i.e. energy) about with very theoretical one (i.e. state formation). Therefore, it is possible to improve the analysis done about how the renewable energy policies in Turkey are determined in further studies by making different combinations of the theoretical tools proposed by the critical theory.

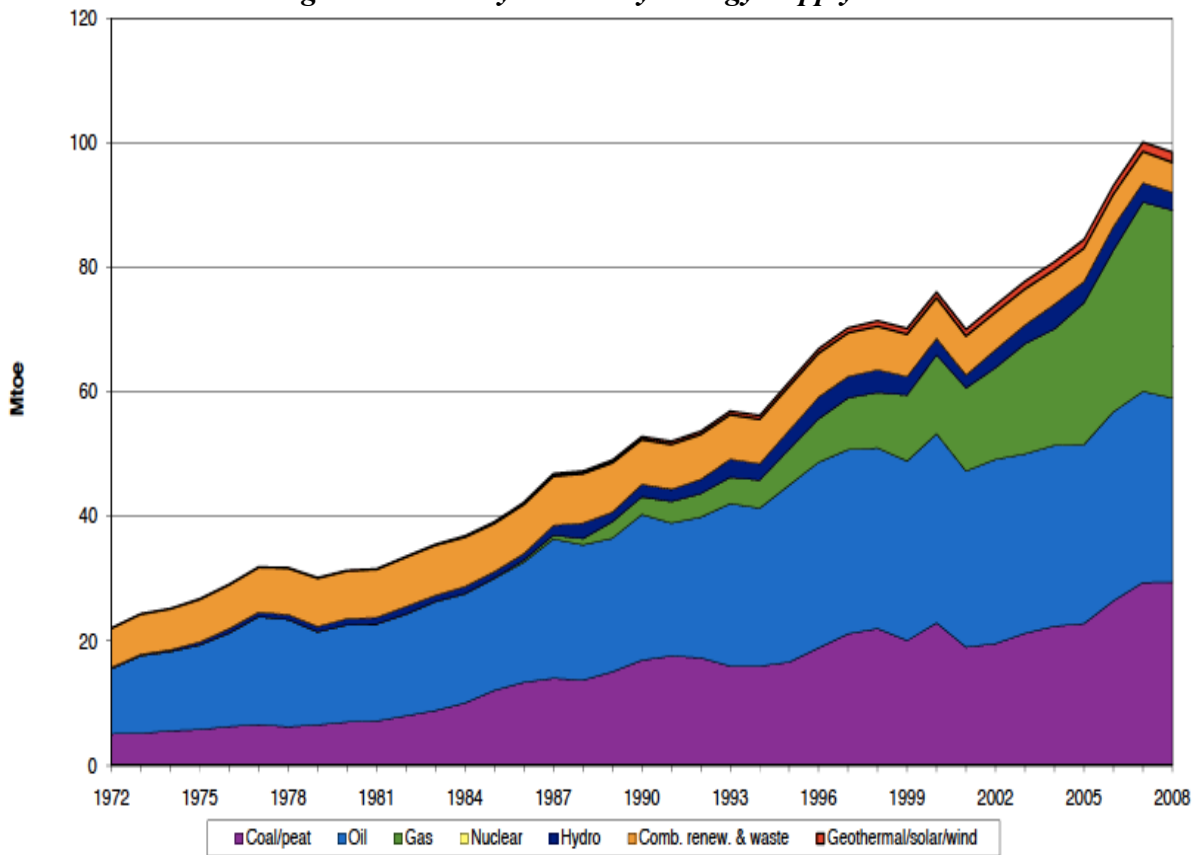
APPENDIX

Figure 1 – Expanding Sectors and Jobs in Renewable Energy



Source: Oksay & Iseri, 2011: 3.

Figure 2 – Turkey's Primary Energy Supply



* Excluding electricity trade.

Source: International Energy Agency (IEA). *Op. Cit.*

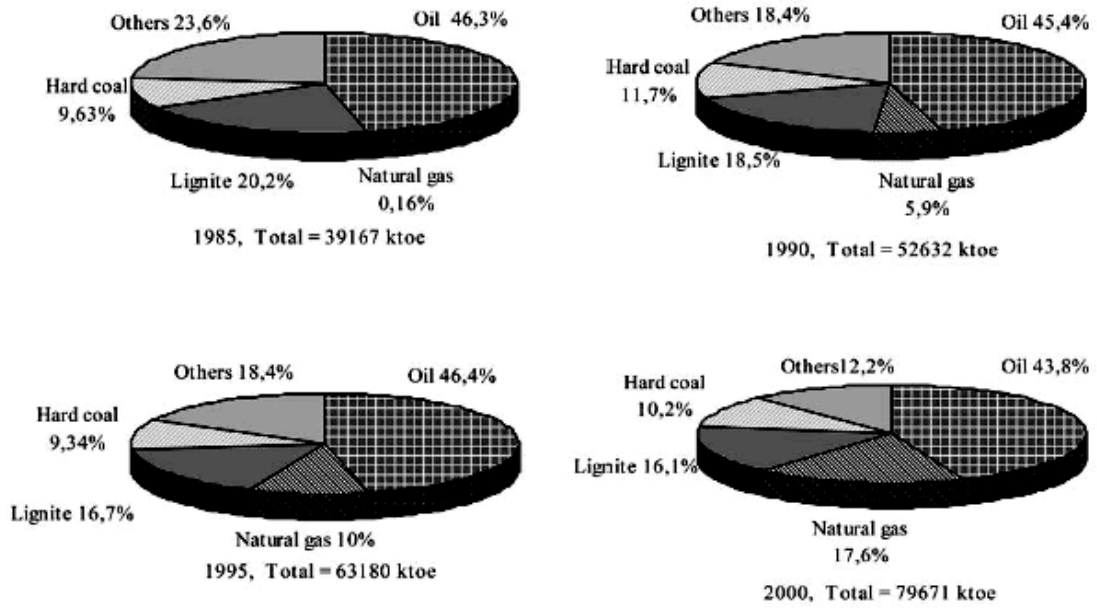
Table 1 – Various Incentive Policies Implemented by Different Countries

	Feed in Tariff	Quota	Capital Subvention	Investment Incentives	Tax and VAT Reduction	Green Certificate Trade	Public Investment, Credit and Finance	Public Tenders
Germany	+		+	+	+		+	
USA	(*)	(*)	+	+	(*)	(*)	(*)	(*)
Argentina	+		+	(*)	+		+	+
Australia	(*)	+	+			+	+	
Belgium		(*)	+	+	+	+		
Brazil				+			+	+
China	+	+	+	+	+		+	+
Denmark	+		+	+	+	+	+	+
Finland	+		+		+	+		
France	+		+	+	+	+	+	+
S. Africa	+		+		+		+	+
Netherlands			+	+	+	+		
UK	+	+	+		+	+	+	
Ireland	+		+	+		+		+
Spain	+		+	+	+	+	+	
Israel	+				+			+
Sweden		+	+	+	+	+	+	
Italy	+	+	+	+	+	+	+	
Luxemburg	+		+	+	+			
Norway			+		+	+	+	
Portugal	+		+	+	+		+	+
Greece	+		+	+		+	+	

Source: G-20 Clean Energy Fact Book 2010 data arranged and cited in Deloitte, 2011: 9.

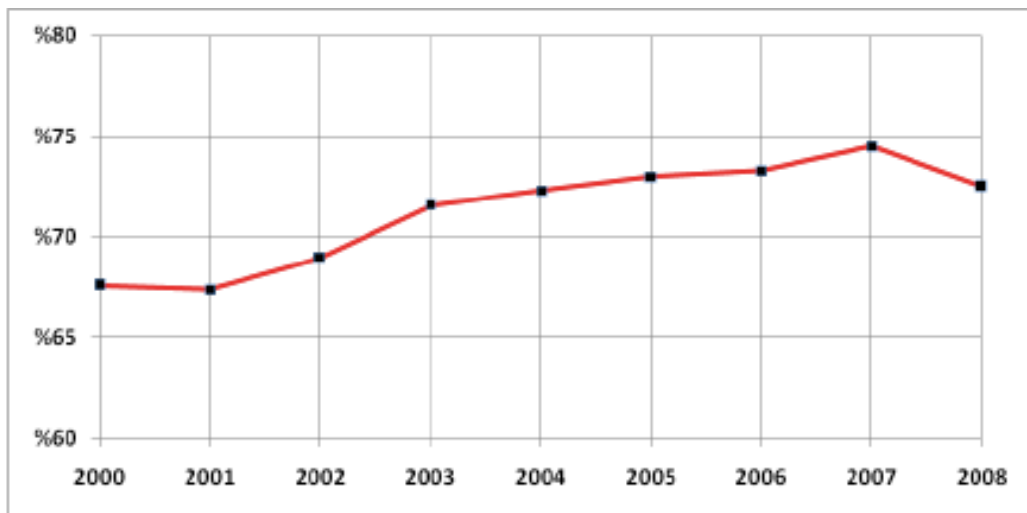
(*) This symbol is used to express that there are no national level policies, although there exist some policies at some states and cities in that countries. Despite the fact that the table show only the legal policies, these legal policies can be insufficient due to the deficiencies or inefficiencies in the regulations regarding the implication of those policies. The policies that are not in force any more are not included to the table. Some of the indicated policies can be valid in some areas other than electricity generation such as solar heated water and bio fuel. (Translated by the author)

Figure 3- Turkey's Primary Energy Consumption Between 1985-2000



Source: Oğulata, 2003: 472.

Figure 4- Rate of Energy Supply Dependency in Turkey (2000- 2008)



Source: Ministry of Energy and Natural Resources (MENR) Strategy Plan, 2010: 13.

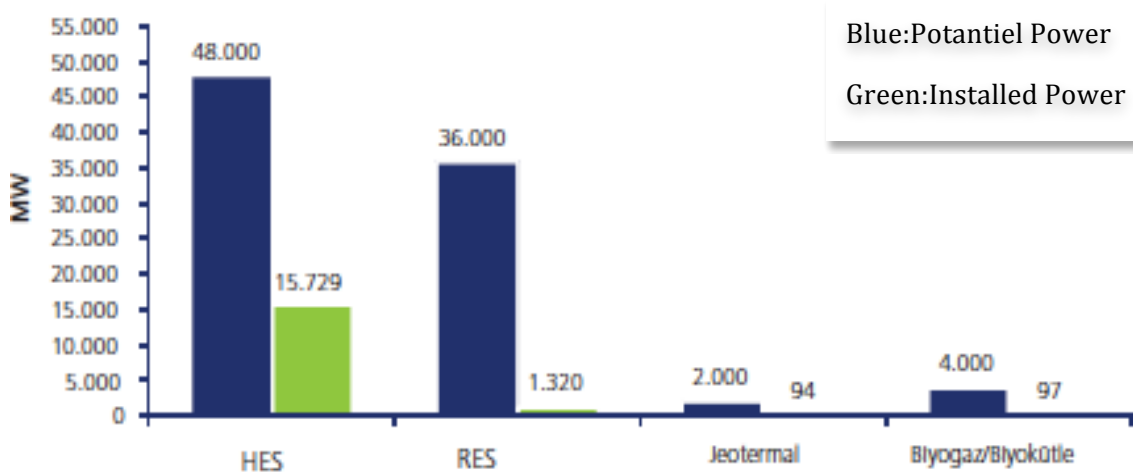
Table 2 – Final Energy Consumption in Turkey (1990-2000) (ktoe)

	1990	(%)	2000	(%)	2005	(%)
Oil	19,931	47.1	26,536	43.1	29,254	31.8
Natural gas	784	1.9	5088	8.3	14,146	15.5
Electricity	3928	9.3	8268	13.4	15,164	16.5
Coals and lignite	9226	21.8	13,187	21.4	19,786	21.5
Non-commercial	7208	17.0	6457	10.5	9212	10.0
Other	1263	3.0	1997	3.2	4344	4.7
Total	42,340	100	61,533	100	91,906	100

*ktoe = Kilo tonnes of oil equivalent

Source: Ministry of Energy and Natural Resources Statistics cited in Yüksel, 2010: 1471.

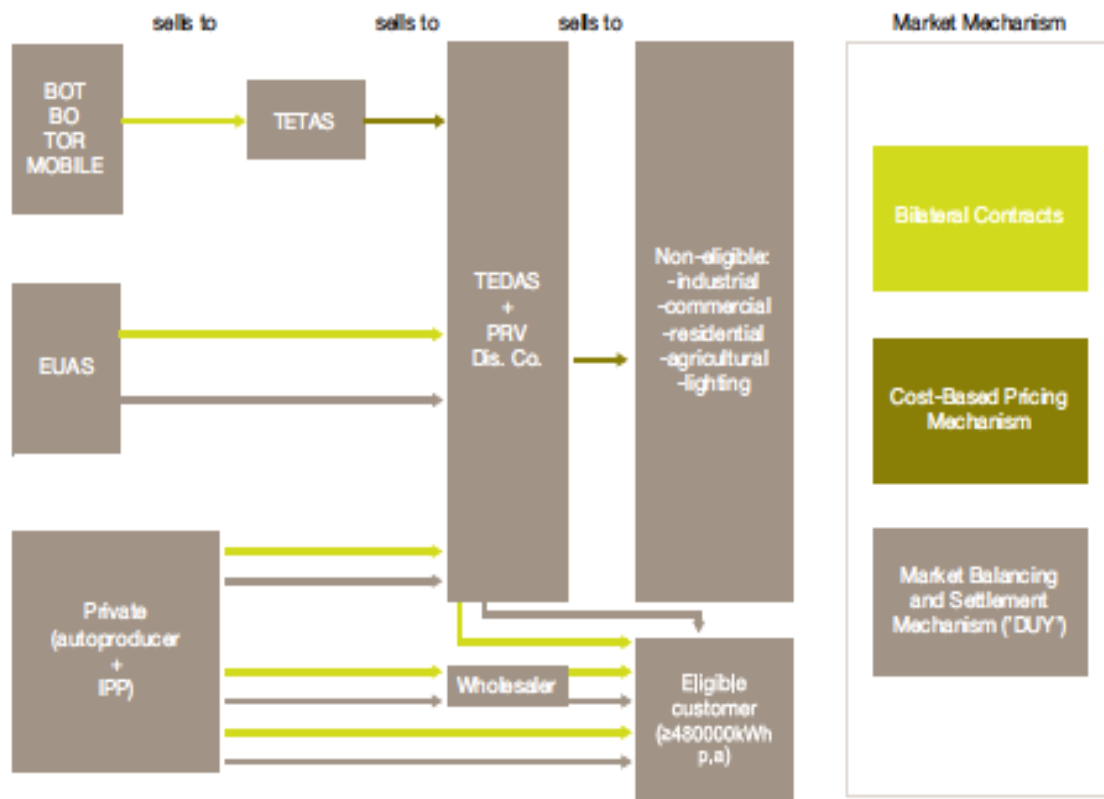
Figure 5- Potential and Installed Powers of Renewable Energy Sources in Turkey



* This data belongs to the end of 2010 and figure includes both dam or river type hydroelectric power plants since there have been no distinction done in the hydroelectric data, which is taken from Energy Market Regulatory Authority (EPDK). (Translated by the author)

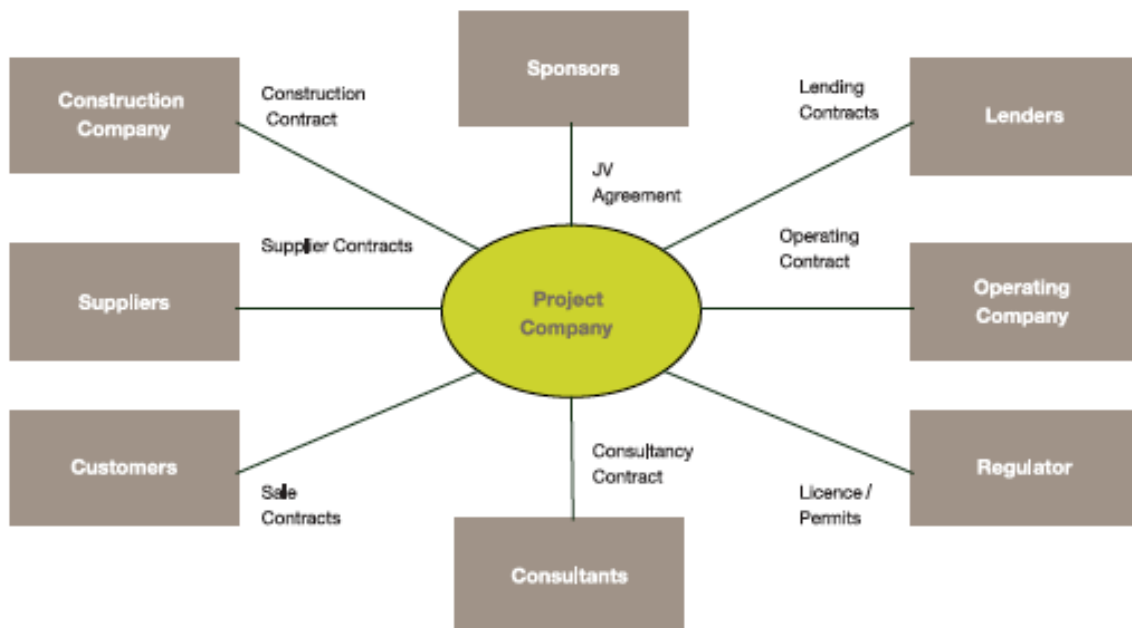
Source: Deloitte, 2011:18.

Figure 6 – Turkish Electricity Market Structure



Source: Price Waters Coopers (PWC), 2009: 26.

Figure 7 – Stakeholders of the Renewable Energy Projects



Source: Price Waters Coopers (PWC), 2009: 10.

Figure 8- Law Making Process in Turkey



Source: YASADER, 2009: 68. (Adapted and translated by the author)

Table 3 – Proposed FIT Levels in the Draft Amendment in 2009

PP Technologies	First 10 years in operation (€cent/kWh)	Second 10 years in operation (€cent/kWh)
HPP	7	N/A
Onshore WPP	8	N/A
Off-shore WPP	12	N/A
Geothermal	9	N/A
Photovoltaic	25	20
Concentrating solar	20	18
Biomass (inc. Landfill)	14	N/A
Tidal	16	N/A

Source: www.tbmm.gov.tr cited in Price Waters Coopers (PWC), 2009: 11.

Table 4 – FIT Levels Accepted in the Amendment Law in 2010

Type of generation facility producing renewable energy	Prices to apply (US dollar cent/kWh)
(a) Hydroelectric power plants	7.3
(b) Wind power plants	7.3
(c) Geothermal power plants	10.5
(d) Biomass power plants (including landfill gas)	13.3
(e) Solar power plants	13.3

Source: Table I of the Amendment Law No: 6094 cited in Gedik & Boz, 2011: 6.

Table 5 – Local Content Bonus in the Amendment Law in 2010

Type of generation plant	Components produced in Turkey	Additional price (US dollar cent/kWh)
A Hydroelectric power plant	1. Turbine	1.3
	2. Generator and power electronics	1.0
B Plant generating electricity from wind energy	1. Wing	0.8
	2. Generator and power electronics	1.0
	3. Turbine tower	0.6
	4. Entire mechanical components in rotor and nacelle groups (excluding payments for wing group and generator and power electronics)	1.3
C Plant generating electricity from photovoltaic (PV) solar energy	1. Production of PV panel integration and solar structural mechanics	0.8
	2. PV modules	1.3
	3. Cells constituting the PV modules	3.5
	4. Inverter	0.6
	5. Material on the PV module that focuses solar ray	0.5
D Plant generating electricity from condensed solar energy	1. Radiation collection tube	2.4
	2. Reflector surface sheet	0.6
	3. Solar tracing system	0.6
	4. Mechanical parts of the heat storage system	1.3
	5. Mechanical parts of the tower steamer collecting solar rays	2.4
	6. Stirling engine	1.3
	7. Panel integration and structural mechanics of the solar panel	0.6
E Plant generating electricity from biomass energy	1. Fluid-bed steam boiler	0.8
	2. Fluid or gas-run steam boiler	0.4
	3. Gasification and gas cleaning group	0.6
	4. Steam or gas turbine	2.0
	5. Internal combustion or stirling engine	0.9
	6. Generator and power electronics	0.5
	7. Co-generation system	0.4
F Plant generating electricity from geothermal energy	1. Steam or gas turbine	1.3
	2. Generator and power electronics	0.7
	3. Steam injector or vacuum compressor	0.7

Source: Table II of the Amendment Law No: 6094 cited in Gedik & Boz, 2011: 7.

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The following interviews were conducted within the scope of this thesis:

- An official from Ministry of Energy and Natural Resources (MENR), 10.05.2011 and 08.07.2011.
- An official from Turkish Electricity Trading & Contracting Co. Inc. (TETAŞ), 10.05.2011.
- An official from Turkish Electricity Transmission Corporation Co. Inc. (TEİAŞ), 11.05.2011.
- Two officials from Energy Market Regulatory Authority (EPDK), 11.05.2011 and 08.07.2011.
- The former head of TBMM Expertise Commission about Industry, Trade, Energy, Natural Resources, Information and Technology (İhtisas Komisyonları / Sanayi, Ticaret, Enerji, Tabii Kaynaklar, Bilgi Ve Teknoloji Komisyonu) and also current deputy in the TBMM from AKP (President of TBMM Commission), 08.07.2011.
- A representative of Turkish Wind Energy Association (TÜREB), 08.07.2011.
- A representative of Wind, Power and Hydropower Plants Businessman's Association (RESSIAD), 11.05.2011.
- A representative of Biogas Investments Development Association (BiyogazDer), 13.07.2011.