

DERLEME MAKALESİ / REVIEW ARTICLE

THE RENEWABLE ENERGY POLICY OF TURKEY UNDER THE IMPACT OF THE EUROPEAN UNION*

AVRUPA BİRLİĞİ ETKİSİNDE TÜRKİYE'NİN YENİLENEBİLİR ENERJİ POLİTİKASI

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ABSTRACT

Public policy analysis basically provides researchers and other relevant actors with comprehensive output to comprehend the effectiveness and the efficiency of the policies. Renewable energy sources are highly crucial especially for the maintenance of sustainable development. Therefore, most of the countries like Turkey, attempt and even struggle to have a functional renewable energy policy with the aim of having diverse energy sources and infrastructure. International actors such as the European Union (EU) have huge and practical impacts on the public policy making process of many countries. In this fashion, the renewable energy policy of Turkey is mostly shaped or formulated according to the EU acquis. The study is a significant effort to scrutinize the renewable energy policy of Turkey by benefiting from the energy chapter of regular progress reports (country reports) published by the European Commission which is the executive body of the EU. The fundamental aim of the study is to put forth the determinations and the expectations of the EU on renewable energy policy to conduct an extensive analysis. In this manner, various policy suggestions regarding renewable energy policy of Turkey is proposed and presented in order to make encouraging contributions.


Keywords: Public Policy Analysis, Renewable Energy, Regular Progress Reports (Country Reports), Turkey.


JEL Classification Codes: J88, Q28, Q48.

ÖZ

Kamu politikası analizi, araştırmacılara ve diğer ilgili aktörlere politikaların etkinliğini ve verimliliğini kavramak için kapsamlı çıktılar sağlamaktadır. Yenilenebilir enerji kaynakları, özellikle sürdürülebilir kalkınmanın sağlanabilmesi için son derece önemlidir. Bu nedenle, Türkiye gibi ülkelerin çoğu, çeşitli enerji kaynaklarına ve altyapıya sahip olmak amacıyla işlevsel yenilenebilir enerji politikasına sahip olma mücadelesi vermektedir. Avrupa Birliği (AB) gibi uluslararası aktörlerin, birçok ülkenin kamu politikası oluşturma süreci üzerinde büyük ve pratik etkileri vardır. Türkiye'nin yenilenebilir enerji politikası çoğunlukla AB müktesebatına göre şekillenmekte veya formüle edilmektedir. Bu çalışmada, AB'nin yürütme organı olan Avrupa Komisyonu tarafından yayınlanan düzenli ilerleme raporlarının (ülke raporları) enerji bölümünden yararlanarak Türkiye'nin

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yenilenebilir enerji politikası incelemektedir. Çalışmanın temel amacı, kapsamlı bir analiz yapmak için AB'nin yenilenebilir enerji politikasına ilişkin tespit ve beklentilerini ortaya koymaktır. Böylelikle, Türkiye'nin yenilenebilir enerji politikasına ilişkin çeşitli politika önerileri sunulmaktadır.

Anahtar Kelimeler: Kamu Politikası Analizi, Yenilenebilir Enerji, Düzenli İlerleme Raporları (Ülke Raporları), Türkiye.

JEL Sınıflandırma Kodları: J88, Q28, Q48.

1. INTRODUCTION

Global energy demand has been on the rise in parallel with the growing world population and the improvement of living standards thanks to advances in technology. The world's demand for energy is met primarily by fossil fuels such as petroleum and natural gas (Önal and Yarbay, 2010: 78). However, global climate change and increasing environmental problems make the need for finding alternatives to fossil fuels ever more pressing. Renewable energy resources can be seen as an effective alternative in that regard. Renewable energy is defined as "energy obtained from energy flows contained within continuous natural processes. These resources include solar, wind, geothermal, hydraulic, biomass and hydrogen energy." Renewable energy resources, on the other hand, are defined as "resources that renew themselves at an equal rate as the energy resource, or a faster rate than the rate at which the resource is replenished" (Ministry of Energy and Natural Resources, 2019a). Renewable energy sources are grouped as "solar", "wind", "geothermal", "hydraulic", "biomass", "tidal" and "hydrogen" energies. These sources provide a good alternative to other energy resources in terms of reducing carbon emissions, which harm the environment, and in terms of offering a local alternative thus avoiding energy exports which in turn reduces energy dependency (Karagöl and Kavaz, 2017: 8).

Though worldwide trends on renewable energy use have increased over the years, it would be an overstatement to say that these resources are used to their fullest extent. Many countries around the globe are in the process of spreading the use of renewable energy resources and develop policies that address the topic. Surely, it must be admitted that these efforts are not mounted with the same intensity when countries' economic and technological advancement are taken into account. However, with global warming and environmental issues in mind, the use of these resources, also referred to as "clean energy", is of paramount importance for all countries worldwide. A number of countries thus has shown a tendency to improve their policies regarding renewable energy.

Similarly, Turkey has given great attention to the matter of renewable energy in parallel to this prevalent tendency to use renewable energy resources that are manifested across the world. Policy formation on supporting the use of clean and renewable energies, chief of which include incentive mechanisms created within the legal framework, clearly shows that the country is willing to take major steps concerning this subject. Furthermore, as an EU candidate, Turkey further implemented regulations in accordance with EU directives and regulations as a part of the accession process which created the need for undertaking projects and studies addressing renewable energy. It could even be said that the EU acts as the main actor in terms of shaping Turkey's renewable energy policy projects as an international actor.

Within this general framework, this study aims to examine the transformations Turkey's renewable energy policy has gone through and the influence of the EU on these policies while referring to the regular progress reports (country reports), mainly the chapters on energy, released by the European Commission, the executive body of the EU. In this context, it touches primarily on Turkey's and the EU's renewable energy policies as well as their projects and regulations concerning the matter. It also examines the regular progress reports on Turkey within the context of renewable energy.

2. THE EU'S RENEWABLE ENERGY POLICY AND RELEVANT REGULATIONS

Due to limited petroleum and natural gas production, a large portion of Europe's energy need is met with imports (Kantörün, 2010a: 97). However, this external dependency on energy and problems caused by global warming has pushed the Union to seek alternative energy resources. As one such resource, renewable energy has become extremely salient for the Union, occupying a bigger space within the EU's energy policies (Kantörün, 2010b). As

evident from the projects and regulations designed by the EU and the Council of Europe, the development and wider adoption of renewable energy resources have gradually become one of the primary policy goals of the Union regarding energy.

It can be said that the EU's energy policies took shape with the foundation of the European Coal and Steel Community in 1951 and subsequently the European Atomic Energy Community in 1958. Following these events, the Union's energy policy had evolved in parallel with further economic integration (Yorkan, 2009: 25). The oil crises of the 1970s and their adverse effects forced the Union to adopt the "New Energy Policy Strategy" in 1974, which formed a policy to increase the security of supply, to reduce energy consumption and to create a policy for the protection of the environment in energy production and consumption (Yorkan, 2009: 26; Adıyaman, 2012: 111). The strategy also advised the Member States to capitalise on renewable energy resources such as geothermal and hydroelectric energy (Kantörün, 2010b).

In 1986, the European Council set the energy goals to be reached by 1995. Among these goals were the improvement of renewable energy resources and encouraging their use by Member States (Ege, 2004: 21; Kantörün, 2010b). The EU's policies on renewable energy resources essentially focused on research and development until the 1990s. This focus shifted gradually towards market deployment policies as the Member States, particular Germany, Italy, the Netherlands, Spain, Sweden and the United Kingdom started making considerable contributions to the EU's renewable energy resources and fulfilling their policy requirements (Blok, 2006: 251; Klessmann, Held, Rathmann and Ragwitz, 2011: 7637). Thus, the Union, besides supporting research on renewable energy, started to affect policy and set goals towards increasing its presence on renewable energy markets from the 1990s onwards (Kantörün, 2010b).

In 1995, the White Paper COM (682) "An Energy Policy for the European Union" was published by the Union, which aimed to "reconcile competitiveness, secure energy supplies and protect the environment" as well as "integrate energy markets and liberalise and create greater flexibility on relevant markets" (Akdoğan, 2008: 41; Yorkan, 2009: 27; Kirteke, 2014: 62). The European Commission released the Green Paper (Report) on energy in 1996 as an important step of its renewable energy strategy. In the report, the Commission discussed urgent and important discussion topics concerning renewable energy resources, then established its goals, the present obstacles that frustrate these goals, and how (and with which tools) these obstacles will be removed while discussing the benefits of renewable energy (DPT, 2001: 4-27; Ege, 2004: 7). In order to define the strategy that would be adopted, another White Paper on "Energy for the Future: Renewable Sources of Energy" was published in 1997 with input from different sources with regards to the goals set in the Green Paper. The EU has brought into question a strategy and action plan on renewable resources with this White Paper, offering predictions for the future. The potential of renewable energy to reduce CO₂ emissions in addition to securing the energy supply was also underlined (DPT, 2001: 4-27; Ege, 2004: 22; Kantörün, 2010b). In 1997, another report titled "COM (97)599 final" White Paper for a Community Strategy and Action Plan" was released. In this report, a strategy and an action plan for the proliferation of the use of renewable energy resources were proposed along with the objective of increasing the contribution of renewable energies to gross internal energy consumption to 12% by 2010 (European Commission, 1997). The White Paper also mentioned that renewable energy resources would reduce dependency on imports and secure energy supplies, reduce CO₂ emissions and create new fields for employment (Adıyaman, 2012: 113).

The signing of the Kyoto Protocol by the EU following the publishing of the White Paper rendered the significance of renewable energy even more paramount for the Union. With the Green Papers released in 2000, 2005 and 2006, the EU endeavoured to develop new strategies to increase the use of renewable energy resources along with various projects on the matter. The package adopted by the European Parliament in 2008 to fight climate change, known as 20-20-20, set goals for the EU to adopt until 2020, which include increasing the share of renewable energy resources within the Union's gross energy production. The concrete goal is to increase the share of the EU's renewable energy to constitute 20% of its entire energy production (Klessmann et. al., 2011: 7637).

When specific EU regulations on renewable energy resources are examined, one of the most notable directives is the "Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market." In the directive, Member States are asked to set objectives that aim to increase the use of renewable energy resources employed for electricity production and declare the tools and the methods they are using (or intend to use) to achieve these goals. The second notable directive is the "Directive 2003/30/EC of the European Parliament and of the Council of 8

May 2003 on the promotion of the use of biofuels or other renewable fuels for transport.” Furthermore, the “Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources” underlined the fact that increased use of renewable energy could contribute considerably to the goal of reducing greenhouse gas emissions as decided in the Kyoto Protocol and the UN Framework Convention on Climate Change (Kantörün, 2010b; Sirin and Ege, 2012: 4921).

It is evident that raising public awareness plays a vital role in the wider adoption of renewable energy resource for the EU, with the Union implementing various policies that address the matter. To that end, a media campaign was run between 2000 and 2003 for the Wider Adoption of Renewable Energy Resources. Furthermore, several community programmes that aim to support and incentivise renewable energy use were developed. The ALTENER programme, which ran between 1992 and 2002, forms the first and the most fundamental programme that was created for that goal. After the programme’s completion in 2002, the Intelligent Energy Europe Programme (2003-2006) was initiated in accordance with the same objectives (Kantörün, 2010b). In addition to these programmes, the EU manifested the attention it paid to the subject of renewable energy by setting up energy technology platforms (ETPs), between 2005 and 2007, that aim to foster research and development on renewable energy technologies by bringing together relevant actors, as well as by publishing the 2007 “Renewable Energy Roadmap” (Sirin and Ege, 2012: 4921). It can be observed explicitly that the EU has launched and currently implements various projects to raise awareness on renewable energy both among the general public and among the Member States and candidate countries.

The EU’s energy policy fundamentally aims to reduce fuel dependency on non-EU countries, minimise carbon emissions and maximise renewable energy use in order to decouple energy costs from petroleum prices. Limiting demand by encouraging energy efficiency within the energy sector itself as well as on final consumption can also be viewed as an important component of this policy (Baris and Kucukali, 2012: 377). Hence, the use of renewable energy resources is of paramount importance in attaining these goals.

As evident, the EU has given higher priority to the topic of renewable energy in recent years, placing great emphasis on the use of renewable energy to reduce energy dependency and to effectively tackle climate change and other environmental problems. To this end, the EU provides considerable funds to renewable energy projects and technological innovation beyond the actions taken within the legal framework discussed so far (Sirin and Ege, 2012: 4921). Concordantly, the Member States and candidate countries are asked to act in accordance with the goals set by the EU and adopt regulations that convey these policies.

3. TURKEY’S RENEWABLE ENERGY POLICY AND RELEVANT REGULATIONS

Turkey is an energy importer that meets a considerable amount of its energy needs through fossil fuels. However, considering the country’s geographic placement and geopolitical status, Turkey is a rich country in terms of renewable energy resources (Yüksel and Kaygusuz, 2011: 4133; Baris and Kucukali, 2012: 5). For this reason, legal regulations and incentives are being adopted for the effective use of renewable energy resources with efforts to create an effective policy on the subject. The recent discussions around high export dependency and the high demand for energy have shaped the country’s energy policy which aims to secure its energy supply and meet the ever-increasing demand; the significance of using renewable energy resources in achieving these goals has thus become more prominent (Sirin and Ege, 2012: 4922).

As of late 2018, energy coming from renewable energy resources in Turkey is estimated to be around 88 551 MW (Ministry of Energy and Natural Resources, 2019b). It is expected that this amount will increase in the coming years. The 2023 goals in particular place particular emphasis on the use of renewable energy resources, aiming to secure 30% of electricity production from renewable resources as Turkey pushes for the active use of clean energy resources (Melikoğlu, 2016: 2; Karagöl and Kavaz, 2017: 7).

The Ministry of Energy and Natural Resources is the primary body in charge of elaborating and implementing policies on renewable energy resources on a general and specific level. However, for the implementation of these policies, it is seen that bodies responsible under the Ministry, such as Elektrik Üretim A.Ş. Genel Müdürlüğü (General Directorate of Electricity Production Inc. - EÜAŞ), Türkiye Elektrik Dağıtım A.Ş. Genel Müdürlüğü (General Directorate of Turkish Electricity Distribution Inc. - TEDAŞ), Enerji Piyasası Düzenleme Kurumu (Energy Market Regulation Authority - EPDK) equally play a role (Ministry of Energy and Natural Resources,

2019c). Before June 2018, a date which caused a radical change in the system of the Turkish government, a “General Directorate of Renewable Energy” operated within the ministry, while afterwards its duties were transferred to the “General Directorate of Energy Affairs” charged with important tasks on energy matters and energy efficiency, including renewable energy. The General Directorate of Energy Affairs fulfils duties on renewable energy such as observing projects and developments in renewable energy, implementing research and development projects in line with the country’s needs and means, sharing the results of such projects with the wider public and developing proposals regarding the use of renewable energy resources (Kılıç, 2018: 255).

In 2001, a process of restructuring and liberalisation began in Turkey with passed legislation and other regulations (Karagöl and Kavaz, 2017: 11). In 2005, a Law on Renewable Energy Resources was enacted, with considerable headway into securing investment in this field. Nevertheless, renewable energy was given consideration in various plans and projects in earlier dates. For example, the fifth five-year development plan was adopted in 1984, and the subsequent development plans mention renewable energy resources, as well as the wider adoption of their use (Güler and Çobanoğlu, 1997: 47; DPT, 2001: 18). Government programmes, too, make various references to renewable energy. The enacting of Energy Market Law No. 4628 in 2001 (with amendments made to it in 2008 and finally passed with the number 6446 in 2013), the creation of the Energy Market Regulation Authority (EPDK) and EPDK’s subsequent investment with the power to incentivise renewable energy use and its incentives, alongside the restructuring of TEAŞ in the same year, can all be viewed as important steps in the development of renewable energy policy in Turkey. Finally, the “Law Concerning the Use of Renewable Energy Resources for Electricity Production” (numbered 5346) gave legal form to renewable energy resources, defining what they are and creating some incentives for their use (Erdem, 2010, p. 2717; Bobat and Özdemir, 2016, p. 153). The law in question has been amended several times until 2016, with some of its articles repealed. These changes have diversified government incentives regarding resources, improved national technologies and created new incentives focusing on national production. In addition, the “Law on Geothermal Resources and Natural Mineral Waters” (numbered 5686, dated 2007), the “Law on Energy Efficiency” (numbered 5627, dated 2007) and the “Law on Energy Market” (numbered 6446, dated 2013), as well as regulations issued during different periods on renewable energy resources and their use have formed the legal backbone of Turkey’s renewable energy policy.

Within this general framework, it can be said that Turkey’s primary aim through its renewable energy policy is to increase energy efficiency by incentivising renewable energy use. Additionally, improving investment and supporting market freedoms, incentivising national markets by prioritising local resources and thus incentivising the production of national energy equipment (such as solar panels and wind turbines) form the most striking features of the country’s renewable energy policy (Melikoğlu, 2016: 3-4). Ultimately, these goals and priorities, and policies that target them, have allowed investments on renewable energies to boom continuously, with Turkey becoming one of the European countries with a total investment of over a billion dollars on energy by making leaps on renewable energy production in a short amount of time (Karagöl and Kavaz, 2017: 19; Kılıç, 2018: 256).

4. ANALYSIS AND DISCUSSION

Turkey’s cooperation process with the EU, which was initiated with the signing of the 1963 Ankara Agreement, has taken on a new dimension with the European Council accepting Turkey as a candidate country in the 1999 Helsinki Summit, leading to a period where adopting the *acquis* has become one of Turkey’s primary concerns. Energy is one of the subjects on which Turkey has enacted new regulations and projects during this period. Turkey’s renewable energy policies have equally been affected by this process. The 6th Amendment to the European Council’s 2009 Directive 2009/28/EC deals with national renewable energy action plans and their elaboration. Inspired by this directive, the Renewable Energy General Directorate of Turkey’s Ministry of Energy and Natural Resources has prepared a National Renewable Energy Action Plan covering the period of 2013-2023. Within this plan, Turkey’s commitment to EU’s renewable energy goals and its desire for EU accession are named as the primary motivations for this plan’s elaboration. Furthermore, it is noted that Turkey’s energy policy is structured around core values, some of which include transparency, reliability, innovation, cooperation, activeness and harmony (Ministry of Energy and Natural Resources, 2014: 8-9).

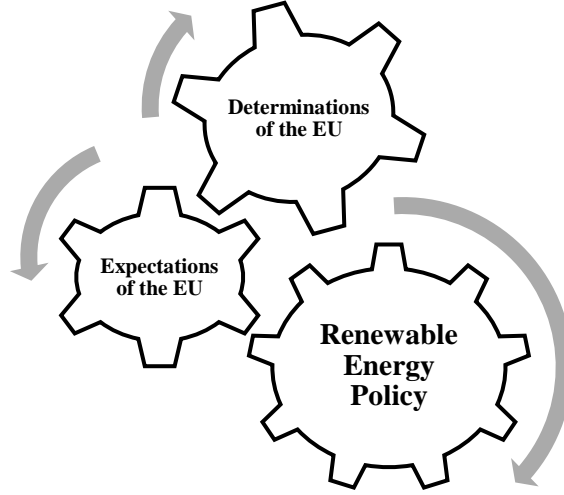


Figure 1. Policy-Making Gear Wheels under the Influence of the EU

As seen above in Figure 1, the policy making process in Turkey is essentially the output of the “Policy-Making Gear Wheels”. In this mechanism, the determinations and the expectations of the EU for Turkey directly influence the nature, roadmap and range of policies. Therefore, the success and stability of the “Policy-Making Gear Wheels” contribute to the development and sustainability of Turkey’s renewable energy policy. In this context, the renewable energy policy of Turkey is shaped in line with EU criteria and the regulations are made accordingly. The regular progress reports (country reports), which are being published since 1998, shape the public policies in Turkey greatly. This study attempts to analyse the renewable energy policy of Turkey by putting forth the determinations and the expectations of the EU since 1998. By doing so, the development of the process of Turkey’s renewable energy and its current state of are probed. There are a couple of pioneering analyses based on the EU’s regular progress reports (see Kerman, Özaltın and Yerlikaya, 2013; Erten and Aktel, 2016; Kulaç and Torlak, 2018) and this study was inspired from those in terms of methodology.

4.1. Determinations of the EU

In this section, the determinations of the EU in terms of renewable energy will be presented in chronological order. Like so, the efforts and the shortcomings of Turkey regarding renewable energy will be put forth by examining the determinations of the EU.

Table 1. Determinations

Years	Determinations
1998-2004	-
2005	The necessary legal framework to promote renewable energy was established through The Law on the Use of Renewable Energy Sources in Electricity Generation, which was adopted in May. The first step towards implementing renewables acquis is through the renewable energy law; but unlike the relevant directive, the law has no target for 2010 regarding electricity generated from renewable resources (Turkey Regular Progress Report (TRPR), 2005: 88).
2006	-
2007	Some provisions of the law on renewable energy were also amended through the framework law for energy efficiency, and these provisions improved the incentives for energy generation from renewable energy sources (TRPR, 2007: 50).
2008	Additional incentives were introduced to the Renewable Energy Law. Criteria to be applied to the renewable energy generation facilities in order to connect to the grid were issued by the Energy Market Regulatory Authority (TRPR, 2008: 57).
2009	Good progress was made in terms of renewable energy. Implementing regulations on the use of geothermal sources and on wind energy, clarifying technical evaluation of license applications for wind power, were adopted (TRPR, 2009: 59).

Years	Determinations
2010	In 2007, the electricity licensing regulation was changed in order to accommodate a large number of wind license applications submitted to the Energy Market Regulatory Authority (TRPR, 2010: 65).
2011	Amending the previous law on renewable energy sources, a long-awaited law was passed mid-January, 2011, with the aim of promoting investment in renewable energy sources (TRPR, 2011: 51). To use small-scale renewable sources in electricity generation, and to import and export electricity, which are designed to promote small-scale customers' cross-border trade and investments; the Energy Market Regulatory Authority (EMRA) adopted two implementing regulations. Implementing regulations were adapted to promoting the use of solar energy and of domestic equipment. Within the framework of founding wind-based energy power plants, a regulation on how to handle multiple applications in the same region and transformation station was adopted to finalise pending applications (TRPR, 2011: 73).
2012	In February 2012, EMRA published a communiqué to set the standards for wind and solar-based energy license applications assessment. In July 2012, changes were made to the regulation regarding the domestic manufacturing of the components used at the plants that generate electricity from renewable energy sources. In order to promote the use of renewable fuel produced with domestic agricultural products as an additive agent to gasoline and diesel in the market, EMRA also published two communiqués (TRPR, 2012: 61).
2013	In the area of renewable energies, the implementing regulation on Incentive Program for Research and Development Projects in Energy Sector (ENAR) was amended with the aim of developing renewable energy technologies (TRPR, 2013: 39). Energy efficiency and the investments in renewable energy have been on the rise after adopting the renewable energy law, the energy efficiency strategy and some projects on awareness regarding renewable energy (TRPR, 2013: 70-71).
2014	In the last quarter of 2013, implementing regulations were made regarding competition, promotion, protection, usage, certification and support of renewable energy sources. Under the Electricity Market Law, several implementing regulations, including the unlicensed electricity generation aiming to promote small-scale renewable energy sources, were made (TRPR, 2014: 37).
2015	The Ministry of Energy and Natural Resources passed the new 2015-2019 Strategy Plan, which aims to improve the energy supply security, the diversification of supply sources, energy efficiency and renewable energy through the promotion of domestic sources (TRPR, 2015: 46). Implementing regulations were made to set up a wind power forecast centre and on the signing of the water usage rights agreements (TRPR, 2015: 47).
2016	Agreements on market liberalization and privatization regarding generation and distribution activities have been particularly encouraging in terms of new private investments (TRPR, 2016: 38). The Renewable Energy Action Plan, prepared in line with the requirements stated in Directive 2009/28/EC on inciting the use of renewable energy, has been in motion since February 2015. A new regulation was made in June 2016 in order to incite and regulate domestically manufactured equipment that will be used in generating electricity from renewable energy sources (TRPR, 2016: 55).
2017	-
2018	Good progress has been made in the field of renewable energy, which is a key element of the National Energy Strategy. The Government issued two regulations on the technical evaluation of solar energy applications and the establishment of large-scale renewable energy resource areas. Turkey has launched two mega tenders each for a total installed capacity of 1000 megawatts of solar and wind energy. The proportion of the total installed power capacity provided by renewable energy corresponds to 44 %, of which 34 % hydro, while the proportion of electric generation reached to 33 % in 2016 (Turkey Country Report (TCR), 2018: 79).
2019	Turkey has made good progress in the renewable energy sector. With the transition to the Presidential system in 2018, the Ministry of Energy and Natural Resources has become one of the few ministries that retain its name and political authority, except for some structural changes to renewable energy and energy efficiency units (TCR, 2019: 80).

When the determinations of the EU about Turkey's renewable energy policy and practices are analysed, various findings and technicalities are spotted. There was a period (between 1998 and 2004) of lack of determinations in terms of renewable energy and the initial determination of the EU regarding renewable energy was formed in 2005. Turkey had made promising progress by enacting laws addressing the matter. Since enactment is one of the most functional stages in public policy-making, varied laws were passed by Turkey in an effort to comply with EU acquis. The Law on the Use of Renewable Energy Sources in Electricity Generation can be listed as an example of the enactment practices of Turkey that directly targets renewable energy (TRPR, 2005: 88). Furthermore, a certain number of

amendments and additional incentives were made by Turkey (TRPR, 2007; 2008; 2011; 2013) to maintain sustainable development in renewable energy. Turkey implemented, adopted and altered regulations (TRPR, 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; TCR, 2018) so as to ensure the efficiency and effectiveness of the implementation stage of the renewable energy policy. To this end, Turkey has undertaken crucial measures by centring on regulations and giving priority to the legalisation process and practices along the process of shaping its renewable energy policy.

The Ministry of Energy and Natural Resources' new Strategic Plan (2015-2019) was an admirable attempt for achieving the objective of having a practicable and functional renewable energy policy. Strategic planning, which enables organisations to set their directions by generating vision, mission and values (May, 2010: 3) is often mandatory, especially for government bodies, to be able to reach the set goals. Accordingly, the foremost aim of the relevant ministry of Turkey with the latest strategic plan was to enhance the energy supply security and to increase the diversification of supply sources, energy efficiency and renewable energy by promoting domestic resources (TRPR, 2015: 46). Moreover, Turkey prepared the Renewable Energy Action Plan in accordance with the requirements mentioned in Directive 2009/28/EC on encouraging the use of renewable energy (TRPR, 2016: 55). In this regard, various activities conducted by Turkey that concern renewable energy and policy are extremely valuable for the purpose of having effective public policies in the relevant policy field.

4.2. Expectations of the EU

The expectations of the EU from candidate countries play an influential role in shaping policies formulated in these states. Accordingly, candidate countries design and even reformulate their policies in an effort to comply with the EU acquis. Thereby, the EU's expectations can be regarded as a roadmap and/or a guide for candidate countries in their public policy-making process. Policy makers and official actors in candidate countries attempt to realise public reforms and innovations as a reflection of the EU's expectations. This part of the study contains the analysis of the expectations of the EU manifest in the regular progress reports (country reports) published through the years.

Table 2. Expectations

Years	Expectations
1998-2002	-
2003	An overall strategy regarding renewable energy sources needs to be put forward in order to increase the use of renewable energy sources (TRPR, 2003: 94).
2004	For the development of renewable energy in Turkey, an overall strategy should be formed. Turkey should introduce a Renewable Energy Law. Turkey ought to increase efforts to make good use of its significant potential regarding renewable energy sources and set strong targets. There needs to be an improvement in the institutional conditions regarding renewable energy (TRPR, 2004: 117).
2005	It is recommended for Turkey to develop an overall strategy regarding renewable energy sources (TRPR, 2005: 88). A reasonable timeframe is needed for the issuing of implementing regulations regarding renewable energy, as well as the legal framework for energy efficiency (TRPR, 2005: 89).
2006-2008	-
2009	Turkey's accession to the Energy Community would be particularly appropriate in terms of renewable energy sources (TRPR, 2009: 59).
2010	-
2011	In all sectors (i.e. electricity, heating, cooling and transport), there is a need for further complementary effort for a regulatory framework, which will increase the use of renewable energy sources (TRPR, 2011: 73). While there has been considerably good progress in terms of renewable energy, further effort is needed for the legislation to be fully compliant with the acquis (TRPR, 2011: 74).
2012	-
2013	The progress made in the renewable energy sector needs to be accelerated through simplified administrative procedures (TRPR, 2013: 37).
2014	-
2015	Acquis requirements on State Aid and on environment must be met by developments in renewable energy. Directorate General for Renewable Energy needs its capacity strengthened (TRPR, 2015: 47).
2016	Acquis requirements on State Aid and on the environment must be met by developments in renewable energy including hydropower (TRPR, 2016: 55).
2017-2019	-

The EU's various expectations in the policy field of renewable energy are identified when the regular progress reports on Turkey between the years 1998-2018 are scrutinised. Starting from 2003, the EU clearly reflects its wishes on these reports especially by providing Turkey with valuable recommendations. Forming and developing an overall strategy for renewable energy sources can be given as an example for one of the significant suggestions and expectations of the EU. The Union's emphasis on the mentioned expectation is attested in several of these regular progress reports (TRPR, 2003; 2004; 2005). In the process of public policy implementation, governments should have sufficient infrastructure, which is stated to be a fundamental public policy source (Knoepfel, Larrue, Varone and Hill, 2007: 65), in order to have successful policy outputs. Concordantly, some of the expectations of the EU contain policy suggestions in terms of administrative, institutional and legal infrastructure (TRPR, 2004; 2005; 2011; 2013; 2015). Yet, there has been a lack of expectations on the EU's regarding Turkey's renewable energy policy in the years 2006, 2007, 2008, 2010, 2012, 2014, 2017 and 2018.

5. CONCLUSION AND DISCUSSION

Energy is an important factor in the capacity to create sustainable development. Countries that adopt effective and efficient policies on energy pursue their development in a rapid and healthy manner. The subject of renewable energy came to the forefront of this discussion due to worldwide environmental issues, the insufficiency of natural resources and citizens' expectations for more services. In this context, international actors and organisations put a considerable emphasis on international cooperation and interaction when it comes to enacting functional policies on renewable energy. To that effect, international conferences have been organised and regulations to which dozens of countries are parties have been adopted. The European Union is also among the international actors that have shown great concern for renewable energy. The EU and its bodies have set forth proactive studies and goals to help both their Member States and candidate countries reach desirable levels of energy potential and use. The EU has prioritised energy policies from its foundation to the present day, publishing White and Green Papers on the subject. In the upcoming period and future processes, it is expected that the EU Members States, as well as candidate countries, will produce an ever-increasing portion of their energy through renewable sources.

As an EU candidate country, Turkey also deems the subject of renewable energy crucial. In fact, much like other developing countries, Turkey's need for energy is considerable. Accordingly, the legal and administrative regulations set up by the relevant public policy actors affect the success of renewable energy policies directly. The progress reports released by the European Commission have a functional effect on the policies Turkey adopts. In these reports, the determinations and expectations set forth by the EU make it so that certain public policy regulations become necessary. The EU's influence creates Policy-Making Gear Wheels, where the EU's determination and expectations form an essential part of the mechanism. As a result, Turkey adopts administrative and institutional reforms on different policy fields in order to adopt the *acquis*.

While Turkey is already in the process of implementing some hopeful reforms, it is possible to offer some essential policy recommendations on this field. The subject of energy needs to be discussed more within school curricula as well as during extracurricular activities, starting from primary school. Furthermore, the number of relevant departments in higher education should be increased, and curricula in related academic fields should be updated in light of renewable energy policies. Additionally, researchers and graduate students working on public policy and public administration need to pay more attention to renewable energy policies in their research. Media is also capable of contributing considerably to renewable energy policies as an effective unofficial actor in public policy. So much so that the media needs to adopt an active role in raising awareness of renewable energy. Turkey's new government system has seen the creation of presidential offices and policy councils which carry functional duties. Establishing an office or council dealing with energy among these bodies could be useful to identify policy issues and offer alternative solutions.

When examined from the EU's perspective, academic projects on renewable energy policies should be further supported. This way, productive outputs could be obtained through projects designed by policy experts. Additionally, cooperation with leading think tanks working on energy would make it so that goals set on renewable energy remain concrete and feasible. The EU currently offers scholarships to many successful students in higher education through the Erasmus Mundus programme. Furthermore, the Erasmus Mundus programme maintains its effectiveness by offering visiting scholar scholarships to many successful researchers from hundreds of universities. In this context, it is imperative that considerable support is provided to the field of renewable energy

and its policies through the said programme. For that matter, renewable energy policy should be declared as one of the programme's priority fields, and greater support should be given to students wishing to pursue graduate-level studies in this field. On the other hand, government leaders of the EU Member States should place a bigger emphasis on renewable energy in events they participate in and as well as in their statements. At the same time, organising more "ad hoc summits" on renewable energy would clearly offer effective achievements. In this way, the EU could adopt a truly sustainable renewable energy policy, while ensuring that future generations will inherit a world less-riddled with energy problems.

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