

**BASKENT UNIVERSITY
INSTITUTE OF EUROPEAN UNION AND INTERNATIONAL
RELATIONS
DEPARTMENT OF POLITICAL SCIENCE AND INTERNATIONAL
RELATIONS
MASTER'S PROGRAMME IN INTERNATIONAL RELATIONS**

**TÜRKİYE'S RENEWABLE ENERGY POLICIES DURING THE
JUSTICE AND DEVELOPMENT PARTY ERA (2002-2024): AN
ASSESSMENT OF WIND AND SOLAR ENERGY POLICIES**

PREPARED BY

UFUK BURAK CANBOLAT

MASTER'S THESIS

ANKARA-2025

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SUPERVISOR

DR. ÖĞR.ÜYESİ ERDEM DAMAR

ANKARA-2025

BAŞKENT ÜNİVERSİTESİ
AVRUPA BİRLİĞİ VE ULUSLARARASI İLİŞKİLER ENSTİTÜSÜ

Siyaset Bilimi ve Uluslararası İlişkiler Anabilim Dalı Uluslararası İlişkiler Tezli Yüksek Lisans Programı çerçevesinde Ufuk Burak Canbolat tarafından hazırlanan bu çalışma, aşağıdaki jüri tarafından Yüksek Lisans Tezi olarak kabul edilmiştir.

Tez Savunma Tarihi: 20/06/2025

Tez Adı: Türkiye's Renewable Energy Policies During the Justice and Development Party Era (2002-2024)Ç An Assessment of Wind And Solar Energy Policies

Tez Jüri Üyeleri (Unvanı, Adı- Soyadı, Kurumu)

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BAŞKENT ÜNİVERSİTESİ
AVRUPA BİRLİĞİ VE ULUSLARARASI İLİŞKİLER ENSTİTÜSÜ YÜKSEK
LİSANS TEZ ÇALIŞMASI ORJİNALLİK RAPORU

Tarih: 26/06/2025

Öğrencinin Adı, Soyadı: Ufuk Burak Canbolat

Öğrencinin Numarası: 22210130

Anabilim Dalı: Siyaset Bilimi ve Uluslararası İlişkiler

Programı: Uluslararası İlişkiler Tezli Yüksek Lisans Programı

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Tez Başlığı: Türkiye's Renewable Energy Policies During The Justice And Development Party Era (2002-2024): An Assesment Of Wind And Solar Energy Policies

Yukarıda başlığı belirtilen Yüksek Lisans tez çalışmamın; Giriş, Ana Bölümler, Sonuç ve Türkçe Özet Bölümünden oluşan, toplam 100 sayfalık kısmına ilişkin, 20/06/2025 tarihinde şahsım/tez danışmanım tarafından Turnitin adlı intihal tespit programından aşağıda belirtilen filtrelemeler uygulanarak alınmış olan orijinallik raporuna göre, tezimin benzerlik oranı %17'dir.

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Öğrenci İmzası

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26 /06/ 2025

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İmza

ACKNOWLEDGMENTS

I want to express my deepest gratitude to all individuals and institutions who contributed to the realisation of this study.

First and foremost, I'm profoundly grateful to my thesis advisor, Dr. Assistant Professor Erdem Damar, for their invaluable guidance, insightful critiques, and unwavering support throughout this thesis process. Their extensive knowledge and inspiring mentorship have been instrumental in shaping this work and my academic journey.

I would also like to thank my thesis committee members Prof. Dr. Pınar Ipek, Assoc. Prof. Dr. Sezgin Mercan, for their constructive feedback and valuable insights, which have greatly enriched this thesis and contributed to my academic growth. Additionally, I would like to express my gratitude to my esteemed lecturers, Assoc. Prof. Haluk Karadag and Dr. Bilge Filiz, for their valuable contributions, which have guided me both in my academic studies during my master's programme and in my future research.

I want to express my deep gratitude to my family and friends, whose support and encouragement, both emotional and academic, have consistently inspired me. This thesis is the culmination of the efforts and support of many people. To all of them, I express my heartfelt gratitude and commit to utilising the knowledge and experiences gained during this process in my future academic endeavours.

ABSTRACT

Ufuk Burak Canbolat

**Türkiye's Renewable Energy Policies During the Justice and Development Party Era
(2002-2024): An Assessment Of Wind and Solar Energy Policies**

Baskent University

Institute of the European Union and International Relations

Master's Program of International Relations with Thesis

2025

Renewable energy sources have become increasingly important, particularly solar and wind in the years following the beginning of the 2000s. Green energy sources are particularly significant as the effects of global warming and the climate crisis, caused by the use of fossil fuels, are being felt more and more. The main aim of this thesis is to focus on Türkiye-European Union relations in terms of energy. More specifically, the thesis aims to analyse Türkiye's renewable energy electricity generation policies and their impact on the process of integration with the European Union. It is argued in the literature that Türkiye has had varying levels of success with renewable energy and the EU harmonisation process. However, it is generally accepted that solar and wind energy, in particular, have become more widespread in Türkiye and the European Union compared to other energy types, and that these forms play an important role in energy production from renewable energy sources.

This thesis investigates the role and impact of renewable energy policies in Türkiye's electricity sector, as well as considering privatisation policies, efforts to increase the share of renewable energy in Türkiye's power generation, and also the impact of this process on the country's European Union integration and accession. Examining the link between privatisation policies and efforts to increase the share of renewable energy in Türkiye's energy production is made possible through document analysis. Privatisation is seen as a key element in the significant steps Türkiye has taken in the area of incentive policies, especially since 2010. The findings of the study show that the country's electricity generation from renewable energy increased after the implementation of YEKA (Renewable Energy Resource Area) and YEKDEM (Renewable Energy Resources Support Mechanism), and that there is no relationship between privatisation and renewable energy.

Despite these successes, it is important to note that the country is still lagging behind expectations in terms of electricity generation from renewable energy sources. In the privatisation process in Türkiye, the government has been close to certain companies in the YEKA and YEKDEM incentives created by the government, and this closeness has leads to irregularities in these incentive programs as such government favored companies tend to win tenders. These incentive tenders held by the government represent unsuccessful project management as the winning companies sell the tender. In other words, the installed capacity is seen numerically but does not represent a contribution to the actual energy power production of the country.

Key Words: Türkiye and the European Union, Renewable Energy, Electricity Generation, the Justice and Development Party Energy Policies, Solar and Wind energy policies

ÖZET

Ufuk Burak Canbolat

**Adalet ve Kalkınma Partisi Döneminde Türkiye'nin Yenilenebilir Enerji Politikaları
(2002-2024): Rüzgâr ve Güneş Enerji Politikalarının Bir Değerlendirilmesi**

Başkent Üniversitesi

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Uluslararası İlişkiler Tezli Yüksek Lisans Programı

2025

Yenilenebilir enerji kaynakları özellikle 2000'li yılların başından itibaren güneş ve rüzgâr enerjisi olmak üzere, giderek daha önemli hâle gelmiştir. Fosil yakıtların kullanımı küresel ısınma ve iklim krizine sebebiyet vermesi sebebiyle ve küresel iklim krizinin etkileri giderek daha da hissedilmeye başladıktan sonra yeşil enerji kaynaklarının anlam ve önemi bir kez daha önem kazanmıştır. Bu tez çalışmasının temel amacı, Türkiye-Avrupa Birliği ilişkilerine enerji boyutu üzerinden odaklanmayı amaçlamaktadır. Daha özel olarak, tezin amacı Türkiye'nin yenilenebilir enerji üzerinden elektrik üretim politikalarını ve bu politikaların Avrupa Birliği entegrasyon sürecine etkisini incelemektir. Literatürde, Türkiye'nin yenilenebilir enerji alanında attığı adımlar özelinde ve AB uyum süreci kapsamında yeterlilik düzeyinin farklılaştığı öne sürülmektedir. Fakat, özellikle güneş ve rüzgâr enerjisi kapsamında Türkiye ve Avrupa Birliği genelinde diğer enerji türlerine nazaran daha yaygınlaştığı ve yenilenebilir enerji kaynaklarından enerji üretiminde önemli bir rol oynadığı kabul edilmektedir.

Bu tez çalışmasında, Türkiye'nin elektrik sektöründe yenilenebilir enerji politikalarının rolü ve etkisi araştırılmaktadır. Özelleştirme politikaları ve Türkiye'nin enerji üretiminde yenilenebilir enerjinin payını arttırmak için yapılan çabalar, bu sürecin ülkenin Avrupa Birliği entegrasyonu ve katılımı üzerindeki etkisi de dahil edilmiştir. Söz konusu araştırma, Türkiye'nin enerji üretimindeki payını arttırmaya yönelik özelleştirme politikaları ve çabaları arasındaki bağlantıyı incelemeyi mümkün kılan doküman analizi yöntemiyle gerçekleştirilmiştir. Özelleştirme alanı, Türkiye'nin özellikle 2010 senesinden bu yana teşvik politikaları alanında attığı önemli adımların kilit noktası durumunda görülmektedir. Çalışmaya ait bulgular, YEKA ve YEKDEM sonrası ülkenin yenilenebilir enerjiden elektrik üretiminde artış gözlemlendiği ve özelleştirme ile yenilenebilir enerji arasındaki

ilişkinin olmadığı tespit edilmiştir. Buna karşın yenilenebilir enerji kaynaklarından elektrik üretimi konusunda ülkenin hala beklenenin geresinde kaldığını eklemekte önem arz etmektedir. Türkiye’de özelleştirme sürecinde, hükümet tarafından oluşturulan YEKA ve YEKDEM teşviklerinde, hükümet belirli şirketlere yakınlık göstermektedir. Bu yakınlık bu teşvik programlarında usulsüzlük yapılmasına sebebiyet vermektedir. Hükûmete yakın olan şirketler teşvik yarışmalarına katılıp ihale yarışmasını kazanmaktadır. Hükümet tarafından yapılan bu teşvik ihaleleri sonrasında ihaleyi kazanan şirketler ihaleyi satması sebebiyle başarısız proje yönetimi olarak sonuçlanmaktadır. Bir diğer ifadeyle, kurulu güç sayısal olarak gözükmekte, ülkenin fiili enerji gücüne bir katkısı olamamaktadır.

Anahtar Kelimeler: Türkiye ve Avrupa Birliği, Yenilenebilir Enerji, Elektrik Üretimi, Adalet ve Kalkınma Partisi Enerji Politikaları, Güneş ve Rüzgâr Enerji Politikaları.

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LIST OF ABBREVIATIONS

CBAM	: Carbon Border Adjustment Mechanism
CO₂	: Carbon Dioxide
EC	: European Commission
EETS	: European Emission Trading System
EGD	: European Green Deal
EMRA	: Electricity Market Regulatory Board and Authority
ENTSO-E	: European Network of Transmission System Operators for Electricity
EU	: European Union
EÜAŞ	: Electricity Generation Company
IEA	: International Energy Agency
IRENA	: International Renewable Energy Agency
JDP	: the Justice and Development Party
MENR	: Ministry of Energy and Natural Resources
OECD	: Organisation for Economic Co-Operation and Development
RPS	: Renewable Energy Portfolio Standard
TEİAŞ	: Turkish Electricity Transmission Company
UCTE	: Union for the Coordination of Transmission of Electricity
UK	: United Kingdom
YEKDEM	: Renewable Energy Support Mechanism
YEKA	: Renewable Energy Resources Area

1. INTRODUCTION

This thesis investigates the renewable energy policies of Türkiye and European Union (EU) with a particular focus on the management of solar and wind energy systems during the government era of the Justice and Development Party (*Adalet ve Kalkınma Partisi*—JDP) from 2002 to 2024. The thesis question is: “Do the energy policies organised through the privatisation process in Türkiye have the ability to provide the expected renewable energy capacity in the harmonisation with the EU?” The primary aim of this study is to analyse the relationship between Türkiye and the European Union through the lens of energy policies. In this context, the impact of Türkiye’s electricity policies based on renewable energy on the European Union integration process will be examined. Studies on energy policies are important to examine the contemporary conditions of Türkiye-EU relations, as energy is one of the few remaining contemporary issues in which Türkiye-EU relations remain alive and dynamic. In addition, as both actors place great importance to the development of renewable energy as a major dynamic in the restructuring of their energy regimes, the renewable energy policies implemented can be considered as one of the key areas from which the present relationship between these two actors, as well as the possible evolving of relations in the near future, can be studied through a careful examination of both Türkiye and the EU’s renewable energy regimes. It is suggested that Türkiye’s renewable energy production in the electricity sector, particularly in terms of solar and wind energy resources, could make a significant contribution to the resolution of energy independence. The present study investigates the renewable energy policies of the EU and Türkiye and clarifies the role of energy in the relationship through conducting document research of a wide range of empirical materials, such as national reports published by the Republic of Türkiye Ministry of Energy and Natural Resources (*Enerji ve Tabii Kaynaklar Bakanlığı*—MENR), official and private companies reports and documents published by the EU and Türkiye.

In the process of aligning with the EU, Türkiye has taken significant steps to fulfil the essential EU requirements in the field of energy. One of the most important of these requirements was the integration of the Turkish electricity system, with that of the EU. This integration was officially finalised on 18 September 2010, when the country’s electricity system became a part of the Coordination of Transmission of Electricity

(UCTE),¹ whose primary objective is to support the interconnection of electricity transmission systems.² In April 2015, Türkiye reached a noteworthy milestone by becoming the first country to gain observer status in the European Network of Transmission System Operations for Electricity (ENTSO-E), which is electricity transmission system operator that operates beyond the borders of the EU. This achievement could be considered as a landmark in the country's relationship with the EU, as it facilitates conditions for Türkiye's interconnection with EU nations, including Greece, and Bulgaria, and thus positions Türkiye as a key actor in the energy field.³ In December 2022, the Turkish Electricity Transmission Company (Türkiye Elektrik İletim Anonim Şirketi—TEİAŞ), which is the only public economic enterprise authorised to carry out electricity transmission processes and procedures in Türkiye, signed an observer membership agreement with ENTSO-E on behalf of Türkiye.⁴ Thanks to this membership agreement, Türkiye has now gained access to 500 megawatts (MW) for the importing, and 400 megawatts for the exporting of, electricity.⁵

The privatisation that has been implemented over recent decades could be considered as being one of the major state policies for the regulation of Türkiye's energy regime as well as in the development and implementation of renewable energy policies. On 26 January 2001, a draft document on the privatisation of the electricity market was approved by the Planning and Budget Commission of the Turkish Grand National Assembly. However, major economic crisis that broke out across the country during this period helped expose the fundamental reasons that lay behind the privatisation of the electricity market. The first effects were felt in November 2000, but the crisis became more pronounced in February 2001. In line with this approach, laws relating to the electricity and natural gas market were put into effect in 2001, for which a legal framework was established involving the enactment of two laws in compliance with the EU's energy legislation. These two laws are Law No. 4628, which pertains to the electricity market, and Law No. 4646, which relates to the natural gas market. The legal infrastructure that was subsequently established

¹ Under the liberalisation wave, the *Union pour la Coordination de la Production et Transport d'Électricité* (UCPTE) became the UCTE in 1990.

² Alparslan Bayraktar, "A Multidimensional Analysis Of Turkish German Low Carbon Energy Transitions" (Doctoral Thesis: Middle East Technical University, Earth System Science, 2020), 206-210.

³ Ibid, 209.

⁴ "Electrifying Europe (ENTSOE-E)," *ENTSO-E EU Members*, Web: <https://www.entsoe.eu/about/inside-entsoe/members/>, Accessed: 15-11-2023.

⁵ Ibid, 156.

allowed the country to fulfil obligations and responsibilities in line with relevant EU regulations.⁶

The primary purpose of Law No.4628 is to ensure: (i) the provision of perpetual, cheap, high-quality, and sustainable electricity; (ii) transparency and robustness in financial matters; and (iii) the maintenance of an independent mechanism for the monitoring and regulation of electricity supply.⁷ Law No.4646, on the other hand, applies the same standards as Law No.4628 to Türkiye's natural gas market.⁸ Türkiye has endeavoured to meet the EU criteria by creating an independent regulatory mechanism⁹ based on these legal regulations supporting liberalisation and privatisation in the energy market.

This thesis study will provide a more detailed explanation under the heading 3.1.2. European Union. The EU's norm-setting authority is subject to debate among member states. The acceptance of EU law has been established as a fundamental condition for the implementation of Union norms in member and candidate countries. This principle of the supremacy of EU law is based on Article 6 of the EU Treaty. This article constitutes the legal foundation of the EU's normative basis. The EU's norm-setting authority applies only to member states. In the energy sector, the EU's norm-setting encompasses the reduction of greenhouse gases, the generation of electricity from renewable energy sources, and the minimisation of energy consumption. For this reason, the EU has emphasised that its citizens bear significant responsibility in this regard. Türkiye faces challenges in aligning with the EU's renewable energy norms in the electricity sector due to political obstacles. Indeed, the energy chapter remains open for negotiation. The steps taken by Türkiye regarding energy supply security and renewable energy are positively regarded by the EU.¹⁰

In 2004, the publication of the Electricity Energy Sector Reform and Privatisation Strategy Document marked the beginning of Türkiye's privatisation of its electricity generation plants.¹¹ Although the Electricity Generation Company (*Elektrik Üretim Şirketi*—EÜAŞ), which is public sector electricity generation corporation, is still operating,

⁶ Ibid, 9-203.

⁷ “Kanun no.6446,” *Elektrik Piyasası Kanunu*, 30 March 2013, Accessed:18-11-2023, Web:<https://www.resmigazete.gov.tr/eskiler/2013/03/20130330-14.htm>

⁸ “Kanun no.4646,” *Doğal Gaz Piyasası Kanunu*, 18 April 2001, Accessed:18-11-2023, Web:<https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=4646&MevzuatTur=1&MevzuatTertip=5>,

⁹ (Energy Market Regulatory Authority—EPDK)

¹⁰ “Fasıl 15 Enerji: Avrupa Birliği'nin Enerji Politikası,” *T.C Dışişleri Bakanlığı Avrupa Birliği Başkanlığı*, 6 February 2024, accessed: 26-06-2025, Web: <https://www.ab.gov.tr/p.php?e=80>

¹¹ “3. Proje Grup Başkanlığı Portföyü,” *Özelleştirme İdaresi Başkanlığı*, Web: <https://www.oib.gov.tr/3-proje-grup-baskanligi/>, Accessed: 19-11-2023.

78 percent of its electricity-producing assets have now been privatised.¹² The private electricity transmission and solar and wind energy production companies established to date continue to represent-Türkiye in matters related to EU energy accession. In accordance with Directive 2001/77/EC of the European Parliament and Council, dated 27 September,2001 on the Promotion of Electricity Produced from Renewable Energy Sources in the Internal Electricity Market, the companies in each EU member state are responsible for producing a yearly report which details the proportion of energy produced from renewable sources. The percentage of electricity produced from renewable energy sources in these reports is shared with the EU and Türkiye as representation of the total renewable energy nationwide as a contribution to measures for EU integration.¹³

Despite these developments, and the notable solar and wind energy potential afforded by its strategic location, Türkiye's use of renewable energy still falls behind that of the EU targets. For instance, Türkiye's installed power capacity of 31GW (gigawatt) from wind energy and 13GW from solar energy is far exceeded by that of Germany, the pioneer in EU renewable energy production, which boasts 114GW of electricity production from wind and 49GW of solar.¹⁴

As stated in the National Energy Action Plan for 2017-2023, as released by the MENR, Türkiye's per capita electricity consumption currently stands at 3,224 kWh. This consumption rate is relatively low compared to other economies in which the rates are 7,124 kWh for France, 6,779 kWh for Germany, 5,217 kWh for the United Kingdom (pre-Brexit), with the Organisation for Economic Co-operation and Development (OECD) average being 8,106 kWh. Expected given Gross Domestic Product and Gross Domestic Product growth rate. What matters is the growth in electricity and total energy demand over the years. One of the highest growth rates among developing countries compared to Türkiye's estimated growth rate in the energy sector.¹⁵

¹² "Enerji," *Türkiye Cumhuriyeti Cumhurbaşkanlığı Yatırım Ofisi*, Accessed:19-11-2023, Web:<https://www.invest.gov.tr/tr/sectors/sayfalar/energy.aspx>

¹³ Zerrin Taç Altuntaşoğlu, "Yenilenebilir Enerji Avrupa Birliği ve Türkiye Müktesebatı," 5. *Enerji Sempozyum Bildirileri*, TMMOB, Ankara, 21-23 December 2023, Web: https://www.emo.org.tr/ekler/6edc1cd1f36e45d_ek.pdf

¹⁴ "Energy Profile Germany," *International Renewable Energy Agency*, Accessed:21-11-2023, Web:https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Europe/Germany_Europe_RE_SP.pdf

¹⁵ "Ulusal Enerji Verimliliği Eylem Planı (2017-2023)," *Enerji ve Tabii Kaynaklar Bakanlığı*, Accessed:25-11-2023,

Web:<https://enerji.gov.tr/Media/Dizin/EVCED/tr/EnerjiVerimlili%C4%9Fi/UlusalEnerjiVerimlili%C4%9FiEylemPlan%C4%B1/Belgeler/UEVEP.pdf>

The National Action Plan 2017-2023 stresses the importance of the privatisation of energy as well as the significance of the increase in the number of private enterprises within the renewable energy sector, in the increasing of public living standards to the desired levels. Türkiye has been aware of its relatively limited renewable energy capacity for the last fifteen years and has consequently exploring new opportunities for the enhancement of its renewable energy system to strengthen energy connections between Türkiye and the EU.

Table 1. Per capita electricity consumption in kilowatt hours (2023)¹⁶

Per capita electricity consumption in kilowatt hours (2023)		
Türkiye	EU (average)	OECD countries (average)
7,124 kWh	5,960 kWh	8,106 kWh

1.1. Why Are Renewable Energy Sources Important?

Energy is a globally significant economic and political asset, which provides advancements according to the area of usage. Countries seek to increase their exploitation of renewable energy resources as part of their efforts to tackle the potential negative consequences of the climate crisis.

The definition of renewable energy is clean energy.¹⁷ One of the major advantages of renewable energy over non-renewable resources is its zero-carbon emission. The forms of renewable energy are geothermal, solar, wind, ocean, wave energy, tidal, biomass, and hydropower, all of which represent sources of clean, and environmentally friendly energy with zero-emission and relatively declining cost.¹⁸ Furthermore, recent technological developments in the renewable energy sector have created new opportunities in the job market, while also contributing to increased productivity the renewable energy in electricity sector.

¹⁶ “Per capita electricity consumption Europe,” *Statista*, Accessed:15-03-2025, Web:<https://www.statista.com/statistics/1262471/per-capita-electricity-consumption-europe/>

¹⁷ “Renewable Energy in Cities,” *International Renewable Energy Agency*, accessed:20-06-2025, https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2016/IRENA_Renewable_Energy_in_Cities_2016.pdf

¹⁸ “Renewable Power Generation Costs in 2023,” *International Renewable Energy Agency*, accessed:20-06-2025, <http://large.stanford.edu/courses/2024/ph240/lutz1/docs/irena-2024.pdf>

There are, however, a number of disadvantages associated with renewable energy, the most notable of which is dependency on weather conditions. This issue calls into question the reliability and efficiency of renewable energy, a major problem as current global social and economic societies depend on uninterrupted production and distribution of energy.¹⁹ As a consequence, there is increased demand for natural gas during poor weather conditions to meet required energy demands. Despite this drawback, renewable energy is generally seen as the best alternative to fossil fuels, with wind and solar energy receiving significant investment by both the leading countries in the field of renewable energies, including Germany, Sweden, Spain and Italy, and Türkiye. These increased investments in wind and solar energy have been significant, particularly in recent years, in the generation of electricity during poor weather conditions, thus reducing reliance on natural gas for the generation of electricity. Overall, as will be discussed below, there are five key axes that mobilise global economic actors, including Türkiye and the EU, towards renewable energy.

1.2. Five Axes Leading Türkiye and the European Union's Shift Towards Renewable Energy

1.2.1. Axis 1: the potential negative consequences of climate change

One of the main reasons for the increased focus on renewable energy in countries' energy regime is climate change, and growing concerns over the environment. The increase in demand for energy in the 21st century has also meant that energy has become a crucial global issue that shapes international and domestic politics. In addition to increased use of technology, the dramatic and continuous increase in the global population is a significant contributing factor to increased energy demand. This dramatic increase in global population, from around one billion in the 1800s, but has now passed the 8 billion.²⁰ This growth has led to scarcities in all resources (food, energy, wood, water, etc.) and has surpassed states to look for new and sustainable energy resources. Today, more than half of all the energy consumed globally is sourced from non-renewable fossil fuels, such as natural gas, coal, as while these resources are polluting, they are easily accessible, cheap,

¹⁹ Dario Maradin. "Advantages and Disadvantages of Renewable Energy Sources Utilization." *International Journal of Energy Economics and Policy* 11, 3 (2021): 176-183.

²⁰ "Climate Change 2023 Synthesis Report," *Intergovernmental Panel on Climate Change (IPCC)*, accessed:21-06-2025, https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf, p.35-115

and abundant. One of the major challenges that has come with the increased demand for energy is the emission of greenhouse gases, such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), of all which trap heat in the atmosphere.²¹ These emissions can be considered as being amongst the primary contributors to climate change.

It is due to issues relating to the rising impact of global warming, which has been exacerbated by technological development and rapid population growth that many states have imposed an array of regulations. As the impact of environmentally related issues increases, countries continue to grapple with these problems in the constitution of appropriate renewable energy policies in electricity sector.

The Paris Climate Agreement is a legally binding international treaty established to address climate change. It officially came into force in 2016, following its adoption by 195 countries at the United Nations Climate Change Conference held in Paris in 2015. The central aim of the agreement is to limit the global average temperature rise to well below 2 degrees Celsius above pre-industrial levels, while actively striving to restrict this increase to 1.5 degrees. In recent years, international climate conferences have increasingly focused on the necessity of maintaining the 1.5-degree target. This shift in emphasis is primarily based on the findings of the Intergovernmental Panel on Climate Change (IPCC), which has warned that exceeding the 1.5-degree threshold would dramatically heighten the risk of extreme climate events, including prolonged heatwaves, severe droughts, and irregular precipitation patterns. It is widely acknowledged that current climate measures must be significantly strengthened in order to meet the targets set by the Paris Agreement. Since its adoption, a range of low-carbon technologies has been developed, and new environmental markets have emerged across the globe. Many countries have introduced strategies aimed at achieving net-zero emissions, with particular focus on the energy and transportation sectors. These two sectors have become especially important in the implementation of zero-carbon policies, not only because of their emissions profiles but also due to their potential to generate substantial employment opportunities.²²

Carbon text is of vital importance for life on Earth. Many tools, devices, and various other necessities of daily life exist and function through carbon. While the world heavily depends on carbon, it is simultaneously facing major global threat; climate change. The slow carbon cycle involves the formation of fossil fuels such as petroleum, natural gas, and

²¹ Jean-Marie Chevalier, "The New Energy Crisis" (London: Palgrave Macmillan, 2009), 6-7.

²² "The Paris Agreement," *United Nations Climate Change*, Web: <https://unfccc.int/process-and-meetings/the-paris-agreement>, accessed: 26-06-2025.

coal through the accumulation of organic carbon underground. This organic carbon enters the atmosphere when smoke from volcanic eruptions rises into the sky. During volcanic eruptions, gases are released into the atmosphere, and to complete the cycle, these gases are brought back to the Earth's surface and trapped in silicate rocks. The chemical processes involved in the regeneration of the slow carbon cycle span extremely long periods of time.²³

In contrast, the fast carbon cycle refers to the significant circulation of carbon through life forms on Earth. Long carbon chains are bonded together by energy, and when these bonds are broken, energy is released. This energy makes carbon molecules a crucial fuel source for the planet. Humans release substantial amounts of carbon into the atmosphere by burning these fuels, effectively transferring carbon from the slow cycle to the fast cycle. In 2009, for instance, approximately 8.4 billion tons of carbon were emitted due to the combustion of fossil fuels such as oil, natural gas, and coal.²⁴

In this final stage of the cycle, part of the emitted carbon is absorbed by land, plants, and oceans, while the remainder remains in the atmosphere. Changes in the carbon cycle contribute to atmospheric warming. In oceans, this process increases water acidity, disrupting marine ecosystems. On land, it causes plants to grow more rapidly and in unexpected ways. These carbon cycles, as outlined above, directly and indirectly affect the energy, transportation, and industrial sectors. In the energy sector, they influence the share of electricity production. In transportation, emissions are generated through air, land, and sea travel. Lastly, in the industrial sector, carbon emissions occur primarily from the production of steel, cement, and chemicals²⁵

The European Union unveiled its roadmap with the European Green Deal (EGD) in December 2019, following the goals highlighted in the Paris Climate Agreement. This roadmap represents the EU's new growth strategy aimed at reducing greenhouse gas emissions by 2050. Between 2019 and 2025, the EU has published numerous policy documents within the scope of this roadmap. In the energy sector, documents such as the Energy System Integration Strategy, Methane Strategy, and Offshore Renewable Energy Strategy hold significant importance. For the transportation sector, the EU has issued the Sustainable and Smart Mobility Strategy to reduce greenhouse gas emissions. Similarly, in

²³ "The Carbon Cycle," *National Aeronautics and Space Administration (NASA)*, Web: <https://earthobservatory.nasa.gov/features/CarbonCycle>, accessed:26-06-2025.

²⁴ "The Carbon Cycle"

²⁵ "The Carbon Cycle"

the industrial sector, the European Commission released the Green Deal Industrial Plan to combat emissions effectively.²⁶

1.2.2. Axis 2: the global energy crisis

While current renewable energy policies aim to address such environmental and climate issues, measures were taken in response to a global energy crisis, much earlier. This is particularly true after World War II, when energy politics became a major field in the determination of state policies. In fact, in the post-1945 world, energy has been become considered key to economic growth in the ensuring of an adequate supply of oil.²⁷ Subsequently, the issue of energy has become the heart of a wide range of international conflicts, which are often identified in the literature as the “energy crisis.” The first indicator of the crisis-ridden character of energy politics in the international arena was the 1973 Oil Crisis, which transformed the global perspective of energy and led to a new political environment in which the role of non-renewable forms of energy was downgraded, especially in Europe and North America.²⁸ In addition, the global energy embargo was imposed on Iran’s oil in 1987 by the United States, internal regime change in 1979, had a significant impact on global energy politics, especially financially. During this period, countries with the capacity to produce oil strived to sustain the international oil markets, while also beginning to investigate and develop new and renewable sources of energy, especially from renewable sources.²⁹

The second global energy crisis occurred following the Iranian Revolution in 1979, prior to which, there had been disagreements related to petroleum prices between the United States, the United Kingdom, and Iran. There were disputes concerning the Iranian state’s share in the Iranian oil company and the royalty payments made to the Iranian government by former Prime Minister Mossadegh starting from 1951. During the reign of Shah Reza Pahlavi, protests began to spread within Iranian society. Although the Pahlavi dynasty was at times popular, Iranian society symbolised the dynasty negatively, accusing

²⁶ “Avrupa Yeşil Mutabakatı,” *T.C Dışişleri Bakanlığı Avrupa Birliği Başkanlığı*, 11 June 2024, Web: https://www.ab.gov.tr/avrupa-yesil-mutabakati_53729.html, accessed: 26-06-2025.

²⁷ Phil Johnstone, Caitriona McLeish, “World Wars and the age of oil: Exploring directionality in deep energy transitions”, *Energy Research and Social Science* 69, 4(2020): 1-3. Doi: <https://doi.org/10.1016/j.erss.2020.101732>

²⁸ Ibid, 1-11.

²⁹ Charles Issawi, “The 1973 Oil Crisis and After”, *Journal of Post Keynesian Economics* 1, 2(1978-79): 8-10. Doi: <https://doi.org/10.1080/01603477.1978.11489099>

it of disrespecting religious values.³⁰ While the oil resources of Iran had long ensured its major role in global oil supply, the revolution in Iran was a clear demonstration to the world of how a massive rise in oil prices had profound effects on Western economies, as well as the unsustainability of the existing energy regime in global politics. It can therefore clearly be seen how the developments following the crisis led to a change in the perception of the sector towards its sources of energy.³¹

More recently, the uprising in the Middle East and in North Africa in the early 2010s, during what became known as the Arab Spring, triggered an array of economic, political, and social conflicts that impacted multiple sectors and oil producers and exporters in particular. The Arab Spring protests started initially in Tunisia and spread across the region to such countries as Egypt, Yemen, and Syria.³² Subsequent civil wars spurred both regional and global crises in the energy sector, with knock-on effect being rising petroleum and natural gas prices.

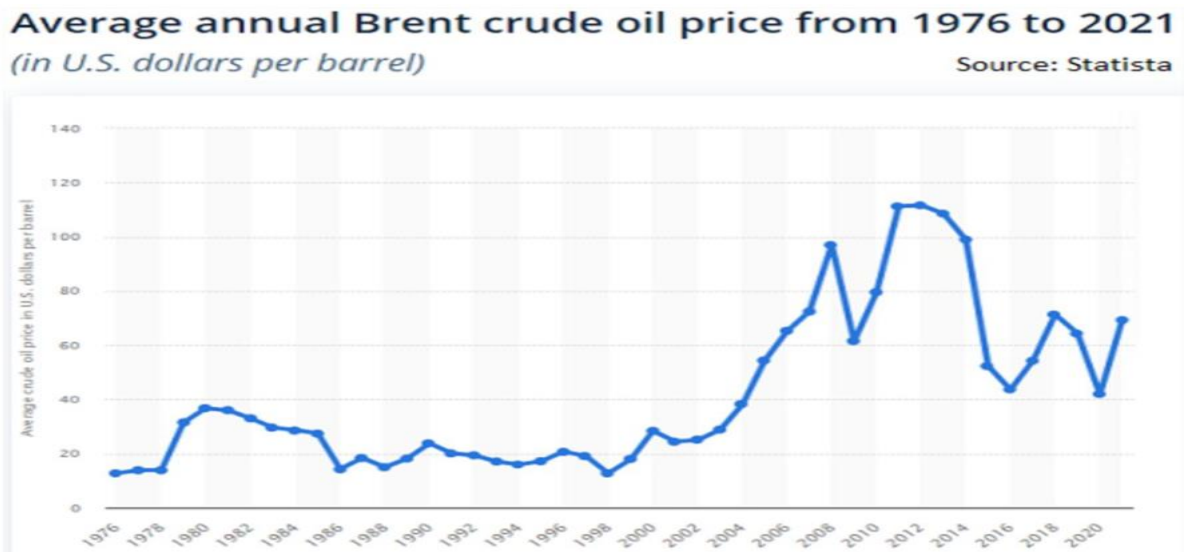


Figure 1. Crude Oil Price from 1976 to 2021³³

³⁰ Scarlett Hart, “İran Devrimi,” *World History Encyclopaedia Türkçe*, çev. Nizamettin Karaben, 13 February 2025, Web: <https://www.worldhistory.org/trans/tr/1-23980/iran-devrimi/>, accessed:26-06-2025.

³¹ Philip K. Verleger, “The US Petroleum Crisis of 1979”, *Brooking Institution*, 2 (1979): 463-464, <https://eds.s.ebscohost.com/eds/pdfviewer/pdfviewer?vid=15&sid=ceb05381-0cdb-4f2b-8204-a77d6a788e08%40redis>

³² Lisa Anderson, “Demystifying the Arab Spring: Parsing the Differences Between Tunisia, Egypt, and Libya”, *Foreign Affairs* 90,3(2011):2-3.

³³ “IEA lifts 2022 average crude oil price assumption to 70.40 dollars/bbl,” *Reuters*, Accessed: 21-06-2025, Web: <https://www.reuters.com/business/energy/oil-price-rally-set-ease-off-supply-rebounds-iea-says-2021-11-16/>

The most recent historical development that is escalating the crisis-ridden conditions of the global energy sector has been the Russia-Ukraine war, which broke out in 2022. This conflict, in which we see the East facing off against the West, could be considered to be the third crisis-ridden shock in the global energy sector.³⁴ It is due to the current crisis-ridden environment conditions in the global energy market that many states in the 21st century are aiming to make renewable energy their main area of energy production. The military support provided to Ukraine by the United States and the EU, thanks to the pro-Western policies of Ukraine and its desire for closer alignment with the West, has led to disruptions in the supply of energy by Russia to Western markets. This has led the Western powers, and the EU in particular, to bolster their pro-renewable energy policies in an effort to enhance energy self-sufficiency. In response to disruptions in the supply of energy from Russia following the war that broke out in February 2020, the EU introduced the REPowerEU plan, the primary goals of which were complete energy independence, full transition to renewable energy and the end of energy imports from Russia. Following the announcement of the plan, the EU adjusted its 2030 clean energy targets, pledging to generate 45 percent of its electricity from renewable energy sources by the specified date.³⁵

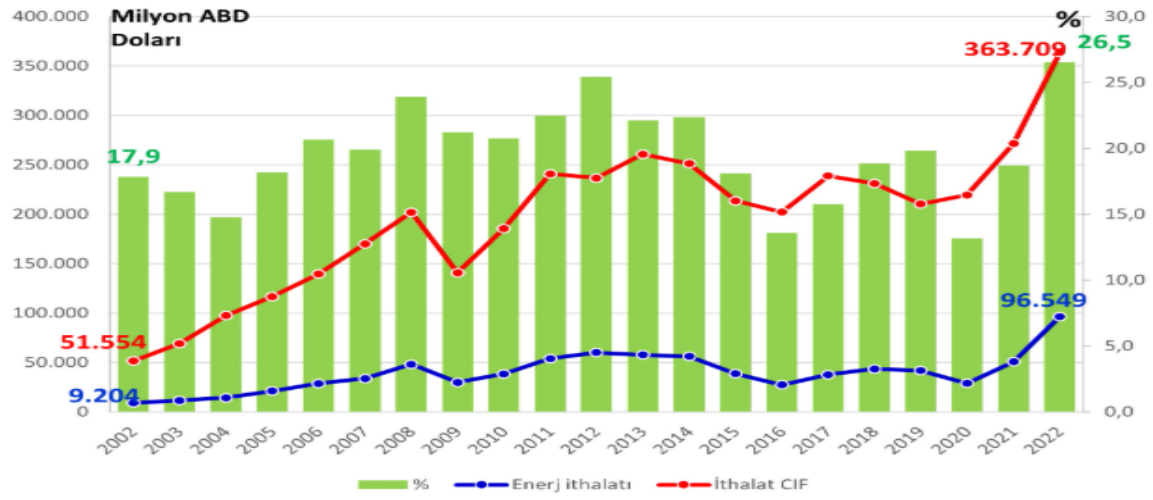


Figure 2. Türkiye's Energy Imports by years³⁶

(Green: Percent, Blue: Energy İthalatı, Red: Cost Insurance and Freight Import)

³⁴ "World," *Reuters*, Accessed:17-10-2023, Web: <https://www.reuters.com/world/europe/putin-orders-military-operations-ukraine-demands-kyiv-forces-surrender-2022-02-24/>

³⁵ "REPowerEU: Affordable, secure and sustainable energy for Europe," *European Commission*, Accessed:21-06-2025, Web: https://commission.europa.eu/topics/energy/repower_eu_en

³⁶ "AKP İktidarının Enerji Karnesi: Enerjide Son 20 Yıl," *TMMOB*, accessed: 22-06-2025, Web: <https://www.tmmob.org.tr/icerik/akp-iktidarinin-enerji-karnesi-enerjide-son-20-yil-raporu-yayimlandi>

As illustrated in Figure 2, Türkiye's energy import cost, based on CIF value, has shown a gradual increase. When analysed as a percentage, the data clearly demonstrate Türkiye's continued dependence on foreign energy sources to meet national demand. A temporary decline is visible in the 2016 and 2017 period, which can be attributed to the introduction of the YEKA and YEKDEM mechanisms. However, this downward trend was not sustained, largely due to irregularities that emerged within the implementation of these state-backed programmes.

1.2.3. Axis 3: self sufficiency and reducing the dependency on foreign sources

Türkiye historically has often looked to foreign suppliers, particularly Russia and Iran, to meet its fossil fuel requirements due to the limited availability of domestic resources. Türkiye does boasts a wide range of sources for the generation of renewable energy. However, Republic of Türkiye has always had to meet its energy requirements through bilateral relations and agreements, which places a considerable financial burden on the country's economy. Furthermore, both in the short and long term, leading to subsequent disruptions in the country's energy regime. When one considers Türkiye's geographical location between the Eastern and Western worlds, and especially the solar and wind energy resources available, it is seen that the country is in a strong position in terms of the production and transportation of renewable energy resources. It should be noted, however, that Türkiye is currently importing wind turbines in the establishment of new power centres, meaning that Türkiye is dependent on EU nations for inventory, particularly in the wind energy sector. Although the government of Türkiye encourages renewable energy deployment through feed-in tariffs and unlicensed generation, the government has yet to provide investment incentives in support of domestic production of the essential materials that would reduce its dependency on external sources.³⁷ Similar to Türkiye, the EU relies heavily on Russia for a significant portion of its natural gas supply in fossil fuel- based energy production. This external dependency places a burden on the EU economy and renders the EU vulnerable to energy supply disruptions. To alleviate this burden, the EU aims to reduce its reliance on natural gas imports by increasing investments in electricity generation from renewable energy sources within the framework of specific plans and programs. Thanks to its impartial, goal-oriented incentives and financial support

³⁷ Ömer Gönül, A. Can Duman, Kaan Deveci, and Önder Güler, "An Assessment of wind energy status, incentive mechanism and market in Turkey", *Engineering Science and Technology, an International Journal* 24, 6(2021):1383-1395.

mechanism for renewable electricity production, the EU can be considered more successful than Türkiye in this regard.

1.2.4. Axis 4: renewable energy as a path to integrate the international system

It would appear that the compatibility of renewable energies are a vital component in Türkiye's integration process with the EU. The country report prepared by the European Commission (EC) highlights positive and negative developments, as well as the yearly expectations as an indicator of compatibility. Amongst the issues raised in the 2023 report were Türkiye's drastic steps backwards in juridical, political and financial areas, as well as the aim to enhance nuclear energy capacity from zero to 5.9 percent by 2035. Concern is also expressed over Türkiye's bilateral relations with Russia and the country's over-reliance on Russia for natural gas.³⁸

1.2.5. Axis 5: global economic crises

The deepening impact of the global financial crises continues to be debated worldwide, and the effect on various sectors is a common subject of discussion. The energy sector in particular has been severely affected, as highlighted during the 2008 financial crisis when International Energy Agency published a report assessing the effect of economic crises on energy investment. The report stated that the 2008 financial crisis had affected both supply and demand in the energy sector, leading to the introduction of strict financing conditions that severely affected cash flows. Private renewable energy companies in electricity sector were particularly affected, leading to an approximate 42 percent contraction in the sector. The report stated that despite the steps taken by Türkiye and Western nations to encourage investments into renewable energy in electricity sector, the global energy markets shifted back toward fossil fuels.³⁹

Türkiye's approach to renewable energy changed considerably following the 2008 economic crisis, as will be explained in subsequent sections of this thesis. As Türkiye and the rest of the world started to recover in the years following the 2008 crisis, there began to be increasing investment into renewable energy. With the financial crises (of 2008 and 2018-2022 (continuing in 2025) in particular), introducing limits to financing that forced

³⁸ "2023 Türkiye Raporu," *Avrupa Birliği Komisyonu*, accessed:20-10-2023, Web: <https://www.ab.gov.tr/siteimages/resimler/2023%20T%C3%BCrkiye%20Raporu.pdf>

³⁹ Nilgün Ercan "Ekonomik Kriz ve Enerji Yatırımları," Web:https://www.emo.org.tr/ekler/610f9e480540f83_ek.pdf?dergi=4, accessed:21-10-2023.

many companies, especially those engaged in solar in wind energy production, to declare a slowdown in investment. The impact of the 2008 and 2024 economic crises reveals the need for more investment in the development of the renewable energy sector, particularly in Türkiye.⁴⁰

An assessment of the effects of the global economic crises on the EU reveals that many renewable energy companies in the member states have faced similar challenges to Türkiye, both in the securing of financing, and in the making of investments. This has led to increased use, and reliance on fossil fuels. In short, renewable energy began to be considered as a luxury in the EU following the 2008 financial crisis. As a result, many renewable energy companies have downsized.⁴¹

1.3. The Energy Regime in Türkiye and the European Union After the 2000s

Defining the notion of the energy regime is quite problematic, although it may be more clearly defined during the periods of energy crises. In historical terms, the 1973 petroleum crisis and the 1979 Iranian Revolution can be considered events that clarified what is meant by an energy regime.⁴² In a modern sense, an energy regime may be defined as a country's comprehensive and subsequent policies in the transformation to renewable energy through technological advances.⁴³

The 2000s were marked by the initiation of activities in Türkiye's renewable energy sector. These included the return to development of prototype renewable technologies, which had previously stagnated at the project stage. In this period, which coincided with the rise of the JDP government, the Turkish economy witnessed substantial growth which was also accompanied by a rise in electricity consumption. All in all, the growth in Türkiye's economy, population, and electricity demand which occurred between 2002 to 2016 had a lasting influence on the economic progress of the nation.⁴⁴

⁴⁰ Gürbüz Gökçen, and Selman Görgülü, "Dünyada ve Türkiye'de Finansal Krizler ile Finansal Krizlerin İşletmelere Etkileri," *Finans Ekonomi ve Sosyal Araştırmalar Dergisi* 10, 1(2025):147-168

⁴¹ İsa Altınışık, Hasan Sencer Peker, and Rıfat Karakoç, "2008 Küresel Finansal Krizinin Avrupa Yenilenebilir Enerji Sektörüne Etkisi", *Gümüşhane Üniversitesi Sosyal Bilimler Elektronik Dergisi* 3, 5(2012): 146-156.

⁴² Michael Niblett, "Energy Regimes", *Fueling Culture: 101 Words for Energy and Environment*, Jennifer Wenzel and Patricia Yaeger (New York: Fordham University Press,2017),136.
<https://doi.org/10.1515/9780823273935-037>

⁴³ Bruce Podobnik, "Toward a Sustainable Energy Regime: A Long-Wave Interpretation of Global Energy Shifts", *Technological Forecasting and Social Change* 62, 3(1999):155-172.

⁴⁴ Ezgi Kopuk, Hüseyin Naci Bayraç, "Enerji ve Elektrik Kullanımının Türkiye Ekonomisi Üzerindeki Etkisi," *International Journal of Management Economic and Business* 17, 2(2021),317-326.

After the 2000s, privatisation emerged as a key policy of the Turkish government. Among the key factors influencing the privatisation of Türkiye's electricity sector were Türkiye's integration process with the EU, the economic crisis of 2001, and the pressure applied on Türkiye to implement reforms by the World Bank and the International Monetary Fund (IMF). Türkiye responded by enacting Electricity Market Law No. 4628 on 20 February, 2001 and establishing the Electricity Market Regulatory Board and Authority (EMRA).⁴⁵

The establishment of EMRA as a regulatory authority laid the foundations for a new energy regime in Türkiye based on several key laws. These included Law No. 4628 on the Organisation and Duties of the Energy Market Regulatory Authority (defining the structure, functions, authority and obligations of EMRA, along with staffing guidelines), Law No. 4646 on the Natural Gas Market, Law No. 5015 on the petroleum (deregulating the natural gas market, thus ensuring the access of consumers to reliable, high-quality, affordable, and competitive energy while safeguarding the environment, and creating a financially sound, transparent market with independent oversight and regulation), Law No. 5307 on the Liquefied Petroleum Gas Market (emphasising the need for the establishment of regulatory, supervisory, and auditing controls to guarantee transparency, equitability, and stability in the provision of liquefied petroleum from both local and international sources to consumers), Law No. 6446 on the Electricity Market (guaranteeing the access of consumers to sufficient, uninterrupted, economical and high quality energy from environmentally sustainable sources, aiming to create a financially robust and transparent electricity market that functions under the principles of private law in a competitive setting, while also ensuring independent regulation and oversight). The

⁴⁵ M. Nilgün Ercan, "Elektrik Enerjisi Sektöründe Özelleştirme/Piyasalaştırma Uygulamaları ve Sonuçları," *16. Ulusal Sosyal Bilimler Kongresi*, Accessed: 15-11-2024, Web: https://enerji.mmo.org.tr/wp-content/uploads/2019/12/Elektrik-Enerjisi-Sekt%C3%B6r%C3%BCnde-Piyasala%C5%9Ft%C4%B1rma-%C3%96zelle%C5%9Firme-ve-Sonu%C3%A7lar%C4%B1-N.ERCAN_.pdf, My notes below are given in the thesis in next sections.

In 1993, the state-owned energy company TEK tried to privatise, and split into two separate state-owned enterprises. However, the constitutional court issued several rulings in 1994 and 1995 that made privatisation in the energy sector very difficult (Erdogdu 2007, p.985). A new Electricity Market Law came into force in 2001, resulting in the Turkish Electricity Generation Transmission Company (TEAS) unbundling into EUAS (generation), TETAS (wholesale trading and contracting), and TEIAS (transmission and market operator) (TOG 2001a). Erdogdu, E. (2007). Regulatory reform in Turkish energy industry: An analysis: Energy Policy, 35(2). Official Gazette of Republic of Turkey (TOG). (2001a, March 3). No. 24335, "Energy Market Law no 4628." TOG. (2001b, May 2). no. 24390, "Natural Gas Market Law no 4646."

primary goal of the duties assigned to EMRA under these laws is to establish, regulate, and supervise a financially strong, transparent and stable national energy market.⁴⁶

With the establishment of EMRA in 2001, the role of the MENR, as well as the nation's energy import and export policies, privatisation processes, incentives, and subsidies, became more defined under a new energy regime. Among the most significant changes witnessed in the energy sector in 2001 was the introduction of Privatisation Law No.4046, which secured the privatisation of such institutions as EÜAŞ, and TEDAŞ. The enabling of privatisation in Türkiye's new energy regime, by this law affected both the generation and distribution sector.⁴⁷

1.4. Literature Review

This section reviews the evolution of Türkiye's energy policies, the shift towards renewable energy initiatives and the effects of privatisation on the energy sector through a review of previous studies, while also presenting an evaluation of Türkiye's energy strategies and their compliance with the renewable energy policies of the EU. This literature review will present a general framework of the academic studies of energy policies, while also highlighting existing gaps in the literature.

Understanding the historical evolution of Türkiye's energy policies necessitates the establishment of the essential theoretical groundwork relating to neoliberal energy policies, most notably to privatisation, and the renewable energy sector. Studies of the privatisation processes, their effect on the renewable energy sector and their impact on Türkiye-EU relations will be explored through the framework of neoliberal energy policy. Furthermore, the main divergences in the renewable energy policies of Türkiye and the EU, as well as their effects on alignment will be assessed.

While there have been many studies to date which explore the evolution of Türkiye's energy policies, taking various viewpoints, there has been few which analyse the link between privatisation and renewable energy policies. Furthermore, there is lack of comprehensive evaluations that consider not only the dimensions of Türkiye's energy policies, but also their environmental and social ramifications. The present study seeks to enhance the existing body of literature by presenting an analysis of the neoliberal shift in

⁴⁶ “2021 Yılı Sayıştay Denetim Raporu,” T.C Sayıştay Başkanlığı Enerji Piyasası Düzenleme Kurumu September 2022, Accessed: 18-11-2024, Web:<https://www.sayistay.gov.tr/reports/download/DNYnKKyo7b-enerji-piyasasi-duzenleme-kurumu>

⁴⁷ Sibel Cengiz, “Türkiye'nin Elektrik Enerjisi Piyasasında Yeniden Yapılanma”, *Yönetim Bilimleri Dergisi*, 4(2006): 117-134.

renewable energy, and the consequences of the move on Türkiye's EU membership and alignment.

It is essential to emphasise that the EU's renewable energy policies are significant not only for addressing the global climate crisis but also for shaping Türkiye's economic relations with the EU. This is especially relevant considering that the European Green Deal (EGD) and the EU more broadly represent Türkiye's largest export market. The EGD, designed to ensure the sustainability of the EU economy and to achieve climate neutrality by 2050, holds strategic importance for Türkiye. This is particularly evident in the proposed Carbon Border Adjustment Mechanism (CBAM), which introduces carbon pricing on specific imports from non-EU countries. The mechanism is part of a broader policy framework covering sectors such as energy, agriculture, and industry. Its overarching aim is to create an emissions trading structure outside the EU that reflects the existing European Emission Trading System (EETS). Special attention is given to industries that are highly energy-intensive and at risk of carbon leakage.⁴⁸

The central regulation seeks to establish import prices that reflect the true carbon content of goods, contributing to the EU's broader emission reduction objectives. Under the terms of the Customs Union agreement between Türkiye and the EU, many EU environmental and technical regulations already apply directly within Türkiye across both product design and production standards. Furthermore, a number of private outside the EU have adopted sustainability as a fundamental part of their business models and have even surpassed some EU-based competitors in meeting sustainable development goals. It is crucial that such firms are not unfairly taxed under the CBAM framework. In this context, Türkiye's trade in renewable energy-related goods with the EU, including both imports and exports, will be evaluated within the new regulatory environment. In addition, carbon pricing, the EGD introduces new approaches to relieve cost burdens on energy-incentive industries in Europe. One of its aims is to reduce the disadvantages experienced by these sectors in previous years, particularly between 2008 and 2012, when energy prices rose sharply across the EU. Instead of imposing additional taxes, the EU has proposed a range of incentives to encourage the import of goods with lower carbon intensity. At the same

⁴⁸ "Avrupa Birliği Sınırdaki Karbon Düzenlemesi ve Etkileri," *Türk Sanayicileri ve İş İnsanları Derneği (TUSİAD)*, 28 September 2020, accessed: 26-06-2025, Web: <https://www.tusiad.org/tr/basin-bultenleri/item/10637-avrupa-birligi-sinirda-karbon-duzenlemesi-ve-etkileri-webinari-yapildi>

time, the possibility of creating a global carbon pricing mechanism remains an open topic of discussion.⁴⁹

The present thesis is a literature review, general in scope, and includes studies published across a broad time period. Essentially being an industry-focused thesis, the present study addresses certain aspects discussed in the literature on activities in the field of renewable energy in Türkiye.

These studies explain that Türkiye achieved these successes mainly due to privatisation policies, while the underperformance, as mentioned above, is attributed to global developments. The consensus among scholars is that Türkiye needs to scale up its efforts in this field. In this context, the present thesis demonstrates how it addresses the gaps identified in the literature, comparing various aspects across academic studies.

Three main gaps are identified in the literature. It is found that these studies addressed the following aspects, but in isolation: first, Türkiye's historical process in the renewable energy under neoliberalism; second, the effects of conventional wars, the climate crisis and global warming, as well as global economic crises, on Türkiye-EU relations regarding renewable energy; and third, legislative differences between Türkiye and the EU.

The present thesis integrates these isolated aspects and conducts a holistic analysis of Türkiye's renewable energy policies during the JDP era. The present thesis also sheds light on the link between renewable energy and privatisation. The present thesis integrates these isolated aspects and conducts a holistic analysis of Türkiye's renewable energy policies during the JDP era. The present thesis also sheds light on the link between renewable energy and privatisation. Since neoliberal policies were implemented in Türkiye, the so-called Kemal Derviş reforms, guided by the expertise of Ali Babacan, who was then Minister of Economy and later Minister of Foreign Affairs, shaped the privatisation of the energy market required by the IMF and EU financing conditions.

A general review of the literature reveals that the study titled "Renewable Energy Policies of Türkiye: Restructuring in Renewable Energy" approaches this area from three different perspectives. The first perspective highlights the importance and impact of privatisation and global climate developments on the renewable energy policies and renewable energy industry of the country, as explained in more detail in the present study. This referenced study provides a brief a historical account of renewable energy during the

⁴⁹ Avrupa Birliği Sınırdaki Karbon Düzenlemesi ve Etkileri"

JDP period, supported by quantitative data spanning several years. The second perspective emphasises that, although certain progress has been made by Türkiye, said progress is insufficient as it has been made under short-term and limited goals, i.e. 2023 goals. It highlights the modesty of these targets compared to those of other countries and supranational organisations using quantitative data and charts.⁵⁰

The third perspective outlines the historical development of the renewable energy industry under neoliberal influence since 1980. These fundamental perspectives are discussed in greater depth in the present thesis. This study collates these indicators and offers a more comprehensive analysis of Türkiye's renewable energy policies, addressing a significant gap in the literature.

Another study is the PhD thesis titled "A Multidimensional Analysis of Turkish German Low Carbon Energy Transitions" by Alpaslan Bayraktar. This doctoral study addresses the legislative and political developments during the JDP period in Türkiye's transition to renewable energy regime, goals, policies, and legislative background in comparison with Germany.⁵¹

This doctoral study highlights that Türkiye lags significantly behind Germany, the leading country of the EU in renewable energy. It states that certain political issues and internal conditions prevent Türkiye from making progress in this field. Despite achieving some success, particularly after 2010, Türkiye has notably underperformed in meeting expectations in renewable energy.

In doctoral thesis, it is understood that analyses of Türkiye's energy policies mostly focus on internal structures, and evaluations are based on comprehensive comparisons with Germany. In this context, it is considered that the doctoral thesis overlooks the influence of global events on Türkiye-Germany relations in the field of renewable energy, a topic examined in depth in the present study. Future academic studies should aim to bridge this gap by incorporating historical and global developments, such as economic crises, the climate crisis, global warming, and conventional conflicts and wars, into the analyses.

Another academic study is titled "An Evaluation of Energy Policies of Türkiye and the EU on Solar and Wind Energy", authored by Yusuf Gocuk in 2015. This study compares the legislative dimension of Türkiye-EU relations in terms of solar and wind energy, explaining the effects of these policies on bilateral relations. This master's thesis

⁵⁰ Alaeddin Bobat and Necmi Özdemir, "Türkiye'nin Yenilenebilir Enerji Politikaları Yenilenebilir Enerjide Yeniden Yapılanma," *Electronic Journal of Vocational Colleges* 6, 4(2016):148-158.

⁵¹ Bayraktar, "A Multidimensional Analysis of Turkish German Low Carbon Energy Transitions", 206-210.

also explores, from a legislative standpoint, whether Türkiye's solar and wind energy policies are shaped by national interest or by harmonisation with the EU. The research concludes that, in renewable energy, Türkiye acts mostly following EU laws and harmonisation but also adopts legislative acts with consideration of its internal structure, a point also asserted in the present thesis.⁵²

In addition, a comprehensive analysis of the aforementioned academic study infers that Türkiye, despite its extensive potential, has failed to take the necessary steps, and once these steps are taken, there will be positive effects for both Türkiye and its relations with the EU. Lastly, this academic study notes the positive progress in incentive mechanisms and legislative developments in the renewable energy sector in Türkiye. It also significantly highlights the insufficiency of these developments.

As a result, this academic study, like other academic works, asserts that despite progress in Türkiye's renewable energy sector, such progress remains inadequate. This master's thesis also underlines the necessity for Türkiye to act in a more planned and strategic fashion — a recommendation affirmed and addressed by present thesis within a similar legislative context.

In short, this literature review analyses current academic research on the evolution of renewable energy policies in Türkiye under the JDP and the influence on this evolution of Türkiye's EU alignment and membership processes. The comparative evaluation that is conducted here of Türkiye's energy policies with those of the EU is the main contribution of this study to the existing literature. The identification of gaps in the existing body of literature has played a vital role in the formation of the research question for this study.

This section presents a review of contemporary literature on the renewable energy sectors of the EU and Türkiye. A careful review of the literature uncovered studies which address several points. The topic of renewable energy is approached more from a global and juridical perspective than the general energy regimes of Türkiye and the EU, as doing so allow better determination of conceptual and theoretical explanations of the issue.

As the majority of the studies identified examine Türkiye-EU relations from a conceptual, political, and legal perspective, the role of privatisation and its relationship with renewable energy seems to require further examination, thus pointing to a gap in the renewable energy regime. The aim of the present study is therefore to offer a fresh perspective, within the framework of Türkiye-EU relations, which helps reveal the

⁵² Yusuf Gocuk, "Politiques Énergétiques Turques Et Européennes Sur Les Énergies Solaire Et Éolienne," (Master's thesis, Galatasaray University, Institute of Social Science, 2015), xi-xiv.

relationship between privatisation and renewable energy during Türkiye's efforts between 2002 and 2024 to achieve integration with EU.

1.5. Method

This thesis elucidates the impact of the privatisation process on Türkiye's efforts since the 2000s to transition to renewable energy, as well as the effects of the country's EU integration process. The document analysis in this study focuses on reports published by the EU between 2000 and 2024, as well as those by the Turkish MENR. Additional, reports and data are provided by, and elaborated on, in this thesis by such relevant organisations as IRENA, EMBER⁵³, and the International Energy Agency, and is further supplemented with statistical data and graphics to provide a more detailed explanation. These sources are used to reveal the activities of the EU and Türkiye in the field of energy politics and to assess the role of Türkiye's privatisation policies in the transition towards renewable energy, especially with respect to the country's planned renewable energy capacity. To this end, the thesis addresses two essential topics related to renewable energy policies. Firstly, it will delve into the issues surrounding these policies and secondly, it will assess how Türkiye's privatisation policies related to renewable energy align with efforts towards integration and potential membership of the EU. More specifically, the thesis will examine the role and influence of private companies operating in the renewable energy sector in Türkiye and their role in bolstering Türkiye's position in its integration with the EU. In doing so, the thesis will assess how compatible Türkiye's privatised renewable energy politics with the country's aspirations to achieving EU membership.

1.6. Organisation of Thesis

The thesis is organised in three chapters. The first chapter takes an in-depth look at the privatisation of the energy sector through the lens of neoliberalism. Furthermore, how neoliberalism has influenced energy policies in regard to the bilateral relations of the EU and Türkiye is elucidated.

Chapter 2 presents a comprehensive overview of the historical background of privatisation and renewable energy policies in Türkiye and the EU, highlighting the significance of renewable energy for countries and companies from 1980s until the present. This chapter also explores the impact of privatisation in the energy sector on the

⁵³ Non-Profit Organisation in the global energy sector.

relationship between Türkiye and the EU and offers a thorough assessment of the development of renewable energy and the privatisation process under the effect of consecutive crises.

Chapter 2 also considers the transition to renewable energy and its effects on Türkiye and the EU, with particular focus on how solar and wind energy systems, and related policies impact the transition to renewable energy, as well as the bilateral relations that exist between Türkiye and other countries due to the effects of the climate crisis, global warming and economic crises.

Chapter 3 provides a comprehensive analysis of the renewable energy policies of the two players that underlines the key differences and similarities in their respective renewable energy sectors, as well as the effects of the alignment process.

2. HOW THE RISE OF THE NEOLIBERAL PARADIGM: PROMOTED THE USE OF RENEWABLE ENERGY

2.1. The Emergence of Neoliberalism from Ordoliberalism

The German version of Neoliberalism known as Ordoliberalism, was developed through yearly articles in the '*Ordnung der Wirtschaft*' journal penned by the three principal founders (who were lawyers) of the Freiburg School: Hans Grobmann-Doerth, Franz Böhm, while Walter Eucken (was an economist).⁵⁴ The ordoliberal ideology, which was developed in the aftermath of World War II and was based on classical liberal political thought is, broadly speaking, an earlier attempt to develop the neoliberalism model. Ordoliberal philosophers are sceptical of the Keynesian economic model, which promotes state intervention, and voiced concerns about the role of the state in financing. This meant that the advocates of ordoliberalism not only had positive view of free markets and competitive conditions, they also placed faith in the protection of individual freedoms in the taking of economy-oriented decisions and actions.⁵⁵

Ordoliberal thinkers were divided between the Freiburg School and such "*Third Way*" thinkers as Wilhelm Röpke and Alexander Rüstow, while neoliberals were divided between the Chicago and Austrian schools of thought. The opinion of Friedrich A. Hayek, a political philosopher and one of the founders of Chicago School, is quite different from that of Milton Friedman, another founder of the Chicago School, in that it focuses exclusively on economic systems from an exclusively financial perspective. The Chicago School took a broader view of neoliberalism in advocating a *laissez faire* approach. Their model subsequently took the place of Keynesian thought. In contrast to the Keynesian model that gained popularity in the United States, the main characteristic of the Chicago School was to create the concept of neoliberalism as being a new project which would restructure economic relations both in the national and the international contexts. It was through such Austrian economists as Ludwig von Mises and Friedrich A. Hayek that the Chicago School was transformed into neoliberalism.⁵⁶

⁵⁴ Anna Jurczuk, Michal Moszynski, Piotr Pysz, "Ordoliberalism-A Research Approach For Today?", *Studies in Logic and Rhetoric* 68,1(2023), 352-355.

⁵⁵ Wendy Brown, "In Doing the Demos: Neoliberalism's Stealth Revolution", (New York: Zone Books,2015),17-222.

⁵⁶ Robert Van Horn, Philip Mirowski, Thomas A. Stapleford, *Building Chicago Economics: New perspectives on the history of Americas Most Powerful Economic Program*, (United States of America: Cambridge University Press,2011),151-368.

Ordoliberalism substantially influenced the financial policies of Germany and the broader Eurozone. There are two fundamental differences that distinguish Neoliberalism from Ordoliberalism: the level of state intervention and the social policies applied. Ordoliberalism is characterised by a lack of trust in the state, unlike Neoliberalism, which has a more sceptical attitude toward the state is followed. Ordoliberal thinkers, unlike neoliberal thinkers, maintain relatively greater trust in the state to establish a free and competitive market.⁵⁷

While both these approaches reject the economic role of the state, as defined by Keynesianism, ordoliberals are distinguished from neoliberals through their adoption of “*Ordnungspolitik*” (order-based policy framework). According to the ordoliberal perspective, each governmental decision should both stem from, and be limited by, the principles defined in the economic constitution. *Ordnungspolitik* requires the legal framework to be organised in such a way that the conditions for perfect competition are both created and upheld, thus guaranteeing the optimal operation of the economic system. In practical terms, according to this theory, the law will be used to maintain the perfect model for competition.⁵⁸

The responsibilities assigned to the government by neoliberals do not arise from the inherent logic of the market economy and capitalism that exists independently of legal frameworks. Instead, neoliberals recognise the importance of political, legal, and intuitional regulations for the introduction of specific sectors into the market, but do not consider this to be a form of state interventionism. Once the markets have been created—whether naturally or through state action—neoliberals support minimal governmental involvement, limiting the function of the government to that of a regulator in the name of fairness and justice. Put another way, neoliberals consider the primary role of the

Four different phases/dimensions for the analysis of neoliberalism:

- (1) As a history of intellectual ideas;
- (2) As a system of enhanced capitalist power in which marketisation is stressed;
- (3) As a cultural examination of everyday conduct; and
- (4) As a more generic post-Marxist expression to denote the current zeitgeist.

Three major acts:

- (1) From the late 1970s to the early 1990s;
- (2) From the mid-1990s to the mid-2000s; and
- (3) From the late 2000s to the present.

⁵⁷ Ali Erdem Bayülke, “Contradictions Of German Ordoliberalism and Their Impact On the European Union During The Euro Crisis, (Master thesis, Baskent University, Institute of European Union and International Relations, 2020), 1-15.

⁵⁸ Zafer Çelik, “Neoliberalizmin Kısa Tarihi”, *İdeal Kent*, 7(2012):187-193.

government to ensure and protect individual rights and freedoms, property rights, and unimpeded operation of the market.⁵⁹

Neoliberalism differs from classical liberalism in terms of the role played by the state. While classical liberals call for the total elimination of the state, neoliberals believe the state should create and uphold the necessary institutional framework in support of market development and operation. In essence, neoliberalism advocates that the state should not take a neutral stance when it comes to market development, but rather actively safeguard private property and ensure the proper functioning of the market through its military, police, and legal systems. Furthermore, in areas where markets have not yet developed—such as social security and the environment—the state should take responsibility for their marketisation and commodification when required.⁶⁰

The term neoliberalism was initially used in academic articles related to the political economy between World War I and World War II. In the 1930s, the prevailing economic theories were rooted in classic liberalism and were dramatically affected by the Great Depression.⁶¹ According to Wendy Brown, the term neoliberalism first came to light at the first meeting of the Mont Pelerin Community, where researchers gathered at Walter Lippmann Colloquium. Briefly, neoliberalism refers to a set of economic policies that call for a considerable reduction in the role of the state in the economy, lower taxes, increased openness to foreign investment, and the privatisation of public assets.⁶²

The growing economic crisis resulted in the creation of neoliberalism as a new economic perspective by virtue of the need for government intervention to balance the economy. After the 1980s, neoliberalism was primarily a worldwide economic system, based on the ideas of its principal founders: Friedrich Hayek and Milton Friedman. Although the two principal founders are referred to as neoliberal thinkers, they labelled themselves as “*new-liberals*”. The fundamental beliefs of these new liberal thinkers stem from the German Freiburg school. While scientists in the modern era tend to be critical in

⁵⁹ Ibid, 187-193.

⁶⁰ Çelik, “Neoliberalizmin Kısa Tarihi”, 187-193.

⁶¹ William Andrew Callison, “Political Deficit: The dawn of Neoliberal Rationality and the Eclipse of Critical Theory”, (Doctoral thesis: University of California, Berkeley, 2019), 1-179.

⁶² Wendy Brown, “In the ruins of Neoliberalism: The Rise Of Anti-Democratic Politics In The West”, (New York: Columbia University Press, 2019), 19-29.

their evaluation of the term neoliberalism, followers of the German Freiburg school consider it a positive and moderate alternative to classical liberalism.⁶³

As neoliberalism has been around since it first emerged as a political concept in the 1940s, this does raise the question of why it only became the prevailing paradigm in the 1970s. According to David Harvey during the Cold War, states embraced Keynesian welfare state strategies to mitigate the risk of conflict and address the lingering repercussions of the economic crises of the 1930s. Consequently, economic expansion persisted throughout the 1950s and 1960s, until the oil crisis in the 1970s, upon which the resulting decrease in the income of economic elites sent the capitalist system into turmoil. Neoliberal measures were subsequently enacted in order to overcome this crisis.⁶⁴ Harvey contends that the shift towards neoliberalism in capitalism in response to this crisis was not an accident, but rather a choice made under specific circumstances, and contends that nobody could have predicted the precise outcomes of the various policies during that period.⁶⁵

Wendy Brown, a prominent political science professor at the University of California Berkeley, argues that the state, according to neoliberal understanding has three essential responsibilities: the provision of national defence, the maintenance of basic security, and the preservation of individual rights,⁶⁶ all of which should be provided in accordance under free market conditions. As far as Brown is concerned, neoliberalism features “the *principle of laissez-faire*” which does not consider the entirety of these three essential responsibilities. In fact, she stresses that it is the responsibility of the state to take control by abstaining from innovation in all of these areas, apart from the subject of security and defence. Brown additionally points out that the main target of the neoliberalism was not only *laissez-faire* but also the idea of full production according to market circumstances.⁶⁷

To summarise, the neoliberalism which emerged in the 1970s, can be described as a school of thought that arose out of the changing economic perspective of Ordoliberalism. Neoliberalism advocates the transfer of market forces from monopolistic structures of the state to free market dynamics. The financial crises of the 1970s paved the way for the

⁶³ Boas, T.C., Gans-Morse, J. Neoliberalism, “Neoliberalism: From New Liberal Philosophy to Anti-Liberal Slogan” *Studies in Comparative International Development* 44, (2009),137-161.
<https://doi.org/10.1007/s12116-009-9040-5>

⁶⁴ Çelik, “Neoliberalizmin Kısa Tarihi”, 187-193.

⁶⁵ Ibid,187-193.

⁶⁶ Wendy Brown, “In Doing the Demos: Neoliberalism’s Stealth Revolution”, (New York: Zone Books,2015),17-222.

⁶⁷ Ibid,17-222.

development of neoliberal thought, which emerged as an alternative to state intervention. It was due to these developments that the two core schools of neoliberalism and ordoliberalism replaced the idea of a regulatory state with a market-based strategy.⁶⁸

2.2. The Privatisation Paradox: The Impact of Neoliberalism

Although this thesis focuses on changes in Türkiye's energy policies towards renewable energy policies through the implementation of privatisation policies by the JDP, the historical formation of neoliberalism and subsequent privatisation policies in the country had begun much earlier than the JDP era. In fact, during the premiership of Turgut Ozal, Türkiye's economy had been gradually shifting from an Import-Substitution-Industrialisation model to an export-oriented growth strategy in which neoliberalisation and privatisation had played key roles in this transition process. Therefore, the primary focus of this thesis, which is the role of the empowerment of neoliberalisation and privatisation politics in the country's energy regime on shifting towards renewable energy, can be fully understood only if a brief historical survey of the country from the Ozal era has been taken into account. In terms of historical background, Türkiye took its first steps towards economic integration to Europe during the Ozal era, who instigated a series of policies published on 24 January 1980 that signalled the end of one era and the start of another. There is certainly a clear connection between Ozal's era of initial steps toward the EU and subsequent efforts to harmonise Türkiye's political, legal, and social systems with EU criteria.

On the issue of compliance with EU standards, many of Türkiye's governments revised the financial, legal, political and social fields in the country to move towards integration with the EU. For instance, both the Motherland Party under Ozal in the 1980s⁶⁹, and the JDP in the 2000s, contributed to Türkiye's progress towards EU integration through revisions to energy, agriculture, communication, commercial, and judiciary policies, amongst others.⁷⁰ In 1993, the state-owned energy company TEK tried to privatise, and split into two separate state-owned enterprises. However, the constitutional court issued several rulings in 1994 and 1995 that made privatisation in the energy sector very difficult (Erdogdu 2007, p.985) A new Electricity Market Law came into force in

⁶⁸ "Explaining Neoliberal Turn," Transforming society, accessed:11-11-2024, Web: <https://www.transformingsociety.co.uk/2019/10/28/explaining-the-neoliberal-turn/>

⁶⁹ Türkiye is included in this period due to its membership application.

⁷⁰ Erkan Demirbaş, Nurettin Can, *Türkiye Ekonomisinde Enerji ve Ulaştırma Yapısal Dönüşüm: Özal'lı Yıllar (1983-1991)*, (Malatya: Turgut Özal Değişim, Dönüşüm yayınları,2015),257-273.

2001, resulting in the Turkish Electricity Generation Transmission Company (TEAS) unbundling into EUAS (generation), TETAS (wholesale trading and contracting), and TEIAS (transmission and market operator) (TOG 2001a). Erdogdu, E. (2007). Regulatory reform in Turkish energy industry: An analysis: Energy Policy, 35(2). Official Gazette of Republic of Türkiye (TOG). (2001a, March 3). No.24335, “Energy Market Law no 4628.” TOG. (2001b, May 2). no. 24390, “Natural Gas Market Law no 4646.”

The main rationale behind the selection of the neoliberalism perspective for the present study lies in its suitability for the case at hand, and the importance of privatisation in neoliberalism theory. The transfer of public institutions into private hands is a vision rooted in the theoretical principles of neoliberalism theory.⁷¹ Such shifts first began in the United Kingdom and were subsequently embraced by other EU countries during the 1980s.⁷² Although the area of the renewable energy is mainly studied in the literature from the perspective of green theory, the present study seeks to understand the influence of privatisation on the capacity for renewable energy use. Neoliberalism has been adapted as the main theoretical lens in this study as privatisation of energy field is inherent to the nature of neoliberalism. In addition, due to environmental concerns being the primary concern of most scholars in the focus on renewable energy, the relationship between privatisation and emergence of the renewable energy regime has been rather overlooked. This thesis seeks to help plug that gap in the literature by considering the area of (renewable) energy regime through an exclusive focus on the role of privatisation and neoliberalisation in that field.

As discussed above, neoliberalism emerged as a modern global economic regime and gained widespread acceptance following a gradual acceptance of neoliberalist ideas following the 1970s. According to Susan George, neoliberalism hegemonically developed into a “worldwide *religion*”, while Perry Anderson refers to neoliberalism as being “*the most successful and powerful ideology*”. The breakthrough of neoliberalism perspective came from Friedrich Von Hayek in 1974 and Milton Friedman in 1976, who were as the most well-known neoliberalism thinkers and were awarded the Nobel prize. There were also two significant turning points in the global success of neoliberalism, one of which was initiated by Prime Minister Margaret Thatcher in the United Kingdom in 1979 and the

⁷¹ Oğuz Bal, “Özelleştirmenin Teorik Temelleri ve Türkiye’deki Sonuçları”, *International Conference on Eurasian Economies*, Web: <https://www.avekon.org/papers/614.pdf>, 355-364.

⁷² Central Bank of the Republic of Turkey, “The Impact of Globalization on the Turkish Economy”, (Ankara: Banknote Printing Plan Department, 2002):4-54.

other by President Ronald Reagan in United States in 1980, both of who initiated the privatisation of government enterprises in their respective countries upon being elected.⁷³

2.3. The Dawn of Neoliberalism in the Energy Regime

It is possible to categorise the emergence of neoliberalism in the energy sector into three cycles. The first cycle begins with a country opening itself to the world, which causes domestic companies to adapt their operations to the global market. The second cycle is defined by the allowing of foreign investment into energy markets and the enacting of neoliberal labour policies. The concluding cycle involves the incorporation of workers and trade unions, who initially endorsed the privatisation of the energy sector, into the neoliberal framework.⁷⁴

The emergence of neoliberalism in the energy sector can be traced back to the petroleum crisis of 1973 and the 1979 Iran Revolution (After 1980s more visible since during the crisis different levels and types of state intervention)⁷⁵, both of which forced the rapid adoption of neoliberal policies and the introduction of populist approaches to gain power, and which ultimately lead to chaos in the structure of the state. With the emergence of the neoliberal order, the strategic structure of energy sources at the start of the 1980s differed from country to country. While some countries, owing to budgetary concerns and governmental ideologies, opted for collaborations under state ownership, others transferred control to the private sector due to the technological limitations of the state and to empower financial conditions.⁷⁶ Although it is the case that the neoliberalism trend gained momentum in the 1980s in economically and technologically less powerful countries such as Africa, Latin America and parts of Asia, the energy sector in these regimes continued in this period to operate mainly under public ownership. In contrast, other developed and developing countries embarked on rapid process of privatisation which, although they sought to keep abreast of technological developments in the energy sector through reforms,

⁷³ Chamsy-el Ojeili and Patrick H6ayden, *Critical Theories of Globalization* (London: Palgrave Macmillan;2006),52-53.

⁷⁴ Akif Bahadır Kaynak, "Gelişen Piyasalarda Neoliberalizm Ve Demokratikleşme," (Master thesis, Istanbul University, Institute of Social Science,2012),225-226.

⁷⁵ G. John Ikenberry, "The Irony of State Strength: Comparative: Responses to the Oil Shocks in the 1970s," *International Organisation* 40, 1(1986):112.

⁷⁶ Ibid, 112.

the main goal of which was to enhance national efficiency and competitiveness through the development of energy sectors.⁷⁷

Between 1980 and 1990, many developing and developed European countries established systems that categorised national privatisation efforts with specific activities which allowed private enterprises to participate in economic growth. The wave of privatisations seen in the 1990s which aimed to recoup the financial losses of the earlier period, gradually subsided as the world entered the new millennium. The global financial crisis of 2001 had a significant effect on the global energy sector, including energy outages during the crisis itself, and ushered in a new era that virtually put a halt to privatisation. After the initial effects of the 2001 financial crisis had passed, there was a return to privatisation as part of neoliberalism. This trend continued until the 2008 financial crisis, during which, unlike in 2001, there was no stagnation in the energy sector. During this period, state incentives provided to increase electricity production from renewable energy resources contributed to a further increase in the participation of private companies in the energy sector.⁷⁸

The distinct manifestations of neoliberalism continue to shape perspectives. In terms of the literature, while scholars Ana Esther Ceceña claims that neoliberalism entered a period of stagnation following the 2008 financial crisis. other intellectuals including Elmar Altvater believes that only one specific part of neoliberalism has come to an end. Debates referring to “end” of Neoliberalism became common with the spread of anti-neoliberal movements and as a result of the 2008 economic crisis. Discussion was primarily on the actions of states during the 2008 financial crisis, where governments intervened to financially bail out struggling private companies. In the context of neoliberal perspective, this supporting of the private sector during a tumultuous period demonstrated that states continue to play a critical role in the stability of the economy.⁷⁹

2.3.1. Neoliberalism’s impact on the renewable energy sector

The expansion of industry and rapid urbanisation over the last 25 years have greatly increased global energy demands.⁸⁰ The consumption of fossil-fuel almost doubled

⁷⁷ Emre Akbaş, “Neoliberalizm, Küresel Enerji Sektörü ve Seçilmiş Ülkeler Bazından Elektrik Sektörü Özelleştirmeleri”, *Social Science Research Journal* 8, 2(2019):21-43.

⁷⁸ Ibid, 21-43.

⁷⁹ A.E. Cecena, Postneoliberalism and its bifurcations, *Dev. Dialogue* 51 (2009):33-44.

⁸⁰ Bülent Yeniktepe, M. Mustafa Savrun, and Tahsin Koroglu, “Current Status of Wind Energy and Wind Energy Policy in Turkey”, *Energy Conversion and Management* 72, (2013):103-110.

between the first quarter of the 1970 and end of 2019.⁸¹ This increasing emphasis on energy production has meant that new and environmentally friendly resources have become of vital global importance for a sustainable future. In the struggle against rising carbon dioxide levels, government incentives linked to neoliberal policies have increased in the number of private companies. Another consequence of neoliberal policy are greater state subsidies and reduced tariffs for the financing of private entities. As seen in Figure 1, the reason behind the reduction in carbon dioxide levels in 2020, and the subsequent upturn can be attributed to the global economic crisis that broke out in the aftermath of the COVID-19 pandemic.

One of the main impacts of neoliberalism on the renewable energy sector has been the competitive environment that has developed within the private sector has driven technological advancements in this area, contributing to lower costs. A prime example of this can be seen in the notable decrease in the costs associated with solar and wind energy systems—a direct results of enhancements in the manufacturing of the materials utilised in these technologies.⁸²

There are two ways that neoliberalism has boosted the renewable energy sector, the first being to enhance access to international funding for renewable energy initiatives. As noted earlier, as part of global efforts to meet this target, organisations like the International Monetary Fund and World Bank continue to provide financial support for key renewable energy projects around the world.⁸³

The other impact of neoliberalism is in the promotion of some states lead ket tech development via research and development technologies funding and picking up winning tech, which has intensified the pace of technological progress. An example of this is the remarkable improvements in battery storage technologies and the efficiency of solar panels of recent years.⁸⁴

⁸¹ International Policy, “*Analysis Global CO2 Emissions could peak as soon as 2023* IEA Data Reveals,” 26 October 2023, Accessed: 21-11-2024, Web: <https://www.carbonbrief.org/analysis-global-co2-emissions-could-peak-as-soon-as-2023-iea-data-reveals/>

⁸² “Power System Flexibility For the Energy Transition: Part 1: Overview For Policy Makers,” International Renewable Energy Agency, November,2018, (Web: https://www.irena.org/-/media/Files/IRENA/Agency/%20%20%20Publication/2018/Nov/IRENA_Power_system_flexibility_1_2018.pdf, accessed:22-06-2025)

⁸³ “Dünya Bankası ve Türkiye Yenilenebilir Enerji Kullanımını Arttırma Çabalarını Destekleyecek 1 Milyar Dolarlık Bir Program için Anlaşma imzaladı,” *World Bank Group*,16 May,2024,(Web:<https://www.worldbank.org/tr/news/press-release/2024/05/27/world-bank-and-t-rkiye-sign-agreement-for-1-billion-program-to-support-renewable-energy-expansion-efforts>, accessed:25-11-2024)

⁸⁴ Büşra Zeynep Özdemir, “Türkiye’nin Yenilenebilir Rekabet Gücü,” *SETA*, 6 October,2023, (Web:<https://www.setav.org/enerji/turkiyenin-yenilenebilir-rekabet-gucu>,accessed:27-11-2024)

The intense neoliberal-state restructuring efforts witnessed recently have included legal changes related to economic impacts.⁸⁵ These include capitalist interventions that have expanded to opportunities for profit-making. One such area is the renewable energy sector, which has been further developed through state interventions (such as through tax breaks and incentives), allowing the entry of numerous players into the market. One key advantage of the development of the renewable energy sector has been the creation of approximately 16 million jobs.⁸⁶ As a further benefit, the renewable energy sector has supported the technological developments of nations in the field of renewable energies, thus facilitating access to the sector's burgeoning technological export market. From a neoliberal viewpoint, this can be considered another powerful contribution of the renewable energy sector.⁸⁷

⁸⁵ Roger Keil, "The Urban Politics of Roll-With-It Neoliberalization", *City* 13, 2-3(2009):230-245.

⁸⁶ "Yenilenebilir Enerjide Küresel İstihdam 16,2 Milyona Ulaştı," T.C Ticaret Bakanlığı, 03 October, 2024, (Web:[https://ticaret.gov.tr/blog/sektor-haberleri/yenilenebilir-enerjide-kuresel-istihdam-16-2-milyona-ulasi#:~:text=Uluslararası%C4%B1%20Yenilenebilir%20Enerji%20Ajansı%C4%B1%20\(IRENA,2%20milyona%20ula%C5%9F%C4%B1%20ifade%20edildi](https://ticaret.gov.tr/blog/sektor-haberleri/yenilenebilir-enerjide-kuresel-istihdam-16-2-milyona-ulasi#:~:text=Uluslararası%C4%B1%20Yenilenebilir%20Enerji%20Ajansı%C4%B1%20(IRENA,2%20milyona%20ula%C5%9F%C4%B1%20ifade%20edildi), accessed:03-12-2024)

⁸⁷ Didem Damyan, "Eurostat: AB, Yenilenebilir Enerji Ekipmanlarında ithalat ve İhracatı Artırıyor", *Temiz Enerji*, 15 October, 2024, (Web:<https://temizenerji.org/2024/10/15/eurostat-ab-yenilenebilir-enerji-ekipmanlarinda-ithalat-ve-ihracati-artiriyor/>, accessed:29-11-2024)

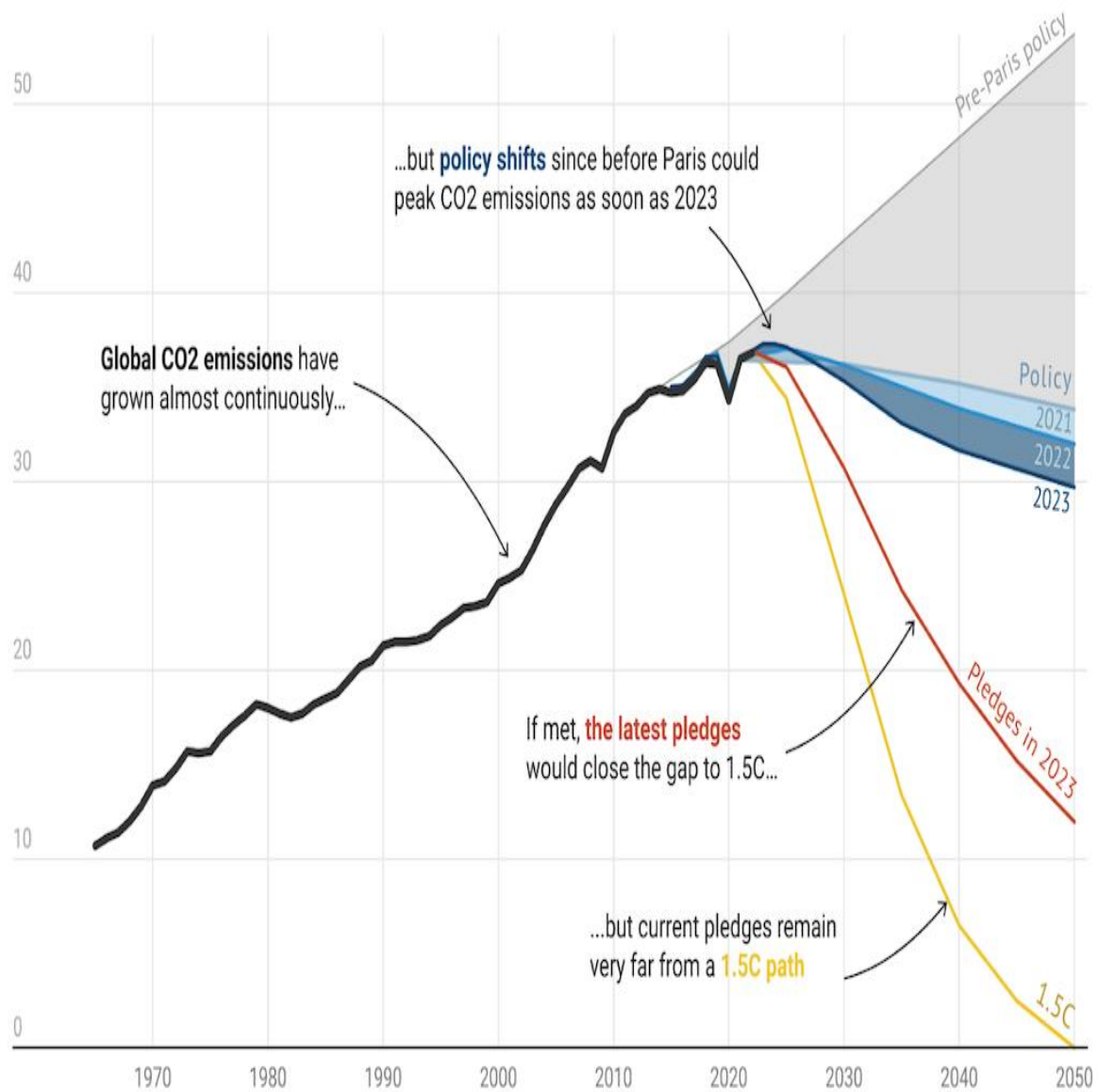


Figure 3. The rising levels of CO₂ emissions⁸⁸

2.4. The Impact of Neoliberalism in Türkiye and Relations with the EU

Within the field of energy, affected three critical parameters of the relationship between Türkiye and the EU: the European Green Deal (EGD) agreement, which remarks a milestone in the generation of renewable energy, which determined Türkiye's future in the field of renewable energy. Additionally, energy policies were indirectly affected by political drawbacks that influenced relations between Türkiye and the EU.

Since the 1999 Helsinki meeting of the European Council, Türkiye, as a candidate for EU membership has been expected to adhere to the legal conditions set forth by the EU

⁸⁸ IEA World Energy Outlook, "The rising levels of CO₂ Emissions," Accessed:30-11-2024, Web: <https://www.iea.org/>

related to the emissions trading system. Türkiye's compliance with the conditions of the EGD declared by the European Commission in 2019, and with the rules governing the EU's emissions trading system, is essential for EU-Turkish relations.⁸⁹ The primary goal of the EGD is to supply the environmental regulations by taking into account technological developments between the member and non-member states. The EGD can thus be considered of great importance for Türkiye's accession to the EU and for the continuation of its commercial relations. The Turkish Ministry of Trade has launched efforts to meet the obligations laid out in the agreement. Since the enactment of the EGD, a comprehensive range of legal and political adjustments have been made affecting many sectors, including those related to the energy trade, agriculture and transportation, aiming to bring to the country in line with the strategic objectives of the EGD.⁹⁰

The success of the JDP in the 2002 elections was expected by certain groups to bring about a deepening of neoliberal policies. Since 2002, Türkiye has developed considerably, and the solar and wind energy market segments in particular have enhanced their regional standing in the energy market, thus attracting the attention of foreign investors. Türkiye's progress in this regard has been particularly notable in the wind energy sector. After being almost non-existent before 2009-2010, is today responsible for 11.70 percent of the total energy generated in the country, as indicated in Table 2.⁹¹

⁸⁹ Emel Akçalı, Evrim Görmüş, and Soli Özel, "Turkey's Green Imagination: The Spatiality of the Low Carbon Energy Transition within the EU Green Deal", *Uluslararası İlişkiler* 20, 77(2023):134-135.

⁹⁰ European Green Deal, "Republic of Türkiye Ministry of Foreign Affairs Directorate for EU Affairs," 11 June, 2024, (Web: https://www.ab.gov.tr/53729_en.html, accessed:05-12-2024)

⁹¹ Sinan Erensü, "Powering neoliberalization: Energy and politics in the making of a new Turkey", *Energy Research and Social Science* 41, (2018):148-157. <https://doi.org/10.1016/j.erss.2018.04.037>

Table 2. Nations and Renewable Energy Electricity Production⁹²

Table	Primary Energy Consumption	Electricity Production from Renewables	Electricity Production from Wind	Electricity Production from Solar	Installed Wind Energy Capacity	Installed Solar Energy Capacity
Nations	2023	2024	2024	2024	2024	2024
TURKEY	18.7%	45.62%	10.70%	7.52%	11.70 GW	11.29 GW
GERMANY	24.39%	57.45%	28.00%	14.89%	69.46 GW	81.74 GW
ITALY	19.28%	49.32%	8.50%	13.53%	12.31 GW	29.80 GW
SPAIN	24.92%	57.21%	22.40%	20.90%	31.03 GW	31.02 GW
FRANCE	16.94%	26.24%	7.70%	4.23%	22.20 GW	20.55 GW
BELGIUM	12.53%	35.86%	18.70%	11.92%	5.50 GW	8.55 GW
AUSTRIA	40.08%	86.72%	12.00%	11.23%	3.98 GW	6.83 GW
BULGARIA	15.01%	31.08%	4.00%	14.38%	0.70 GW	2.94 GW
CZECHIA	7.98%	17.01%	0.90%	5.48%	0.34 GW	2.5 GW
DENMARK	42.73%	88.04%	57.90%	11.26%	7.48 GW	3.53 GW
ESTONIA	15.52%	56.67%	19.10%	15.49%	0.41 GW	0.69 GW
FINLAND	35.94%	55.42%	24.40%	1.47%	6.96 GW	0.90 GW
CROATIA	31.57%	72.85%	16.10%	5.60%	1.14 GW	0.46 GW
NETHERLANDS	17.79%	50.77%	27.00%	17.70%	10.75 GW	23.90 GW
IRELAND	22.30%	45.32%	37.00%	3.14%	4.81 GW	0.74 GW
LATVIA	31.92%	74.30%	4.20%	7.89%	0.14 GW	0.35 GW
LITHUANIA	17.46%	80.33%	45.40%	19.26%	1.29 GW	1.17 GW
LUXEMBOURG	No data	No data	No data	No data	No data	No data
HUNGARY	10.98%	32.77%	1.80%	24.62%	0.32 GW	5.83 GW
PORTUGAL	36.04%	85.19%	31.10%	14.51%	5.62 GW	3.88 GW
MALTA	No data	16.74%	0%	16.29%	0 GW	0.23 GW
POLAND	12.15%	29.85%	14.60%	8.95%	9.31 GW	15.81 GW
SLOVAKIA	11.76%	23.97%	0%	2.32%	0 GW	0.63 GW
SLOVENIA	24.55%	42.00%	0%	8.71%	0 GW	1.03 GW
ROMANIA	21.85%	47.65%	12.20%	7.95%	3.09 GW	1.92 GW
GREECE	21.64%	49.71%	21.80%	21.44%	5.22 GW	7.03 GW
SWEDEN	53.89%	69.45%	23.60%	2.11%	16.25 GW	3.49 GW
CYPRUS	No data	23.78%	3.50%	19.41%	0.16 GW	0.61 GW

(Table 2, accompanying this text, has been prepared by the author.)⁹³

The development of the relationship between Türkiye and the EU relationship gained significant momentum between 2002 and 2005. After the JDP strengthened its position in the local elections of December 2004, the European Council declared the opening of Türkiye's negotiation process at the Brussels Summit in recognition of Türkiye's rapid transformative reforms.

The period from the end of 2002 until the end of 2005, has been referred to by the JDP as the “*Golden Age of Europeanization*”. This was a period during which significant efforts were made to build upon the foundations of the bilateral relations laid by the previous coalition government.⁹⁴ However, this process of Europeanisation entered a period of decline from early 2005. At the heart of the issue was Türkiye's fraught relations with the EU over Cyprus crisis and that, despite Türkiye's application for full membership application, its status as a merely candidate country has remained unchanged since the

⁹² “Renewable Energy,” *Ourworldindata*, Web: <https://ourworldindata.org/renewable-energy>, accessed:24-06-2025.

⁹³ The information provided on the Our World in Data platform is sourced from collaborative efforts with organisations, including IRENA, EMBER, and the Energy Institute.

⁹⁴ Ziya Öniş, “Turkey-EU Relations: Beyond the Current Stalemate”, *Insight Turkey* 10,4(2008),35-50.

Helsinki Summit. The Council's continuous demands that the Cyprus issue be resolved has had a marked effect on the prestige of the EU in Türkiye. With that said, the two partners have continued to cooperate in energy and trade despite the decline in Türkiye-EU relations.⁹⁵

Even more, substantial changes have occurred since that date. One such change is that the amount of electricity produced from renewable energy resources saw a marked increase both in the EU and Türkiye. The year 2009 has become a milestone year for neoliberal policies with the publishing by the EU Council of its "Renewable Energy Sources Directive", in which, while it was binding for the 27 member states, no obligations were placed on such EU candidate countries as Türkiye, Ukraine, Moldova, and Bosnia-Herzegovina. However, these countries all opted to act in accordance with the directive to support their EU accession processes.⁹⁶ The initial target for the production of renewable energy by 2030 was 20 percent, although this was later updated to 42.5 percent. Up until 2010, companies operating in the renewable energy sector only achieved minimum growth in their continuing operations.⁹⁷

⁹⁵ Kıvanç Ulusoy, "Turkey and the EU: Democratization, Civil-Military Relations, and the Cyprus issue," *Insight Turkey* 10,4(2008):51-76.

⁹⁶ "Directive 2009/28- Promotion of the use of energy from renewable sources and amending and subsequently," *EU Monitor*, 5 June,2009, (Web: <https://www.eumonitor.eu/9353000/1/j9vvik7m1c3gyxp/vitgbgiqxyw>, accessed:12-12-2024)

⁹⁷ "Directive 2009/28- Promotion of the use of energy from renewable sources and amending and subsequently"

3. TÜRKİYE'S RENEWABLE ENERGY TRANSFORMATION FROM PAST TO PRESENT: ASSESSING THE ROLE OF PRIVATISATION WITHIN THE CONTEXT OF TÜRKİYE–EU RELATIONS

3.1. The Historical Background of Renewable Energy and Privatisation Process

Electricity, due to its convenient ability to be transformed into different forms of energy, is an integral and necessary part of our everyday life. Electricity consumption is also vital tool of measurement of a country's current level of advancement in modernisation, and industrialisation, with public electricity supplies being considered a form of wealth. The potential of electricity was first realised in the late 1800s, and electricity can be said to have entered everyday life in 1878 with its first use being for lighting. However, the increasing range of uses and demand for electricity sparked the exploration of not only primary sources but also new and sustainable forms, such as wind, hydro and bioenergy.⁹⁸

James Blyth, a Scottish electrical engineer, took the first steps towards the utilisation of electricity derived from renewable energy sources by establishing the first wind power plant in London in 1887.⁹⁹ The first ventures into the use of solar-sourced electricity date from the late 18th and early 19th centuries, with the powering of ovens using sunlight, and subsequent use of the sun's energy to power steamboats. In later years, the French scientist Edmond Becquerel made a notable discovery by producing electricity from light through the photovoltaic effect, paving the way for subsequent developments in the field of generating electricity.¹⁰⁰

The profound interest in all of the global economies of the 21st century in activities related to renewable energy resources has led to an increase in the utilisation of renewable energy resources in the first quarter of the century, as part of efforts to address global issues such as climate change and environmental concerns.¹⁰¹

⁹⁸ Necati İpek, “Türkiye’de Elektrik Enerjisi Gelişiminin Kısa Tarihçesi ve Genel Üretim Bilgileri,” *TMMOB*, (Web: https://www.emo.org.tr/ekler/61b27cff1f9ef4e_ek.pdf?dergi=4, accessed:19-12-2024)

⁹⁹ Dan Garisto, “July 1887: James Blyth Harnesses the Wind for Electricity,” *APS News*, 8 July,2022, (Web:<https://www.aps.org/apsnews/2022/07/james-blyth-harnesses-wind>,accessed:16-12-2024)

¹⁰⁰ Luke Richardson, “Solar history: Timeline&Invention of solar panels,” *Energysage*,26 April, 2023, (Web:<https://www.energysage.com/about-clean-energy/solar/the-history-and-invention-of-solar-panel-technology/#when-were-solar-panels-invented>, accessed:23-12-2024)

¹⁰¹ Uğur Yıldırım, M. Veysel Kaya, “Yenilenebilir Enerji: Tarihsel ve Teorik Bir Bakış”, *Üçüncü Sektör Sosyal Ekonomi Dergisi* 55, 4(2020):2420-2433.

While there are many existing definitions in the literature regarding renewable energy, the term is used in the present study as renewable energy refers to natural resources that have no negative impact on the climate or environment. The hallmark that distinguishes renewable from fossil energy is sustainability, i.e. it is an endless source of natural energy. At a national level, the presence of renewable energy resources benefits a country by reducing external dependence on fossil-fuel sources and increasing the use of clean energy.¹⁰²

Solar and wind energy have particularly gained prominence during the previous 15 years over other forms of renewable energy as they are considered, by virtue of their cost-effectiveness and environmental benefits, to be the most advantageous. As can be seen in Figures 4 and 5, the amount of electricity generated from wind and solar energy in the EU countries during the first quarter of 2024 surpassed the amount produced from fossil fuels. As stated in many academic resources, fossil fuels, such as coal, natural gas, and oil, are all stored forms of solar energy which have formed over an extremely long time. It is for this reason that solar energy, when compared with other resources, can be considered the most critical energy resource in the contemporary world.¹⁰³

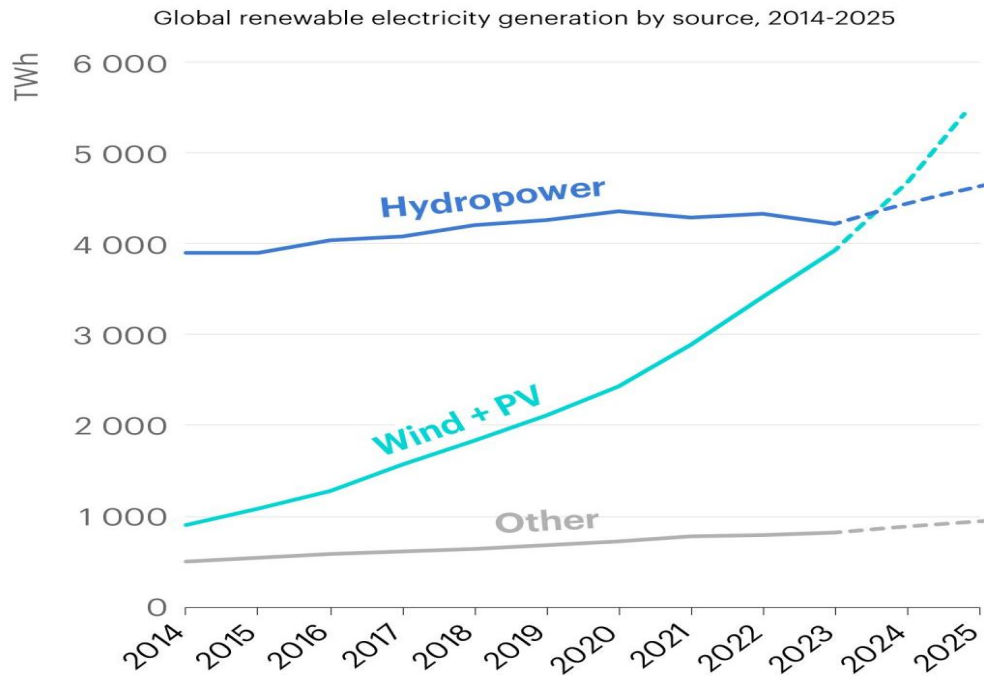


Figure 4. Global Generation of Renewable Electricity 2014-2025¹⁰⁴.

¹⁰² Erdal Tanas Karagöl, İsmail Kavaz, “Dünyada ve Türkiye’de Yenilenebilir Enerji,” *SETA*, 197(2017):7-8.

¹⁰³ Ibid, 8-9.

¹⁰⁴ International Energy Agency, “Global Generation of Renewable Electricity 2014-2025,” Accessed:25-12-2024, Web: <https://www.iea.org/>

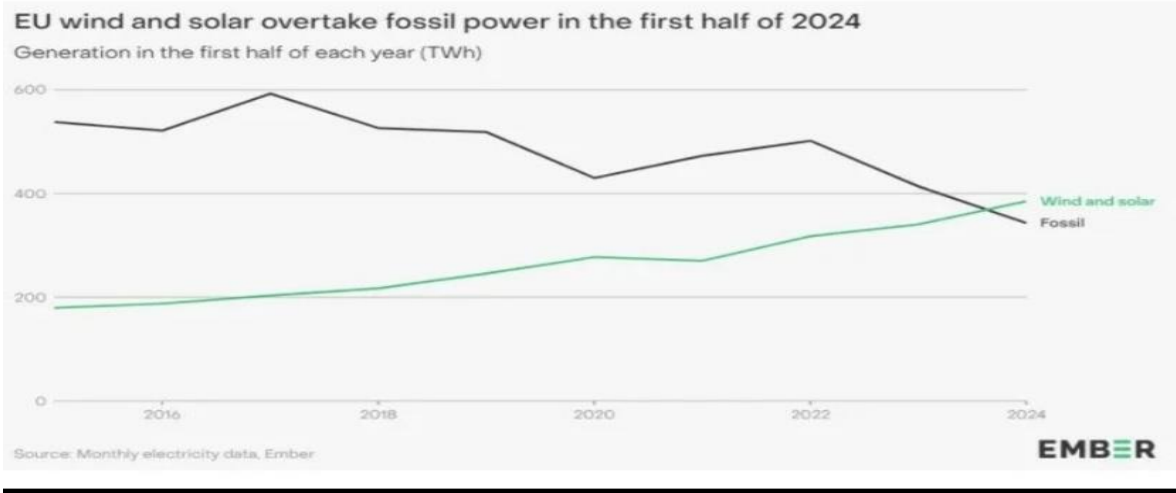


Figure 5. Map Illustrating the Transition Points for Renewable Energy in the European Union¹⁰⁵

3.1.1. Türkiye

In this section, the connection between renewable energy and privatisation will be explained alongside the regulatory and political developments that have occurred in Türkiye. The privatisation process in Türkiye was officially started in many sectors with the published decisions announced on 24 January 1980 which aimed to diminish the state's role in finance. These decisions are considered as the being first step towards the privatisation of the country, although the privatisation process in Türkiye's electricity sector took place in the later years.¹⁰⁶ It is for this reason that Türkiye's realisation of the significance of renewable energy can be considered to have occurred relatively late. As was the case with the EU member states, Türkiye began taking steps only after renewable energy became a global trend. If, however, the investments being made today had started earlier, Türkiye could now be meeting more than half of its energy demand from renewable energy sources. No studies to date have been identified which explore whether Türkiye can attain energy independence through the generation of electricity from renewable energy sources.

Türkiye's geographical and geological status provide strategic advantages over other countries in the generation of electricity from renewable energy sources, especially in

¹⁰⁵ Ember, "EU wind and solar overtake fossil power in the first half of 2024," Accessed:09-01-2025, Web: <https://ember-energy.org/tr/>

¹⁰⁶ Teoman Alptürk, Erhan Karaçay, Tefik Fikret Demirel, Suat Yılmaz, Halil Suat Türker, Tarık Tarhan, Engin Çakırkaptan, "Cumhuriyetimizin 100.Yılında Elektrik Özelleştirmeleri Raporu," *TMMOB Elektrik Mühendisleri Odası March, 2022*, (Web: https://www.emo.org.tr/ekler/dafc2b225b7ad8e_ek.pdf, accessed:10-01-2025)

terms of wind and solar energy systems. Despite these favourable conditions, Türkiye only began to take significant steps in wind and solar energy generation after 2009. This is seen a relatively late entry when compared to many other countries who had already begun to utilise their potential in the early 2000s.¹⁰⁷ As stated in the Annex Table of the Strategy Document published by the MENR, the 3-year privatisation process left the Turkish electricity generation sector lagging behind other countries. Following 2009, the electricity generation sector in Türkiye has made progress in conjunction with privatisation. Currently, private actors play key role on Türkiye’s production capacity of renewable energy as can be seen in Table 3.¹⁰⁸

Table 3. Installed electricity capacity of EÜAŞ-private companies (2025)

<i>Türkiye’s Total Installed Electricity Capacity from Renewable Energy Sources:</i> <i>116,605 MW</i>	
<i>EÜAŞ</i>	<i>306 Private Electricity Production Companies</i>
<i>14,383 MW</i>	<i>102,222 MW</i>

Sources: <https://www.enerjiatlas.com/firma/and> and <https://www.aa.com.tr/tr/ekonomi/turkiyenin-elektrik-kapasitesinde-yenilenebilir-enerjinin-payi-yuzde-60a-yukseldi/3492611>, accessed: 10.01.2025

Türkiye began its activities in grid-connected wind power generation in 1998. However, these activities gained prominence with a legal framework being created through the enactment of the Renewable Electricity Law in 2005.¹⁰⁹ The Law targeted an increase in the power product from renewable energy resources through the involvement of the private sector with the objectives of reducing greenhouse gas emissions, diversifying resources, reducing reliance on foreign energy, and safeguarding the environment. The Law was designed to encourage private companies to establish new renewable energy production areas in accordance with legislation by the Energy Market Regulatory Authority. In terms

¹⁰⁷ Karagöl, Kavaz, “Dünyada ve Türkiye’de Yenilenebilir Enerji”, 18-19.

¹⁰⁸ “Elektrik Enerjisi Sektörü Reformu ve Özelleştirme Strateji Belgesi,” 17 March, 2004, (Web:https://enerji.gov.tr//Media/Dizin/SGB/tr/Belgeler/813926-9elektrik_enerjisi_sektoru_reformu_ve_ozellestirme_strateji_belgesi.pdf, accessed:12-01-2025)

¹⁰⁹ “Rüzgâr Enerjisi ve Rüzgâr Tribünleri Yerel Sempozyumu”, *Türkiye Mühendis ve Mimar Odaları Birliği Yerel Sempozyumu*, TMMOB, Balıkesir, 11-12 March, 2011, Web:<https://www.mmo.org.tr/etkinlik/ruzgar-enerjisi-ve-ruzgar-turbinleri-yerel-sempozyumu>

of the historical context, the Law can be said to constitute the initial link between renewable energy and the privatisation of Türkiye's electricity sector.¹¹⁰

The Turkish electricity sector has made notable advances toward the global progress objectives, which determine the goal of energy supply security. Furthermore, there is ongoing progress in the efforts of the energy sector to achieve critical targets, such as the integration of the zero-carbon principle. For many years, the public sector has taken a leading role in the management of electricity generation, transmission, and distribution activities. In the 1990s, the energy sector was divided into two, electricity generation and electricity distribution. The primary purpose of this split was to increase the involvement of private energy companies. In following years, while the electricity distribution and generation sectors underwent privatisation, the electricity transmission sector has remained publicly owned and continues to operate under public control to the present day.

In the period from the early 2000s until the present day, the electricity sector has evolved into a competitive market model with multiple participants, which are backed by legal regulations and a liberalisation process.¹¹¹ Within this process, many public power generation facilities have been privatised and private energy corporations have been given a maximum of 49-year (, and a minimum of 10-year) licences to manage the generation of electricity from renewable energy sources.¹¹² By the year 2022, roughly 292 private renewable energy companies operating in Türkiye. It is projected by the Turkish government that this number will increase to 307 by the end of 2025.¹¹³ That said, if the opportunity is limited only to those with 250 MW installed power, the number drops to about 20, suggesting that powerful market players represent only a small fraction of the market.¹¹⁴

As seen in the graph below, which details the privatisations carried out during the JDP era, a significant decline in revenues was generated from privatisation after 2014. This figure demonstrates that the economic contribution of Türkiye's privatisation policies since

¹¹⁰ "Yenilenebilir Enerji Kaynaklarının Elektrik Enerjisi Üretimi Amaçlı Kullanımına İlişkin Kanun", *Resmî Gazete*, 10 May, 2005, (Web: <https://www.resmigazete.gov.tr/eskiler/2005/05/20050518-1.htm>, accessed: 11-01-2025)

¹¹¹ Kubilay Kavak, Can Hakyemez, Emine Çelen, Ersin Türkmen, Orçun Yıldızca, Zümray Şentürk, Mukaddes Emecen, "Enerji Görünümü 2023 Raporu," *Türkiye Sınai Kalkınma Bankası A.Ş.* (Web: <https://www.tskb.com.tr/uploads/file/enerji-gorunumu-2023.pdf>, accessed: 18-01-2025)

¹¹² Bal, "Özelleştirmenin Teorik Temelleri ve Türkiye'deki Sonuçları," 360-361.

¹¹³ "Elektrik Üretim Firmaları," *Enerji Atlası*, accessed: 2025-01-21, Web: <https://www.enerjiatlasi.com/firma/>

¹¹⁴ "Türkiye Elektrik Piyasasına Genel Bakış 2023," *PwC*, accessed: 22-02-2025, Web: <https://www.pwc.com.tr/tr/basin-odasi/2023-basin-bulteni/pwc-nin-yeni-raporu-turkiyenin-yenilenebilir-enerjideki-potansiyeline-ve-firsatlara-dikkat-cekiliyor.html#:~:text=T%C3%BCrkiye'de%20yenilenebilir%20kaynaklara%20dayal%C4%B1,oyuncusu%20say%C4%B1s%C4%B1n%C4%B1n%20azl%C4%B1%C4%9F%C4%B1%20dikkat%20%C3%A7ekiyor.>

2002 cannot be overlooked. However, following 2013, the ongoing effects of the 2008-2022 financial crisis and the insufficient incentives provided by the government have led to a decline in privatisation revenues. In summary, it can be argued that the contribution of privatisation policies to the country has diminished to minimal levels after a certain period. The primary reasons for this decline are the misguided policies implemented by the government at the time and the impact of global crises. This table reveals that there is no correlation between the growth in renewable energy and the revenues generated from privatisation process.

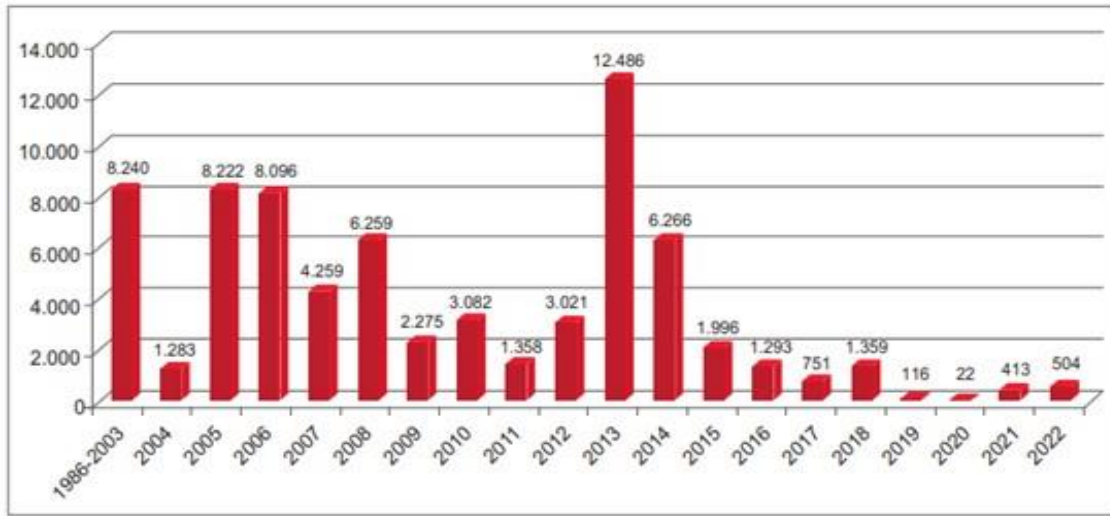


Figure 6. A Summary of the Value of Privatisation by Year (million USD)

Source: Privatisation Administration¹¹⁵

3.1.2. The European Union

The renewable energy and privatisation policies of EU member states vary from country to country. Although the emphasis on renewable energy sources has been increasing within the EU, a significant reduction in the dependence on fossil fuels such as natural gas and oil does not seem feasible in the near future. Of the investments made by the EU, solar and wind energy tend to be prioritised over other renewable energy sources.¹¹⁶ As the main intended beneficiary of the EU's renewable energy policies is society, and rules targeting clean energy tend to either prioritise society at large or individuals within it. The onus is thus on private companies in the EU member states to

¹¹⁵ "AKP İktidarının Enerji Karnesi: Enerjide Son 20 Yıl"

¹¹⁶ Elif Demir, "Avrupa Birliği'nin Enerji Politikası ve Türkiye", (Master thesis, Istanbul University, Institute of Social Science, 2012), 51-52.

take strategic decisions, while also considering the core objectives of the EU's energy policies.¹¹⁷

In this section, the connection between renewable energy and privatisation within the EU will be elucidated to provide some historical context, with examples presented from the United Kingdom, France, and Germany. The primary privatisation drive within the EU occurred between 1979 and 1980. A comprehensive privatisation programme, the first of its kind, was launched in the United Kingdom (UK) in 1979, and remains in place. The privatisation drive in the UK, which was a member of the EU at that time, was a milestone in the country's history. The expanded scope of privatisation drive had positive outcomes for both the investor companies and the economy. Prior to privatisation, many sectors, such as those related to telecommunications, agriculture, transportation, energy, were under UK public ownership. This left them vulnerable to state and government interventions and thus harmed companies operating as private actors in these fields. However, privatisation contributed to provide both improvements in the country's welfare level and advancements in financial conditions. British Gas can be put forward as a prime example of this process based on the considerable income it generated and the global value added by British Gas to the country. To date, the primary institutions that have been privatised in the energy sector in the UK include British Petroleum (BP), British Gas, 12 regional electricity companies located in Wales and the UK, Scottish Power, Scottish Hydro-Electric (generation and distribution companies), and power generation companies in Northern Ireland (generation and distribution companies).¹¹⁸

The privatisation process in France was a response to the oil crisis of 1979. This crisis not only resulted in national economic challenges but also caused upheavals in the political landscape of France. While there was initially a lack of government support for privatisation in the country prior to 1985. The implementation of the expected transformations into the electricity sector under the direction of the EU gave rise to a liberalisation process in France, and a five-year privatisation plan was announced in 1985 based on a political majority decision. The subsequent privatisation process and the impacts on the country's financial structure transformed a gradual negative decline into a positive change in the country's economy.¹¹⁹

¹¹⁷ Ibid,51-54.

¹¹⁸ Sadık Rıdvan Karluk, "Dünya Ülkelerinde Özelleştirme Uygulamaları ve İngiltere ve Japonya Örnekleri," *Eskişehir Anadolu Üniversitesi İktisadi ve İdari Bilimler Fakülte Dergisi* 11, 1-2 (1993),66-72.

¹¹⁹ Bal, "Özelleştirmenin Teorik Temelleri ve Türkiye'deki Sonuçları," 359.

The state still has shares in the energy generation and distribution sector. By implementing this policy, France aimed to develop the market and maintain investment assurances among producer-distributor companies. Between 2001 and 2002, the Purchase Tariff Document, which included solar and wind energy, was reviewed and underwent several adjustments. In 2002, the French government prepared a report that included these adjustments and the need to generate as much as possible from renewable energy resources. Through the report, the French government emphasised the importance of renewable energy resources for the country's economy and welfare.¹²⁰

The privatisation programme in Germany was initially launched by the government in the 1980 in the automotive and mining sectors. As was the case in France, the liberalisation process in Germany gained momentum in 1985, and is still continuing today.¹²¹ However, the system in Germany does differ from that of France and the UK. In the 1930s, each federal state's administration in Germany continued to provide financial support in the electricity sector to maintain regional development. The most significant energy producers were unveiled by financial aid in many states. In the 1920s, Public Economic Enterprises strived to consolidate almost all the shares owned by private companies in the electricity production sector under a single roof. This effort culminated in the 1929 decision of the German Public Economic Enterprises to merge into the joint-stock company “*Die Vereinigte Elektrizitäts- und Bergwerks-AG*” (VEBA) joint-stock company as part of the privatisation process. Subsequently, public and private entities formed partnerships in the electricity production sector, one such partnership being “*Die Rheinisch-Westfälisches Elektrizitätswerk AG*” (RWE).¹²²

¹²⁰ Neslihan Kulözü, “Yenilenebilir Enerji Politikaları: Fransa Örneği” *III. Yenilenebilir Enerji Kaynakları Sempozyumu Bildirileri*, TMMOB Elektrik Mühendisleri Odası, Ankara, 2005.

¹²¹ Ibid, 359-360.

¹²² Muzaffer Dartan, “Almanya’da Kitler ve Özelleştirme Uygulamaları”, *Marmara Üniversitesi Avrupa Araştırmaları Enstitüsü Avrupa Araştırmaları Dergisi* 3, 1&2(1993), 154-191.

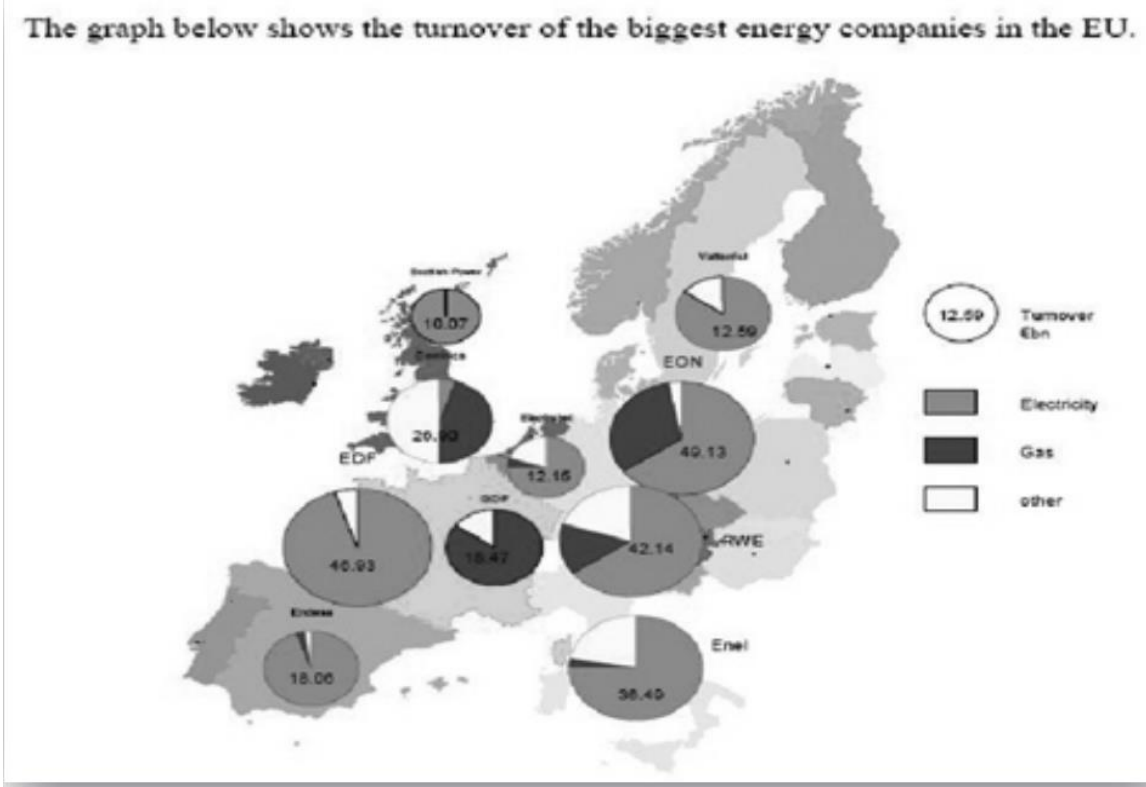


Figure 7. The Largest Energy Companies in the EU.¹²³

The point conveyed by this thesis and through this figure 7 presented above is that the renewable energy sector within the EU is dominated by a few key players. The seven largest energy companies in the EU are highly influential within their own countries but also hold substantial power within the EU through the shares they hold in many companies located in Central, Southern, and Eastern Europe.¹²⁴ The point being made here is that these seven major companies within the EU hold a significant share of energy production. In other words, these companies are responsible for electricity generation in the EU through specific resources. Simply put, these companies form the cornerstone of the EU's energy system. They play a major role in both the transition to renewable energy and electricity production. These companies include E-ON, RWE, EDF, ENEL, Endesa, Iberdrola, and Vestas.

In Türkiye, however, the situation is largely managed by companies close to the government. Some of these companies have been unable to sustain their operations over

¹²³ Elektrik Mühendisleri Odası, "The Largest Energy Companies in the EU," Accessed:25-11-2024, Web: https://www.emo.org.tr/ekler/82e6c2d3d78eef4_ek.pdf

¹²⁴ David Hall, "Enerji Alanında Özelleştirme ve Liberalleşme Ekseninde Avrupa Birliği Gaz ve Elektrik Direktifleri," accessed:21-02-2025, Web: https://www.emo.org.tr/ekler/82e6c2d3d78eef4_ek.pdf, 33-51.

the long term due to ongoing financial crises.¹²⁵ Nevertheless, it can be said that the certain long-standing and government-affiliated energy companies are also present within this system in Türkiye.

The EU serves as a distinctive actor within the international system, aiming to establish a normative framework that shapes global governance. Its institutional structure and historical development have enabled the EU to produce a wide range of regulatory declarations, legal texts, international agreements, and political criteria. However, the complex and multidimensional nature of the Union, the incomplete integration among its member states and institutions, and a variety of persistent internal challenges have left its normative role open to scholarly debate. The enforcement of EU norms in both member and candidate countries is fundamentally based on the acceptance of EU law. A clear example of this normative influence is seen in the abolition of the death penalty, which has become a prerequisite for both membership and candidacy, thereby demonstrating how EU norms can directly reshape national legal systems. The core values underpinning the EU's normative agenda include peace, democracy, and the protection of human rights. The legal basis for these normative foundations is provided by Article 2 of the Treaty of Rome and Articles 6 and 13 of the EU Treaty. However, the EU's failure to adopt a clear position during the attempted coup in Türkiye on July 15, 2016, has cast doubt on its normative consistency and revealed an ongoing democratic shortfall in its external policy stance.¹²⁶

The EU's normative authority is binding on its member states and encompasses key policy areas such as the reduction of greenhouse gas emissions, the generation of electricity from renewable sources, and broader efforts to lower energy consumption. The collective goal of a 20 percent reduction in emissions across the 27 member states has led to internal disagreement, with some members pushing for a more ambitious target of 30 percent. Alongside these disagreements, the EU continues to face institutional and financial barriers in the implementation of its climate goals. Although the EU Commissioner for Energy has emphasised the strategic necessity of investing in new energy infrastructure and technologies, the lingering effects of the financial crisis have made many national economic ministries hesitant to commit to such expenditures.¹²⁷

¹²⁵ "27 Yıllık Enerji Şirketi İflas Etti," T24, 7 June, 2025, (Web: <https://t24.com.tr/haber/27-yillik-enerji-sirketi-iflas-etti,1243518>, Accessed: 22-06-2025)

¹²⁶ Selim Vatandaş, "Avrupa Birliği'nin Normatif Gücü: İnsan Hakları ve Demokrasi İdeali Bağlamında Bir Analiz," *Bilge Strateji* 10, 19(2018):149-176.

¹²⁷ Selim Rüsen, "Normatif Güç Bağlamında Avrupa Birliği'nin Uluslararası Konumu Üzerine Tartışmalar," *Sosyal Bilimler Dergisi* 5, 23(2018):336-354.

Türkiye's engagement with EU norms has been shaped significantly by the political impasse surrounding the energy chapter of the EU acquis. This chapter has not been officially opened for negotiation, primarily due to the opposition of the Republic of Cyprus. Türkiye's submission of the Draft Screening Report did not lead to a positive outcome, resulting in continued stagnation in this area. Despite this political barrier, the energy chapter is widely considered one of the areas where Türkiye demonstrates high degree of alignment with the EU standards. In particular, initiatives concerning energy supply security and the expansion of renewable energy sources have received favourable responses from EU officials.¹²⁸

In 2015, Türkiye and the EU launched a High-Level Energy Dialogue, supported by Türkiye's observer membership in the European Network of Transmission System Operators for Electricity (ENTSO-E). This dialogue has become increasingly important in fostering cooperation between Türkiye and the EU in the field of renewable energy. Türkiye has taken steps to harmonise its national energy policies with the EU expectations. While progress has been made in aligning Türkiye's legal and regulatory frameworks with the EU's energy and environmental acquis, various forms of political resistance continue to hinder further integration. These obstacles are rooted in unresolved geopolitical disputes, particularly the Cyprus issue. Additionally, Türkiye's lag in prioritising environmental protection, its lack of a national carbon pricing mechanism, deficiencies in market transparency, and ongoing institutional governance issues have further complicated the integration process.

3.2. Türkiye's Energy Transformation From the Past to Present

3.2.1. 1980 to 2001

In the early 1980s, Prime Minister Turgut Ozal launched wide-ranging reforms in an attempt to restructure the Turkish energy sector. The global trend towards liberalisation at this time greatly influenced Türkiye's vision for the future of energy. The decision made on 24 January 1980 meant that Türkiye now joined this wave of global liberalisation in terms of the structural transformation of the financial sector, and the incorporation of the private sector. Under Law No. 3096, passed in 1984, private companies became able to participate in the electricity market. The introduction of the Built-Operate-Transfer (BOT) model in

¹²⁸ "Fasıl:15 Avrupa Birliği'nin Enerji Politikası," *T.C Dışişleri Bakanlığı Avrupa Birliği Başkanlığı*, 06 February 2025, accessed: 26-06-2025, Web: <https://www.ab.gov.tr/p.php?e=80>

1984 brought about a considerable shift in the Turkish electricity market, breaking the monopoly of the Turkish Electricity Authority and facilitating the entry of private companies into the sector.¹²⁹

Türkiye's first geothermal power plant went into operation in 1984. Despite concerted efforts to boost the use of renewable energy through the BOT model, there were few projects until 2001. From 1980 to 1990, Türkiye met its increasing energy demands through public projects. Law No.3096 was driven by increased demand for electricity and the need to overcome the energy deficits associated with the inadequacy of installed capacity, and which permitted investors to establish electricity generation facilities under the BOT model.¹³⁰ After the 1990s, Türkiye implemented a policy, that allowed private companies to participate in the energy sector. As for the petroleum and national gas sector in Türkiye, between the 1980s and 1990s, due to the transformation into a laissez-faire policy, the country made a series of reforms in order to keep up with the liberating developments in the petroleum sector. However, the influx of foreign capital remained below expectations due to insufficient technological equipment.¹³¹

Between 1980 and 1990, the EU strived to come up with a unified energy policy that was in line with the Council of Europe decision of 9 June 1980. The main goals in this regard were to reduce reliance on oil imports, a greater use of renewable energy sources, the development of a common energy pricing mechanism, and the placement of limits on the use of fossil energy sources. The European Commission of 16 September 1986 announced its energy policy for the period up to 1995 and beyond, which targeted energy supply security, the prevention of fluctuations in the oil market, technological development, the increased use of renewable energy sources, a reduction in the use of hydrocarbons, and balance in the use of natural gas resources.¹³²

In the 1990s, Türkiye's electricity sector entered a period of transformation in which a new system was initiated in which the government played a central role in the production and distribution of electricity through the Turkish Electricity Generation and Transmission Company (Türkiye Elektrik İletim Anonim Şirketi—TEİAŞ), and the Türkiye Electricity

¹²⁹ Emine Başçı Devres, Begüm Durukan, “*Prof.Dr. Mahmut Tevfik Bırsel’e Armağan*” (İzmir: Dokuz Eylül Üniversitesi Rektörlük Matbaası,2001),63-66.

¹³⁰ “Türkiye Elektrik Kurumu Dışındaki Kuruluşların Elektrik Üretimi, İletimi, Dağıtımı ve Ticareti ile Görevlendirilmesi Hakkında Kanun,” accessed:23-11-2024, Web: <https://www.mevzuat.gov.tr/MevzuatMetin/1.5.3096.pdf>

¹³¹ Uğur Selçuk Akalın, Suat Tüfekçi, “Türkiye’nin Petrol Politikaları ve Enerji Özelleştirmelerine Bir Bakış”, *İktisat Politikası Araştırma Dergisi* 1, 1(2014):51-66.

¹³² Vladimir Milcik, “Avrupa Birliği’nin Enerji Politikası ve Türkiye: Enerji Güvenliği ve Çevrenin Korunması,” (Master thesis, Istanbul University, Institute of Social Science,2012), 69-70.

Distribution Company (*Türkiye Elektrik Dağıtım Anonim Şirketi*—TEDAŞ). The two state-owned structures continued to play a key role in the energy sector, until the establishment of the Energy Market Regulatory Authority (EMRA) in 2001.¹³³ In the period between 1980 and 2000, only small-scale inroads were made into the field of renewable energy. Despite the plans and programmes in place, the electricity sector underwent only fragmented reforms in these years. In the period from 1990 to 2001, the natural gas and petroleum sectors were gradually privatised through liberalisation, and with the participation of foreign entities.¹³⁴ In short, there was reshaping of the energy sector, especially with the establishment of EMRA.

The benefits to the economy resulting from the privatisation efforts following the 2001 economic crisis when compared to the 1980s to 1990s were substantial and stemmed from the necessary political calculations of the JDP, after it came to power in 2002. It should be noted, however, that the 2001 economic crisis had a significant impact on the development of these policies. In this period, there was a noticeable rise in revenue due to privatisation and the establishment of effective monetary policies.¹³⁵ Hence, the year 2001 can be considered a milestone for Türkiye in the liberalisation of the energy sector and the impact of the financial crisis on this transformation.

3.2.2. 2002-2024

The rise to power of the JDP in 2002, which has retained its position as the ruling party up to the present day, marked the beginning of a new era for Türkiye. This period, typified by conflicting and diverse political discourses, has been stormy one for Türkiye. There was considerable speculation about what kind of energy policy would be adopted, given the JDP's self-identification as reformist party.

Before the rise to power of the JDP, the electricity market in Türkiye operated in accordance with the Electricity Market Law No.4628, the primary purpose of which was to create a competitive market framework and encourage private investments into the electricity generation sector. During this period of the early 2000s, Türkiye made concerted efforts to integrate renewable energy into its energy portfolio. As can be seen in Figure 4, the market privatisation rate reached 29 percent in 2004. The utilisation of renewable

¹³³ Bayraktar, "A Multidimensional Analysis Of Turkish German Low Carbon Energy Transitions", 115-116.

¹³⁴ Uğur Selçuk Akalın, Suat Tüfekçi, "Türkiye'nin Petrol Politikaları ve Enerji Özelleştirmelerine Bir Bakış", *İktisat Politikası Araştırma Dergisi* 1, 1(2014):51-66.

¹³⁵ Sırrı Emrah Üçer, "Türkiye'de Özelleştirmenin Üç Dönemi: 1980'ler, 1990'lar ve 2001 Sonrası", *I. Uluslararası İktisad Sosyal Bilimler Kongresi*, 554-563.

energy in Türkiye began with the introduction of the Electricity Market Law in 2001, and witnessed substantial increase following the adoption of the Renewable Energy Sources Law in 2005.¹³⁶

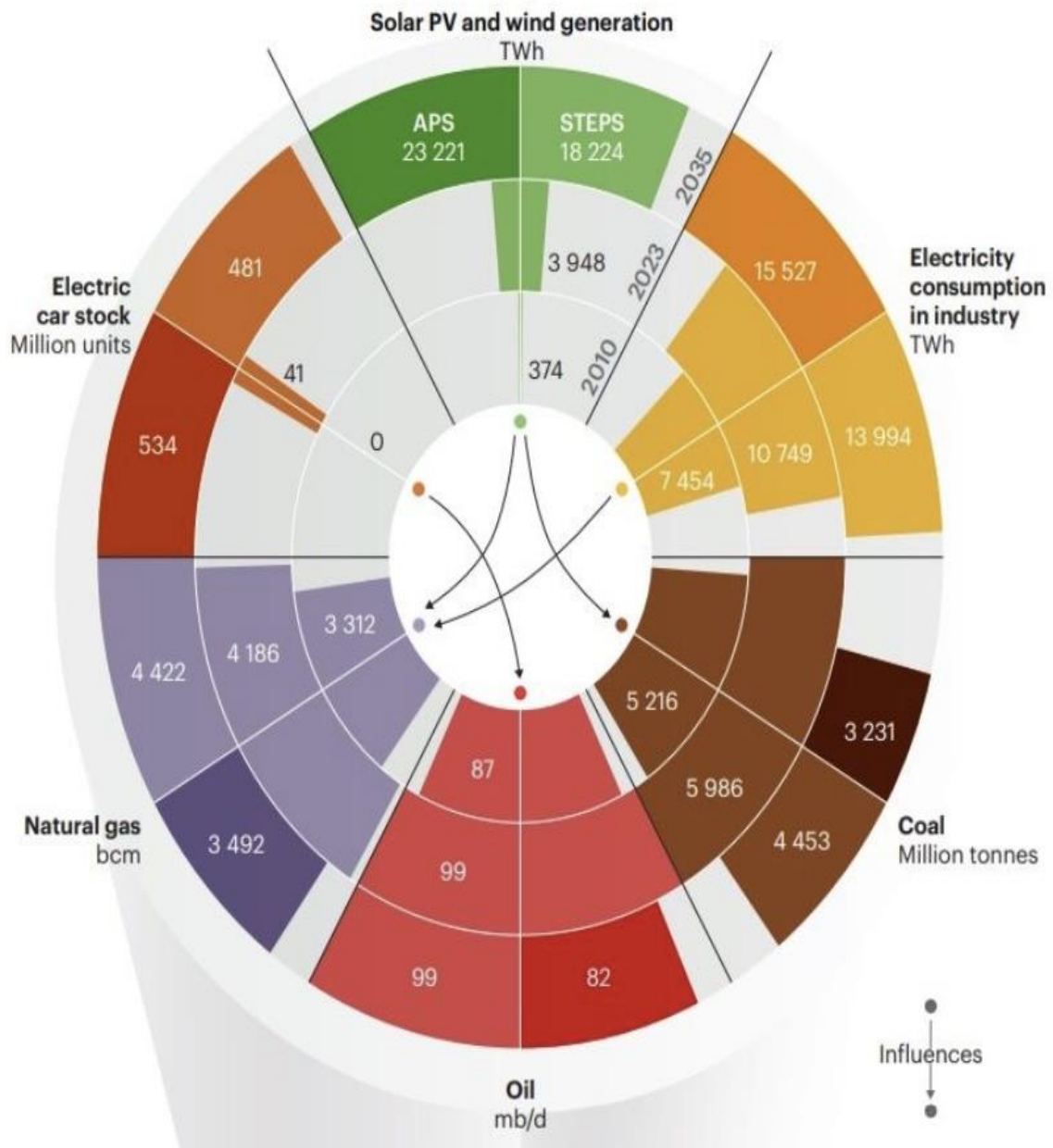


Figure 8. Solar PV, Wind Generation and Influences¹³⁷

¹³⁶ Bayraktar, "A Multidimensional Analysis Of Turkish German Low Carbon Energy Transitions", 123-124.

¹³⁷ International Energy Agency, "IEA Outlook 2024," Accessed: 01-12-2024, Web: <https://www.iea.org/reports/world-energy-outlook-2024>

Table: Key Milestones in Turkey's Transition to Renewable Energy

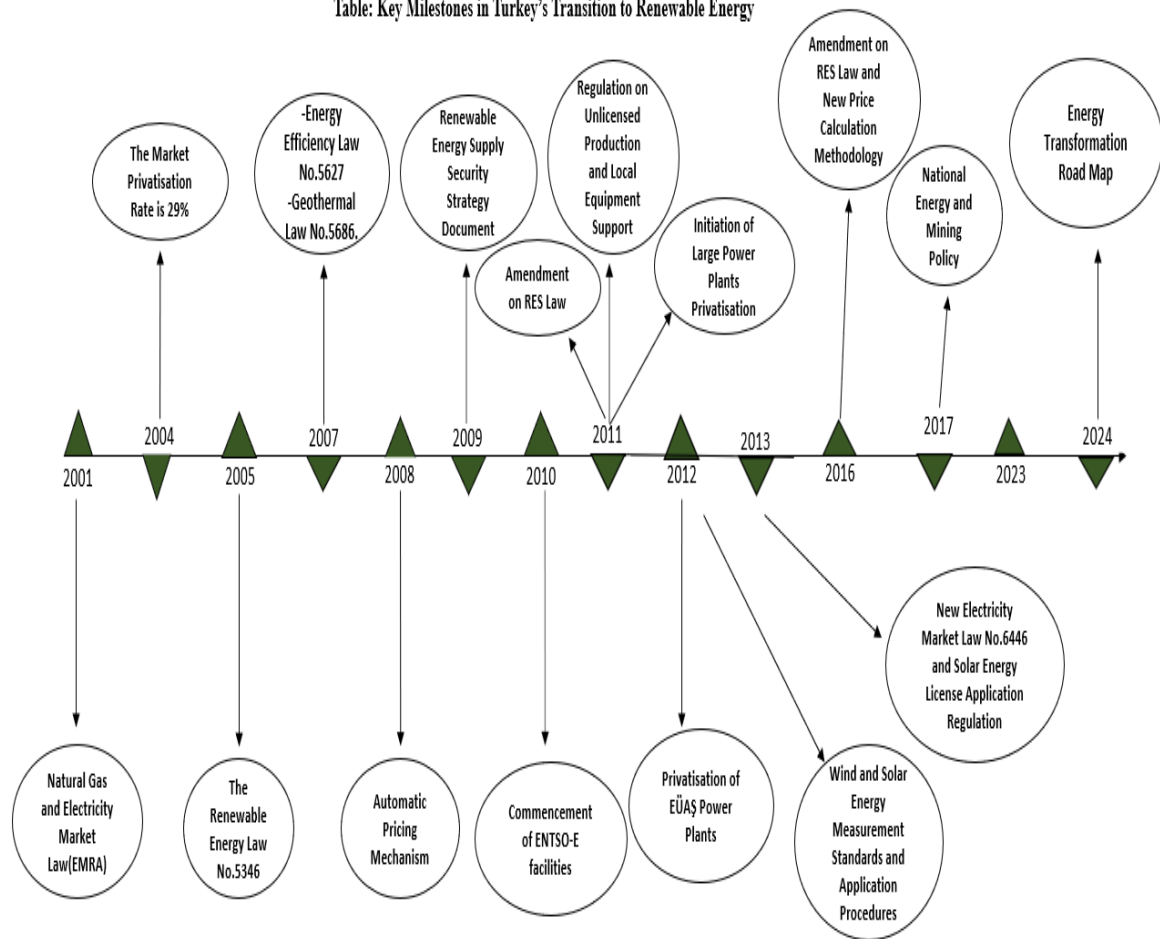


Figure 9. Key Milestones in Türkiye's Transition to Renewable Energy

(Figure 9, accompanying this text, has been prepared by the author)

The period from 2002 to 2005 has been described as the brief golden age of Türkiye's bilateral relations with the EU. (Chapter 1 considers this period from a neoliberal perspective.) The increase in the number of private companies in the Turkish energy sector after 2001 played a crucial role in shaping the country's connections with the EU. In 2003, based on EMRA's Electricity Market Report, the contribution of private companies to power generation in 2003 had increased by 22 percent. (from 18 percent to 40 percent).¹³⁸ As stated in the section of this thesis entitled "3.1.1.Türkiye", the increase in renewable energy sources was spurred by the initiatives of private companies after the forced entry of 2005 Law and the positive course of bilateral relations.

¹³⁸ Bayraktar, "A Multidimensional Analysis Of Turkish German Low Carbon Energy Transitions", 119-120.

The country reports published by the EC in 2008 stated that bilateral relations between Türkiye and the EU entered a period of stagnation, due to political crises.¹³⁹ In 2010, the EU heralded the Negotiation Framework Document, the importance of which is the laying out of the essential principles, the conduct of negotiations and the roles of institutions, as well as the conditions under which bilateral relations would be suspended. Despite the publication of such a negative document, the positive developments that were noted in bilateral energy relations led to trade in energy. The ENTSO-E programme was launched in 2010 with the involvement of Türkiye and the EU, marking the official initiation of mutual energy trade. Although, the trade and transfer of electricity between Türkiye and the EU remains minimal, the programme should be considered substantial in its contribution to the continuity of bilateral relations.

Türkiye launched the Renewable Energy Support Scheme (*Yenilenebilir Enerji Kaynaklarını Destekleme Mekanizması*—YEKDEM) in 2011, the main goal of which is encouraging and facilitating the use of renewable energy sources. Türkiye has covered a lot of ground through the scheme, facilitating the private sector in increasing access to renewable energy resources, particularly in wind and solar energy. In 2024, as stated in the new YEKDEM plan published by the MENR also provided rapid progression in a planned way.¹⁴⁰ Between 2002 and 2011, bilateral relations between the EU and Türkiye underwent a considerable transition. In spite of encountering a set of political and lawful challenges before the year 2001, Türkiye was able to maintain its political, economic and trade ties with the EU, whose country reports, categorised Türkiye as partially sufficient in the field of energy.¹⁴¹

In 2013, the Electricity Market Law No. 4628 was replaced by Law No. 6446, which redefined market operations in Türkiye in line with the evolving electricity market. Subsequently, the Istanbul Energy Exchange was established to oversee the trade of energy in accordance with the new law. The role of EÜAŞ was expanded by this legislation, and was granted the same rights as private-sector license holders.¹⁴² Between 2011 and 2015, relations between Türkiye and the EU became more strained owing to Türkiye's political

¹³⁹ "Türkiye Progress Report 2008," *European Commission*, 29 October 2008, Web:https://enlargement.ec.europa.eu/turkey-progress-report-2008_en, accessed:30-01-2025

¹⁴⁰ Nurhan Üregen Güler, Prof.Dr. Zehra Yumurtacı, "YEKDEM Politikası ve Yenilenebilir Enerji Girişimi" *6.İzmir Rüzgâr Enerji Sempozyumu*, İzmir, 23-24 Eylül 2021.

¹⁴¹ Ziya Öniş, "Historic missed opportunities and prospect for renewal: Turkey-EU relations in a post-Western order", *Turkish Studies* 24,3-4(2023):700-701.

¹⁴² "6446 Elektrik Piyasası Kanunu," *T.C Mevzuat Bilgi Sistemi*, accessed:05-12-2024, Web:<https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6446&MevzuatTur=1&MevzuatTertip=5>

rhetoric towards the EU. During such periods of tension, Türkiye opted to focus on its internal political structure and to make lawful shifts on the basis of obtaining the benefits of the energy regime.¹⁴³

Following an attempted military coup in Türkiye on 15 July 2016, bilateral relations between the EU and Türkiye politically collapsed. According to Meltem-Müftüler Bac, this date is stated as the nadir point of the relations.¹⁴⁴ Many sectors underwent considerable transformation in this period, amongst which the energy sector was restructured following the publication of the National Energy Policy in 2017. As a result of which, Türkiye increased its European ranking in renewable energy capacity to 5th and its global ranking to 12th, place respectively.¹⁴⁵ Türkiye also revised its renewable energy investment strategy in 2016 to take advantage of the recent advances in renewable power plant technologies, thus reducing investment costs. Accordingly, the Regulation on Renewable Energy Resource Zones (RE-ZONE) was enacted by the MENR in 2016.¹⁴⁶ According to a RE-ZONE report, there were two essential targets for the renewable energy sector. The creation of a new investment model targeting an increase in investments, and a reduction in the energy dependence and support for the attainment of self-sufficiency. The pricing system that had been implemented in 2008 was also reformed during this period, being replaced in 2016 with a new pricing framework. It can be stated that the changes in this pricing system represent new opportunities or costs for investors in the renewable energy sector.

¹⁴³ Öniş, “Historic missed opportunities and prospect for renewal: Turkey-EU relations in a post-Western order”, 701-702.

¹⁴⁴ Meltem Müftüler Baç, “Remolding the Turkey-EU Relationship”, *Turkish Policy Quarterly* 17, 1(2018):119-128. <https://research.sabanciuniv.edu/id/eprint/35406/1/muftulerbac2018TPQ.pdf>

¹⁴⁵ “Turkey’s International Energy Strategy”, *Republic of Turkey Ministry of Foreign Affairs*, accessed:05-12-2024, Web: <https://www.mfa.gov.tr/turkeys-energy-strategy.en.mfa>

¹⁴⁶ “6719 Elektrik Piyasası Kanunu ile Bazı Kanunlarda Değişiklik Yapılmasına Dair Kanun”, *Resmî Gazete*, accessed:09-12-2024, Web:<https://www.resmigazete.gov.tr/eskiler/2016/06/20160617-1.htm>

Table 4. Republic of Türkiye Ministry of Energy and Natural Resources Strategic Plans (Table 4 has been prepared by the author)

<i>Republic of Türkiye Ministry of Energy And Natural Resources Strategic Plans</i>	
2010-2014 Strategic Plan	1-) Ensuring energy supply security is identified as a top national priority. One of the key objectives outlined is the improvement of energy efficiency. 2-) The plan emphasises the importance of generating electricity from renewable energy sources within a competitive and transparent market framework. 3-) Reducing dependence on external energy sources is a core aim, with particular focus on increasing the use of domestic and renewable energy resources. 4-) Priority is given to domestic exploration and production of oil, natural gas, and coal, with a commitment to intensify investment in these areas. 5-) The development of domestic lignite technology is highlighted, alongside efforts to improve thermal power plant efficiency and reduce carbon emissions.
2015-2019 Strategic Plan	1-) This plan draws attention to the rising cost of oil and market volatility in natural gas. Continued dependence on foreign sources is recognized, and the need to expand natural gas storage systems is stressed. 2-) Renewable energy development is again prioritised, with more strategic planning aimed at boosting electricity generation from renewables. Strengthening infrastructure especially storage systems is a key goal. 3-) The Akkuyu Nuclear Power Plant is presented as strategically important for meeting energy demand, with the possibility of expanding nuclear capacity in future plans. 4-) Measures are outlined to prevent disruptions in the electricity distribution network. 5-) A roadmap is proposed to increase domestic participation in energy investments, aiming to enhance the use of locally manufactured equipment.
2020-2024 Strategic Plan	1-) Specific targets are set for increasing electricity generation from domestic sources, particularly solar and wind energy. 2-) Integrating nuclear power into the energy system is described as essential for meeting future national energy needs. 3-) Goals are established for boosting domestic oil and natural gas output and expanding the country's storage capacities. 4-) Strengthening both domestic and international electricity transmission and distribution networks is identified as a strategic priority. 5-) The plan emphasizes support for the transition toward carbon neutrality by integrating energy infrastructure with digital and smart technologies to improve efficiency.
2025-2028 Strategic Plan	1-) Targets for domestic electricity generation have been raised significantly, with a more ambitious approach than in previous plans. 2-) The integration of nuclear energy is anticipated to play a major role in satisfying national energy demand, and its operational inclusion is reflected in this planning cycle. 3-) Production targets for domestic oil and natural gas are reaffirmed, along with a strong emphasis on improving storage systems in line with these goals. 4-) Investment in infrastructure, including the national grid and distribution systems, is set to increase as a strategy for enhancing energy supply security. 5-) A key focus is the reduction of foreign dependency across the entire oil and gas supply chain, from production through distribution.

The year 2017 was particularly important for Türkiye due to the government's announcement of its National Energy and Mining Policy and its target of full independence in the energy sector. The report emphasised the importance of renewable energy due to the

country's almost 90 percent dependence on fossil fuels.¹⁴⁷ The National Energy Efficiency Action Plan unveiled by the MENR states that if Türkiye is to meet its strategic targets, it needs to take action to reduce the greenhouse gas emission levels of the electricity generation, distribution, and transportation sectors by end of 2023.¹⁴⁸

In the period from 2017 to 2023, Türkiye has taken steps to increase the rate of renewable energy in electricity generation. As indicated in the 2023 annual report published by the MENR, the Renewable Energy Resource Area (*Yenilenebilir Enerji Kaynakları Alanı*—YEKA) project initiated by the government for the private sector aims to increase the share of renewable energy, particularly from wind and solar energy sources.¹⁴⁹ According to the percentage weight of data by the Ministry of Natural Resources heralded in 2024, 10.8 percent of Türkiye's electricity generation was obtained from wind power and 16.2 percent came from solar sources systems.¹⁵⁰

In October 2024, the Renewable Energy Transition Plan, which is part of the YEKA project, was officially declared by the MENR. The aim of the Plan is to substantially augment the installed solar and wind power capacity by 2035, by which a quadrupling of the current power capacity from solar and wind power resources is foreseen.¹⁵¹ Accordingly, within the scope of the YEKA project, private enterprises assume considerable responsibility for electricity generation from the country's solar and wind energy resources in the move towards the ultimate goal of reaching full independence in the energy sector.

3.3. The Role of Privatisation on Türkiye-EU Relations in the Energy Sector

The privatisation process of Türkiye's energy sector, within the framework of its relationship with the EU, has now reached a critical phase in which comprehensive reforms are required for the political and economic requirements of the integration process to be

¹⁴⁷ Erdal Tanas Karagöl, İsmail Kavaz, Salihe Kaya, and Büşra Zeynep Özdemir, "Türkiye'nin Milli Enerji ve Maden Politikası," *Analiz SETAV*, 203(2017):7-22.

<https://www.setav.org/assets/uploads/2017/06/Analiz203.pdf>

¹⁴⁸ "Ulusal Enerji Verimliliği Eylem Planı 2017-2023", *Enerji ve Tabii Kaynaklar Bakanlığı*, accessed:09-12-2024, Web:https://www.gmka.gov.tr/dokumanlar/yayinlar/2017-2023_Ulusal-Enerji-Verimliliği-Eylem-Plani.pdf

¹⁴⁹ "Faaliyet Raporları", *Enerji ve Tabii Kaynaklar Bakanlığı*, accessed:20-11-2024, Web:https://enerji.gov.tr/Media/Dizin/SGB/tr/Faaliyet_Raporlari/2023/ETKB2023FR.pdf p,73-74.

¹⁵⁰ "Elektrik", *Enerji ve Tabii Kaynaklar Bakanlığı*, accessed:09-11-2024, Web:<https://enerji.gov.tr/bilgi-merkezi-enerji-elektrik#:~:text=2024%20y%C4%B1%C4%B1%20A%C4%9Fustos%20ay%C4%B1%20sonu,%C3%BC%20ise%20di%C4%9Fer%20kaynaklar%20%C5%9Feklindedir.>

¹⁵¹ "Yenilenebilir Enerjide 2035 Yol Haritası", *Enerji ve Tabii Kaynaklar Bakanlığı*, accessed:09-11-2024, Web: <https://enerji.gov.tr/haber-detay?id=21380>

met. As a part of its ongoing efforts towards achieving integration, Türkiye is in the process of fully privatising the institutions TEİAŞ¹⁵² and EÜAŞ following the successful privatisation of TEDAŞ in the electricity sector. Based on data from 2023, the distribution of electricity production by institutions, as depicted in graphs produced by the Chamber of Electrical Engineers of Türkiye, indicates that Build-Operate-Transfer Power Plants account for 0,1 percent, EÜAŞ 28 percent, Unlicensed Power Plants hold 3,7 percent, Transferred Operation Rights Power Plants 3,2 percent, while private companies account for 65 percent of the share.¹⁵³ It can therefore be seen from the percentage rate that the private companies account for roughly 72 percent of the share.

The privatisation of Türkiye's electricity sector has led to the rapid transformation of how the nation's public electricity organised. Established in 1970, Türkiye's electricity transmission, distribution, and trading were initially managed by state-owned enterprises before being divided into the Türkiye Electricity Authority in 1994.¹⁵⁴

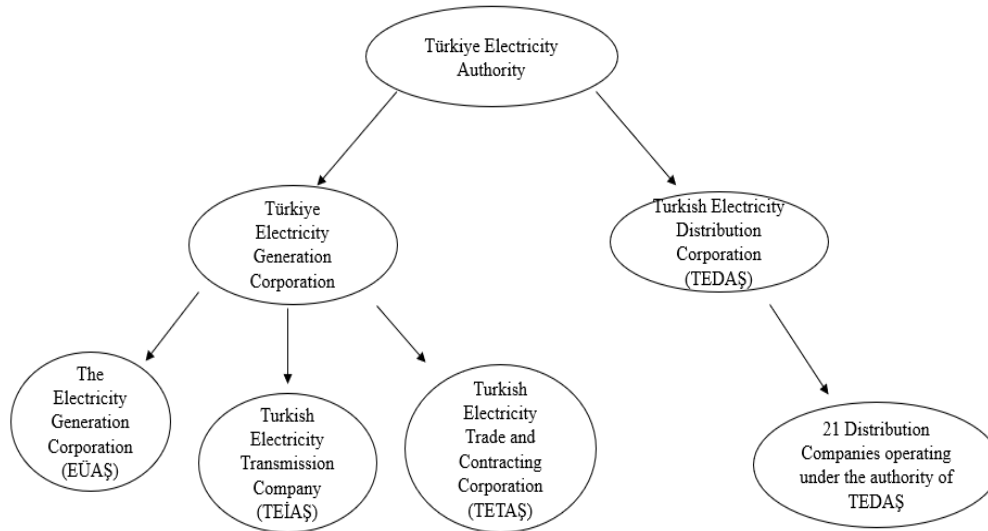


Figure 10. The transformation of Türkiye's Energy Sector¹⁵⁵

Source: https://www.slideserve.com/toya/elektrik-piyasas-ve-organize-sanayi-b-lgeleri#google_vignette, accessed:13.02.2025

¹⁵² The privatisation preparation process of TEİAŞ is postponed to 31 December 2026.

¹⁵³ TMMOB Elektrik Mühendisleri Odası, "Türkiye Elektrik Enerjisi İstatistikleri," accessed:11-11-2024, Web: https://www.emo.org.tr/genel/bizden_detay.php?kod=88369

¹⁵⁴ Enerji Ekonomisi, "Turkey's largest energy company," 13 February,2018, Web: <https://www.enerjiekonomisi.com/turkey-s-largest-energy-company/227/>, accessed:12-11-2024.

¹⁵⁵ The Turkish Electricity Authority (Türkiye Elektrik Kurumu (TEK)) served as the governmental body in charge of producing, transmitting, and distributing electricity across Türkiye from 1970 until 1994. In 1994, it was dissolved following a resolution from the Council of Ministers and was then reorganised. With the issuance of Law No. 703 in the reprinted edition of the Official Gazette on July 9, 2018, Turkish Electricity Trade and Contracting Corporation (TETAŞ) was officially dissolved. As a result of this regulation, all rights, liabilities, and responsibilities of TETAŞ were passed on to the Electricity Generation Corporation (EÜAŞ).

The privatisation of Türkiye's electricity sector is not only motivated by alignment with the EU; it can also be seen as an attempt to adopt the economic role models of certain European countries. According to Minister of Treasury and Finance, Mehmet Şimşek, privatisation has led to significant reductions in rates of loss and leakage, as well as in operating, and investment costs within the distribution sector and instances of electricity outages.¹⁵⁶ According to a report published by the Investment Office of the Presidency of the Republic of Türkiye, the country earned approximately USD 23 billion from the transfer of 78 percent of its electricity generation assets into private hands.¹⁵⁷ Since the launch of the privatisation process, wind and hydroelectric power plants, particularly those owned by EÜAŞ are gradually becoming privatised.¹⁵⁸ However, the national reports also highlight systemic setbacks in the renewable energy sector, and the transition to renewable energy has raised concerns in the EU that efforts towards privatisation have been insufficient.¹⁵⁹

This raises the question of why the EU considered, despite its privatisation initiatives, Türkiye's renewable energy sector to be inadequate. The primary reason was the long implementation periods of such state incentives as YEKA and YEKDEM, and the country's failure to meet the targets announced under these schemes. The problem was that, although the state incentives promised opportunities for major players in the sector, the projects suffered from repeated postponements. Accordingly, although there was high capacity in the targeted power capacity, neither the expected level of energy production, nor the anticipated renewable energy distances, could be achieved. Furthermore, the financial difficulties faced by the companies due to the prevailing economic conditions in Türkiye also contributed to delays in the implementation of these incentive-driven projects. In this section, to demonstrate that privatisation in Türkiye's energy regime transformation and EU integration process is not limited to renewable energy sector, it is also necessary to discuss privatisations that have taken place in the oil and natural gas sectors.

¹⁵⁶ "Bakan Şimşek: Devlet TEDAŞ'ı İyi Yönetemiyor," *Milliyet*, 03 September, 2010, Web: <https://www.milliyet.com.tr/siyaset/bakan-simsek-devlet-tedasi-iyi-isetemiyor-1284702>, accessed: 15-11-2024.

¹⁵⁷ "Enerji," *Türkiye Cumhuriyeti Cumhurbaşkanlığı Yatırım Ofisi*, Web: <https://www.invest.gov.tr/tr/sectors/sayfalar/energy.aspx>, accessed: 21-11-2024.

¹⁵⁸ "Bazı RES ve HES'ler Özelleştirilecek," *NTV*, 10 August, 2024, Web: <https://www.ntv.com.tr/ntvpara/baziresveheslerozellestirilecek,uwZxiFfArkaziBaJRhbBbRQ>, accessed: 21-11-2024.

¹⁵⁹ "Türkiye Reports Prepared by the EU Commission," *Directorate for EU Affairs*, Web: https://www.ab.gov.tr/46224_en.html, accessed: 22-11-2024.

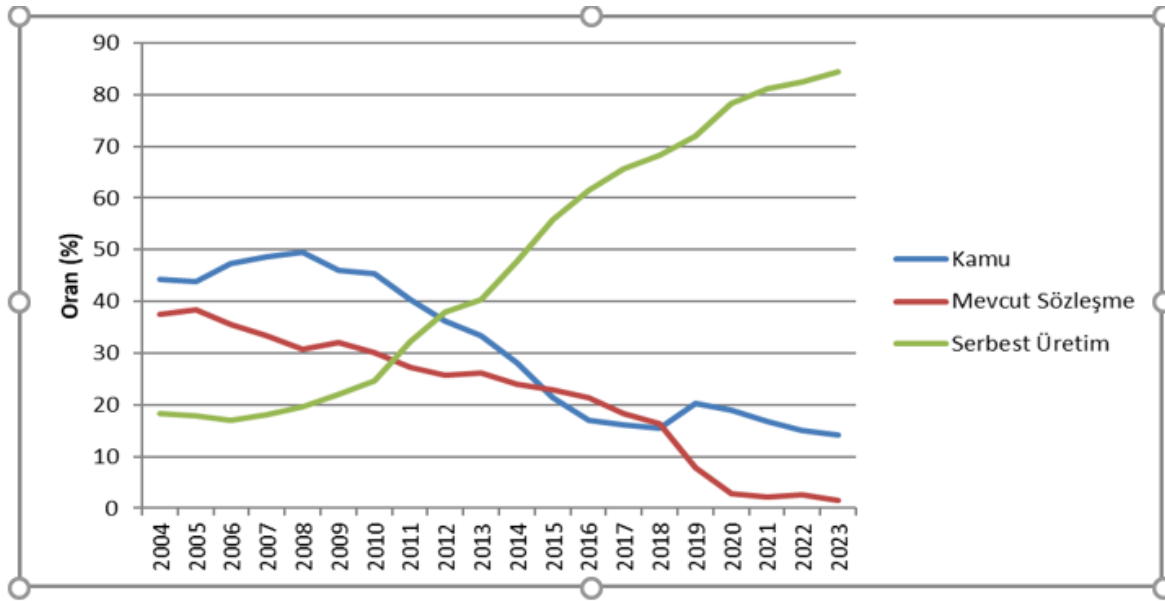


Figure 11. Annual Change in Licenced Electricity Generation by Energy Source¹⁶⁰
(Blue: Public, Red: Current Contract, and Green: Private electricity generation)

Table 5. YEKDEM Electricity Generation by Year¹⁶¹ (Table 5 has been prepared by the author)

YEKDEM Electricity Generation by year	
Years	YEKDEM Generation MWh
2023	72.468,092
2022	83.852,638
2021	74.156,245
2020	73.482,227
2019	76.668,087
2018	62.608,517
2017	45.830,502
2016	15.082,72
2015	5.423,63
2014	1.798
2013	608

As outlined in earlier sections of this thesis, the global trend toward renewable energy in the electricity sector has gained significant momentum since 2010. Türkiye, however, has progressed more slowly in comparison. According to the date presented in Table 5 and Figure 11, national awareness of renewable energy's importance began to emerge around 2013. Figure 11 shows a noticeable increase in electricity generation from solar and wind sources after 2013, largely as a result of government-backed incentive

¹⁶⁰ "Elektrik Yıllık Sektör Raporu," *Enerji Piyasası Denetleme Kurulu (EPDK)*, Web: <https://www.epdk.gov.tr/Detay/Icerik/3-0-24/elektrikyillik-sektor-raporu>, accessed:23-06-2025.

¹⁶¹ "Elektrik Yıllık Sektör Raporu"

programmes. A closer examination of Table 5 reveals that the YEKA and YEKDEM mechanisms gained meaningful traction starting in 2017. This pattern indicates that there is no direct correlation between privatisation and renewable energy development in Türkiye. Instead, the growth of the renewable energy sector in electricity production has been primarily driven by state support. The YEKA and YEKDEM programs have played a pivotal role in increasing the share of renewables in electricity generation. In essence, the country's progress in this area has been facilitated largely through government-provided incentives.

The country reports published by the EC over the last five years, reveals that Türkiye has yet to achieve the expected level of development in the energy sector. The reports claim that the state-owned pipeline company BOTAŞ (Boru Hatlarıyla Petrol Taşıma Anonim Şirketi) is hindering market competition contributing due to its monopolistic status in the natural gas sector. In 2023, however, an application for observer membership status in the ENTSO-G programme was submitted by BOTAŞ to achieve better parity with the EU. This demonstrates how Türkiye is not only taking steps in the renewable energy sector but also making considerable efforts to comply with the EU in the natural gas sector.¹⁶²

While the management of the Turkish petroleum sector was under public control until the 1930s, the move towards privatisation that occurred between 1940 to 1980 represent a noticeable shift. Amendments to the National Petroleum Law resulted in the liberalisation of exploration, production, distribution and trade operations, thus opening the field to both foreign and domestic partnership. It was during this period that the Turkish Petroleum Corporation (*Türkiye Petrolleri Anonim Ortaklığı*—TPAO) took its first steps towards privatisation. TPAO continued to make financial contributions to the country's economy within the privatisation programme. From 1980 to 1990, due to the significant movement towards free-market policies after 1980, national policies were replaced by neoliberal practices. The beginning of the privatisation of oil industry was also part of this evolutionary process. However, the privatisation of the TPAO has since been abandoned due to various wars and the country's position during the process from the 1990s to the

¹⁶² “ENTSO-G Winter Supply Outlook 2023/2024”, *European Commission*, October, 2023, Web: https://www.entsog.eu/sites/default/files/2023-10/SO0052-23_Winter%20Supply%20Outlook%202023-24%20with%20Summer%202024%20Overview.pdf, accessed: 30-11-2024.

present. Today, TPAO strives to contribute to the nation by operating both within the country's borders and internationally.¹⁶³

3.4. The Importance of Renewable Energy Resources

Energy represents monetary and diplomatic power in the global order. In other words, a country that has technology and energy resources, particularly renewable energy resources, also has global power. Furthermore, renewable energy sources make vital contributions to the fight against climate change, global warming, and other environmental issues. Historically, the importance of renewable energy resources was realised in the 1800s. However, owing to a set of catastrophes, including wars, crises and conflicts, insufficient awareness and importance was given to these resources. This is because during times of conflict and significant crises, nations tend to ignore developments in this field and more directly obtain their required energy from fossil fuels.¹⁶⁴

As we enter the 21st century, a new global order related to renewable energy resources has emerged. Global conflicts have accelerated the modification of energy systems and highlighted the importance of renewable energy resources. While diplomatic interventions with these issues is the remit of states, in terms of meeting economic, production, and global objectives, the onus is on the private companies, who have significant responsibilities in the production of green electricity from renewable energy sources.

At the forefront of these responsibilities is increasing the production of power from renewable energy sources, while also decreasing carbon emissions to zero. Since 2000, when the global carbon levels reached levels that prompted global action, the importance of these energy sources has increased substantially. In addition, crises emerging in the aftermath of subsequent global conflicts have once again underscored the importance of renewable energy sources.

In addition to instabilities in the traditionally structured global energy regime, and the country's dependency on foreign actors in terms of energy, a further global challenge in achieving zero carbon is one of main reasons behind the integration of renewable energy resources into existing power systems. This remains a major concern, despite the necessary

¹⁶³ Uğur Selçuk Akalın, Suat Tüfekçi, "Türkiye'nin Petrol Politikaları ve Enerji Özelleştirmelerine Bir Bakış", *İktisat Politikası Araştırma Dergisi* 1, 1(2014):51-66.

¹⁶⁴ "History of Renewable Energy Timeline:1800-Present Day", *Inspire Clean Energy*, Web: <https://www.inspirecleanenergy.com/blog/clean-energy-101/earth-day-technology-timeline>, accessed:03-12-2024.

steps of increasing the share of renewable energy in electricity generation and the decarbonisation of the energy sector. The reason for this concern stems primarily from private companies. The technological and economic structures of the companies who are taking on this responsibility in each country, as well as the economic, political, and technological conditions of the country they belong to, directly affect this process. Hence, while private companies are endeavouring to expand their renewable energy activities, they also encounter numerous challenges, such as difficulties in securing financing, regulatory uncertainties and fluctuating government incentives.¹⁶⁵

3.5. The Development of Renewable Energy and the Privatisation Process while on the Brink of Crisis

Following this discussion of the significance of renewable energy in the development of the contemporary global energy regime, it is also essential to consider the economic policies that lead to the production of renewable energy. This discussion requires an unpacking of the relationship between renewable energy and the politics of privatisation. An evaluation of the linkages between privatisation and renewable energy reveals four fundamentally interconnected contributory factors: financial crises, climate crisis and global energy crises.

It is well-known that the Keynesian economic model is based on the idea that state intervention and public entrepreneurship are ideal solutions to overcome financial crises or instabilities. Keynes' idea was implemented in many countries for approximately 20 years until the 1973 oil crisis pulled the rug from under the Keynesian model.¹⁶⁶

The application of Keynesian policy promoted in the involvement of the public sector in the electricity sector until the tumultuous period which began in 1973. This initiated the first historical connection between renewable energy and privatisation when countries started looking for alternative sources of energy to overcome the crisis in the energy sector. In addition to these developments, the state's role in the energy sector became a hotly debated topic, which resulted ultimately in the passing of the decision-making authority in the electricity sector from the state to the private sector. A shift towards liberalisation occurred in the energy sector, particularly in the production of

¹⁶⁵ “The 200-year history of mankind’s energy transition”, *World Economic Forum*, Web:<https://www.weforum.org/stories/2022/04/visualizing-the-history-of-energy-transitions/>, accessed:03-12-2024.

¹⁶⁶ Bal, “Özelleştirmenin Teorik Temelleri ve Türkiye’deki Sonuçları”, 355-356.

electricity from renewable sources, within the free market framework, but the collapse of this economic model between 1980 and 1985, the successor of the Keynesian economic model, revealed a second point of connection between privatisation and renewable energy.¹⁶⁷

A second, fundamental point of connection point between renewable energy and the climate crisis appeared in 1988. James Hansen, the celebrated climate scientist, was one of the first to point out that uncontrolled and escalating emissions of greenhouse gases are having a considerable effect on global temperatures. Although his warning was largely ignored at the time, his testimony did mark the beginning of a gradual movement towards the improvement of renewable energy resources to reduce perilous levels of greenhouse gas emissions.¹⁶⁸ As the significance of this global crisis became slowly appreciated, cooperation with private companies increased. The primary reason for the inclusion of private entities in the efforts to reverse the climate crisis was to keep up with technological developments and to minimise financial costs.¹⁶⁹

The third, contributory factor is global crises, more specifically the oil crises of 1973 and 1979, which developed into global energy crises. Of these two, the 1973 oil crisis, which is associated with the embargoes created due to the war between Israel and Arabs, led to a global economic crisis due to escalating petroleum prices. In the long run, the rising oil price triggered stagflation and inflation on global scale. The Iran Revolution of 1979 is also known as the energy crisis and the petroleum shock. Just as was the case with the 1973 oil crisis, inflation was escalated by the United States after the 1979 Iran Revolution. As a result of these consecutive crises, the privatisation of energy sector gained significant importance and private companies started to seek new solutions through renewable energy resources. Accordingly, financial setbacks paved the way for the development of energy resources other than fossil fuels, and private companies in European countries in particular started investing in research and development related to power generation.¹⁷⁰

Financial crises, global conflicts, climate crises, and global warming issues have all had a marked negative effect on national energy policies and have led to the adoption of a

¹⁶⁷ Cem Doğru, “Türkiye’de Elektrik Piyasasının Yeniden Yapılanması Sürecine Bir Bakış”, *Namık Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 1(2010):8-9.

¹⁶⁸ Adam R. Aron, *The Climate Crisis* (Cambridge: Cambridge University Press, 2023), 7-8.

¹⁶⁹ Bonizella Biagini, Alan Miller, “Engaging the private sector in adaptation to climate change in developing countries: importance, status and challenges”, *Climate and development* 5, 3(2013):243-252.

¹⁷⁰ “Investopedia, 1979 Energy Crisis: Definition, History, Causes, and Impact,” *Investopedia*, Web: <https://www.investopedia.com/terms/1/1979-energy-crisis.asp>, accessed:07-12-2024

broad range of measures. In the 21st century, the production of power from renewable energy resources is considered a potential solution to these global challenges. Such global crises have also had a marked effect on the bilateral relations of Türkiye and the EU. The following will analyse the effects of the emerging global crises on relations between Türkiye and the EU with a particular emphasis on (renewable) energy politics.

Heading 3.6, 3.7 and 3.8 provide a detailed explanation of the aforementioned developments from a historical perspective, focusing on their impacts on Türkiye and Türkiye's EU integration process. The inclusion of these heading in the thesis aims to reveal how global developments have influenced Türkiye's activities in the renewable energy sector as well as its efforts within the EU integration process.

3.6. The Rise of Conventional Crises: (1973-1979-2010-2020)

The developments leading up to the 1973 petroleum crisis had a profound effect on the development of relations between Türkiye and the EU. Prior to 1973, the rapid increase in oil production fuelled economic growth both in the Middle East and in many other developed countries. and so, prior to 1973, petroleum was an integral indicator of economic power. During this period, Türkiye, was able to build on its ethnic, cultural and historical connections with the Middle East, to maintain a peaceful relationship with the petroleum producing countries. The motivation and consequence of this relationship was not fully considered on a global scale until the year 1973.¹⁷¹

After petroleum sanctions were mainly imposed on European countries, a new global crisis occurred in the United States. As a consequence of this crisis, the rising inflation worldwide substantially influenced other countries which imported petroleum. The most consequential result of the 1973 crisis for Türkiye was that the Turkish market became a more reasonable market for Middle Eastern countries, while the European countries' export embargo against Türkiye brought about an impairment of bilateral relations.¹⁷²

Unlike the 1973 oil crisis, the 1979 oil crisis was a period of internal upheaval due to the additional influence of the Iranian Revolution and the attempts of the Soviet Union to increase its power in the region. In 1980, the Turkish government attempted to accelerate, or at least not terminate, its membership process through policies announced on 24 January

¹⁷¹ Veli Sırım, "Türkiye-Ortadoğu Ülkeleri Ekonomik İlişkilerinde 1973 Petrol Krizinin Yeri", *Social Sciences Studies Journal* 4, 26(2018):5753-5762.

¹⁷² Ibid, 5753-5762.

1980. Unfortunately, the military coup of 12 September 1980 again disrupted the European Economic Community- Türkiye relationship.¹⁷³

The Arab Spring of 2010, which had a different root cause than the previous two crises, mainly affected democratic relations between Middle Eastern countries and the EU. However, a secondary and indirect consequence was to impact relations between Türkiye and the EU due to the fossil-fuel dependence of the EU on the Middle East. The Arab Spring also had indirect effects on the energy regime, demonstrating how the crisis can impact regional crises, and thus have both direct and indirect effects on the energy sector. One of the primary indirect effects has been the increased interest of global powers in the Middle East, a region rich in oil and natural gas. This situation has further intensified conflicts of interest in the region. The efforts of global powers to establish greater dominance in the area have now become a central component of their national energy policies.¹⁷⁴

Subsequent to the 2010 Arab Spring, the JDP decided to adopt a policy that was independent of that of the EU. Initially, Türkiye had remained silent over regional developments, but when it was realised that doing so was having a negative effect on financial and commercial connections with Middle Eastern countries. Accordingly, the government of Türkiye decided to adopt a more active role in the region.¹⁷⁵ As a consequence, affected by the Arab Spring, bilateral relations between Türkiye and the EU steadily began deteriorating after 2010. The accession negotiations were also brought to deadlock in line with these developments.¹⁷⁶

The last conventional crisis, which began in 2016 and is still unresolved, is the Russia-Ukraine war, which is indirectly impacting bilateral relations among the EU, Russia and Türkiye. Initial political tensions between Russia and Ukraine develop into a hot war in February 2020, and with the involvement of other countries, the United States, the United Kingdom, and the EU, in particular, the Russia-Ukraine War has become a global crisis in which the western powers contribute military and financial support against Russia. Involvement has reached such a level that the conflict between Russia and Ukraine can

¹⁷³ Ceren Uysal, “Türkiye-Avrupa Birliği İlişkilerinin Tarihsel Süreci ve Son Gelişmeler”, *Akdeniz İ.I.B.F Dergisi 1*, (2001):140-153.

¹⁷⁴ Muhammed İkbâl Saylık, “Arap Baharı Sonrası Türkiye’nin Orta Doğu Politikasının Ofansif ve Defansif Realizm Bağlamında Değerlendirilmesi”, *Akim Akademi Sosyal Bilimler Dergisi 6*, 2(2022):80-104.

¹⁷⁵ Ibid, 80-104.

¹⁷⁶ Sema Nur Yeniöldüz, “Etiketleme Teorisi Bağlamında 2010 Sonrası Türkiye-AB İlişkileri”, (Master thesis, Marmara University, Institute of European Studies,2024),1-3.

now be considered a global war.¹⁷⁷ For our purposes, a secondary outcome of the war has been the impact on energy. Germany and France began to reduce their energy use due to Russia's natural gas embargo on the European countries. France even began to implement restrictions on street lighting at night. Such consequence of the war have only underlined the importance of renewable energy resources, and the desirability of complete energy independence.¹⁷⁸

The role of Türkiye in the Russian and Ukraine war is to enable diplomatic negotiation towards a peaceful solution. This is made possible by the JDP's robust relations with the Putin administration, and Türkiye's intermediary role has also indirectly had a positive effect on relations between Türkiye and the EU. Türkiye has a significant role in the conflict as an energy corridor due to housing natural gas pipelines with Russia. Furthermore, Türkiye's role as a negotiator is shaped by the country's dependence on Russia for natural gas and its desire to sustain cardinal relations with the Putin administration.¹⁷⁹ However, current developments, particularly the sanctions imposed by the United States on Gazprombank are likely to have a considerable negative impact on Türkiye, especially when Türkiye's dependency on natural gas and its current financial circumstances are taken into consideration.¹⁸⁰

Following negotiations between Türkiye and the United States, Turkish government officials stated that Türkiye would be exempt from these sanctions, allowing Türkiye to continue its natural gas trade with Russia. Had the sanctions been applied to Türkiye, other countries with which Türkiye has energy agreements would have been impacted. Among the EU member states that would be affected by such sanctions, Bulgaria can be considered one of the most vulnerable.¹⁸¹

¹⁷⁷ Aysu Biçer, "Britain directly involved in Ukraine-Russia war," *Anadolu Ajansı*, 21 November, 2024, Web: <https://www.aa.com.tr/en/europe/britain-directly-involved-in-ukraine-war-says-russian-envoy-to-uk/3400491>, accessed: 30-11-2024.

¹⁷⁸ Francois De Beaupuy, "France to Fine Stores for leaving their lights on too long", *Bloomberg*, 12 October, 2023, Web: <https://www.bloomberg.com/news/articles/2023-10-12/france-bolsters-energy-saving-measures-to-avoid-demand-rebound>, accessed: 01-12-2024.

¹⁷⁹ Şevval Beste Gökçelik, "Rusya-Ukrayna Savaşında Türkiye'nin Arabuluculuk Rolü", *Avrasya İnceleme Merkezi*, 11 April, 2022, Web: <https://avim.org.tr/tr/Yorum/RUSYA-UKRAYNA-SAVASI-NDA-TURKIYE-NIN-ARABULUCU-ROLU>, accessed: 03-12-2024.

¹⁸⁰ Hüseyin Hayatsever, "Turkey talking with U.S. for Russia sanctions waiver on energy imports," *Reuters*, 26 November, 2024, Web: <https://www.reuters.com/business/energy/turkey-talks-with-us-russia-sanctions-waiver-energy-2024-11-26/>, accessed: 04-12-2024.

¹⁸¹ "Enerji Bakanı Bayraktar: Türkiye, ABD'nin Rus Gazprombank'a uyguladığı yaptırımlardan muaf tutulacak", *BBC News Türkçe*, 20 December, 2024, Web: <https://www.bbc.com/turkce/articles/cn9g7d7qj71o>, accessed: 01-03-2025.

3.7. Climate Crises and Global Warming

Climate change occurs as a result of substantial and lasting changes in atmospheric patterns over an extended timeframe that is attributable to the accumulation of greenhouse gases in the atmosphere. In the literature, global warming is defined as the rise in the average temperature of the Earth owing to the combustion of fossil fuels. Accordingly, the climate crisis can be ascribed primarily to the rise in global temperatures resulting from the accumulation of greenhouse gases in the atmosphere, produced during the combustion of petroleum, coal, and natural gas, known collectively as fossil fuels.¹⁸²

Following earlier reports and papers produced by the United Nations before the 2000s which linked greenhouse gas emissions to human activity, there was a surge in the early 2000s in global initiatives, namely agreements and protocols that attempted to tackle the global climate crisis, as well as a significant increase in public and social awareness of the crisis. The 30 years that has elapsed since the problem was first recognised in the 1970s suggests that government intervention has been critically slow, and it has only been the ever more apparent the negative impacts of the climate crisis in the 2000s on everyday lives and the increasing frequency of catastrophic natural disasters, including droughts, floods, heatwaves, and epidemics, that is finally spurring the human race into action.¹⁸³

3.8. Economic Crises (2001-2008-(2018-2022))

Economic crises influence the internal policies of countries and affect many sectors, including the energy sector. For this reason, the energy sector can be considered a primary indicator in times of crisis. Since the financial crisis of 2001, developed nations have placed robust measures in place to lessen the impact of future economic crises, thus offloading the financial responsibilities of the crisis onto developing and underdeveloped countries.¹⁸⁴ The financial burden on such countries has led to the cessation of renewable energy investments, the burden of which has been shouldered indirectly by private companies. The most notable consequence of this financial burden has been a deadlock in investments in the renewable energy sector. As a consequence of inadequate incentives and

¹⁸² Anyoha, N., Chikaire, J., Ajah, O., & Henri-Ukoha, A., “Implications of Global Climate Change for Food Systems and Food Security in Sub”, *Saharan Africa: A Review. International Journal of Tropical Agriculture and Food Systems* 5, 1(2011):1-5.

¹⁸³ Şerif Öner, “İklim Değişikliği Sorununun Uluslararası Gelişmeler Eşliğinde Türkiye’nin Politika ve Kurumlarına Yansımaları”, *Ombudsman Akademik* 9,18(2023):13-15.

¹⁸⁴ Eugene D. Coyle, Richard A. Simmons, “Understanding the Global Energy Crisis”, (Purdue University Press: West Lafayette,2014):27-58.

tax breaks and financial burden created by economic crises, private companies in developing countries tend to invest overseas.

Türkiye's 2001 economic crisis can be traced back to 19 February 2001, when an official meeting was held between Ahmet Necdet Sezer, the 10th the president of Türkiye, and Bülent Ecevit, then the country's 16th Prime Minister to discuss policy decisions related to the banking system. The issues raised during this meeting led to a depreciation of the Turkish lira and an increase in interest rates, contributing to the financial collapse of the economy and many other key sectors, including those of energy, industry, and agriculture. Rising levels of state debt a serious motivator of financial distress since Türkiye became uncontrollably increasingly dependent on foreign sources in numerous sectors. Furthermore, the government of the period enacted several ill-advised policies that proved to be detrimental to the energy sector, industry, and the economy, as well as having a negative effect on Türkiye's relationship with the EU.¹⁸⁵

The 2001 economic crisis has been called the most dramatic financial challenge that the country has ever faced. The main reason for the crisis was the rise in energy prices. Türkiye's dependence on external energy sources, and the depreciation of the Turkish Lira was devastating for the economy. In order to overcome the crisis, the Turkish government announced the launch of a new National Programme as the basis of its economic policy.¹⁸⁶ This National Programme aimed to lessen the negative influence of politicians on the country's economy and the ramifications of these measures contributed to the success of the self-stated reformist the JDP in the 2002 elections. Despite the unfavourable political landscape left behind by the previous administration, the JDP was able to improve Türkiye's relationship with the EU during its first years in power.

The financial crisis that hit the United States in 2007 and then spread to Europe and the rest of the world in the following year left countries and markets in many sectors in a state of economic distress. With the benefit of hindsight, it can be seen that the 2007-2008 economic crisis led to the decline of the international financial system, commercial banks, and several significant assets, and precipitated the Great Depression (of 2007-2009).¹⁸⁷ An evaluation of Türkiye's political response to the 2008 economic crisis suggests that

¹⁸⁵ W. Robert Pearson, "CPR For Turkish Economy: The 2001 Financial Crisis and its Aftermath", *American Diplomacy*, February, 2024, Web: <https://americandiplomacy.web.unc.edu/2024/02/cpr-for-the-turkish-economy-the-2001-financial-crisis-and-its-aftermath/>, accessed: 21-11-2024.

¹⁸⁶ David H. Erkens, Mingyi Hung, and Pedro Matos, "Corporate governance in the 2007-2008 financial crisis: Evidence from financial institutions worldwide", *Journal of Corporate Finance* 18, 2(2012):389-411.

¹⁸⁷ Brian Duignan, "Financial Crisis 2007-2008," *Britannica Money*, 4 July, 2024, Web: <https://www.britannica.com/money/financial-crisis-of-2007-2008>, accessed: 30-11-2024.

decisive liquidity measures taken by the Turkish Central Bank were effective in returning economic indicators to their normal levels. A comparison of the 2008 and 2001 financial crises reveals distinct differences in the monetary and political decisions of the governments in the two periods. The primary impact of the 2007-2008 financial crisis on the energy sector can be seen as favourable in that it allowed time to determine deficiencies of the public authority and accelerate the public privatisation process.¹⁸⁸ Conversely, while the financial and political decisions implemented by the JDP during the years of the crisis were effective in reversing its effects, it can be said that the JDP fell short in its efforts to address unemployment in the aftermath of the economic downturn. The financial problems experienced by Türkiye, especially in the aftermath of 2009, are described in the national reports issued by the EC.

The current financial crisis that began in March 2020, can be traced back to 2019 with the outbreak of the COVID-19 pandemic in Wuhan/China. If global economic indicators are considered, it can be seen that the economic growth rates began to contract from around this point in time, and that Türkiye is no exception in this regard. This has led the country to impose a set of measures to provide liquidity support for its financial markets.¹⁸⁹ While the effects of 2018-2022 financial crisis (ongoing crisis from 2018 until today) have been profound the situation is expected to worsen in 2025, particularly for private companies operating in the energy sector.¹⁹⁰ As part of Türkiye's continued struggle with this crisis, efforts are ongoing to increase the share of renewable energy in the total installed energy capacity through YEKA projects. The long-term national goal is to not only align with the EU's decarbonisation objectives, but also achieve complete energy independence.

In the following heading, the technological advancements in the renewable energy sector and the progress made by energy companies in transitioning to renewable energy will be explained in detail from social science perspective (international relations). This discussion

¹⁸⁸ "Ekonomik Krizin Türk Enerji Sektörüne Etkileri" *World Energy Council Comite National Turc*, June, 2009, Web: https://www.dunyaenerji.org.tr/wp-content/uploads/2017/10/dek_tmk_enerji_yatirimlari_23.06.2009.pdf, accessed: 30-11-2024.

¹⁸⁹ Sami Küçükoğlu, "COVID-19 Pandemi Sürecinin Küresel Ekonomik Göstergeleri ve Türkiye'de Bankacılık ve Finans Sektörlerine Etkileri", *İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi* 20, 42(2021):1269-1291.

¹⁹⁰ "2024: Beş ekonomiste göre Türkiye ekonomisine yön veren beş gelişme," *BBC News Türkçe*, 25 December, 2024, Web: <https://www.bbc.com/turkce/articles/c1lne06gdm8o>, accessed: 30-11-2024.

3.9. Unavoidable Reasons for Transition to Renewable Energy Resources

Since this thesis examines solar and wind energy, it is necessary to discuss developments in these two systems under the respective heading from a social sciences perspective. The literature review has shown that these topics are predominantly addressed in detail within the field of engineering. However, as this study situated within the framework of the social sciences, the analysis is conducted exclusively from a social sciences perspective. This discussion is necessary in order to address the issues outlined under the heading of crises and to explore potential solutions.

3.9.1. Solar energy

The rise of renewable energy sources, and the possibility for the harnessing of solar energy for practical use, has sparked great interest among scientists and engineers.¹⁹¹ The main advantages of solar energy is that it is the most plentiful of all the renewable energy sources and is available in a variety of weather conditions.¹⁹² Furthermore, and according to many researchers and academics, solar energy is the most practical and useful resource for the production of electricity owing to its relatively low cost. Technological improvements to storage systems are making it more possible to meet the daily energy needs of the public with solar energy resources. Although there are many advantages and great potential with the use of solar energy, practical generation of solar electricity has remained an elusive goal until around fifteen years ago. Yet, despite many governments introducing supportive measures such as incentives and tax exemptions, investment remain insufficient due to the shoe-string budget of private companies in the renewable energy sector.¹⁹³

The ongoing technological improvements in solar power storage systems are steadily increasing the usage of solar energy in numerous fields, ranging from the energy sector to many other branches of industry.¹⁹⁴ Related technology continues to advance, alongside

¹⁹¹ Canan Karakaş Ulusoy, “Yenilenebilir Enerji Kaynaklarının Kullanımındaki Gelişmeler; Güneş Enerji Sistemleri ve Finansman Modelleri”, *ASSAM Uluslararası Hakemli Dergi* 6, 13(2019):70-71.

¹⁹² “What is renewable energy”, *United Nations Climate Action*, Web: https://www.un.org/en/climatechange/what-is-renewable-energy?gad_source=1&gclid=Cj0KCQiA0MG5BhD1ARIsAEcZtwSotE61EenK9KOj0zgW0P8r8Jnz3KlBw4j9e_tLbNx6Y56OjqOGs9YaAlOaEALw_wcB, accessed:09-12-2024.

¹⁹³ Ehsanul Kabir, Pawan Kumar, Sandeep Kumar, Adedeji A. Adelodun, Ki-Hyun Kim, “Solar Energy: Potential and Future Prospects”, *Renewable and Sustainable Energy Review* 82, 1(2018):894-895.

¹⁹⁴ “Akıllı Depolama Güneş Enerjisi Gelirlerini 50% Arttırabilir”, *Temiz Enerji*, 25 June, 2020, Web: https://temizenerji.org/2020/06/25/akilli-depolama-gunes-enerjisi-gelirlerini-yuzde-50-arttirabilir/?gad_source=1&gclid=Cj0KCQjwi5q3BhCiARIsAJCfuZm43lKSsuS3LwJGWc2D34FeAQicmeSBRV_GXnaXXnNFPyUzAq3PAcaAtAsEALw_wcB, accessed:27-12-2024.

efforts to reduce carbon emissions, and solar energy electricity generation is having a notable global impact on greenhouse gas emissions.¹⁹⁵ Recent technological developments, such as floating solar energy systems and solar panels that can generate electricity at night, are steadily enabling national efforts towards tackling the climate crisis.¹⁹⁶

3.9.2. Wind energy

Wind energy systems can be divided into two categories: horizontal-axis systems and vertical-axis systems. Horizontal-axis systems offer several advantages over vertical-axis systems, such as being more economical, easier to install and manufacture, while also providing better performance, although they can be difficult to maintain. The benefits of vertical-axis systems include reduced noise levels, more dependable mechanisms and a more visually appealing design. Although the initial set-up costs of wind turbines can be high, their low dependence on raw materials significantly reduces operational expenses. Furthermore, the cost of generating electricity from wind energy systems is decreasing due to improvements in wind turbine technologies, meaning that wind energy is becoming increasingly favoured over other renewable sources.¹⁹⁷

Wind energy systems generate electricity through the transformation of kinetic energy into mechanical energy. While the initial setup of wind energy systems is generally more expensive than that of solar energy, it remains one of the most beneficial renewable energy resources and eco-friendly forms of electricity generation. Similar to solar energy, wind energy has recently gained tremendous importance through technological developments related to the production of clean energy and continues to contribute to meeting society's growing energy demands. Among these technological advancements, floating wind energy systems stand out as a particularly unique technological achievement.¹⁹⁸ Offshore wind turbines are fundamentally similar to onshore turbines but differ mainly in their anti-corrosive outer coating. Offshore turbine blades are also designed for better aerodynamic efficiency and higher performance, allowing them to

¹⁹⁵ Ibid, 894-895.

¹⁹⁶ "Floating Solar Systems", *RWE*, Web:<https://www.rwe.com/en/research-and-development/solar-energy-projects/floating-solar-systems/>, accessed:28-12-2024.

¹⁹⁷ Yüksel Bayraktar, Halil İbrahim Kaya, "Yenilenebilir Enerji Politikaları ve Rüzgâr Enerjisi Açısından Bir Karşılaştırma: Çin, Almanya ve Türkiye Örneği", *Uluslararası Ekonomik Araştırmalar Dergisi* 2, 4(2016):1-3.

¹⁹⁸ "Dünyanın ilk yarı batırılabilir yüzer rüzgar enerji santrali", *Yeşil Haber*, 2 February, 2024, Web: <https://yesilhaber.net/dunyanin-ilk-yari-batirilabilir-yuzer-ruzgar-santrali-firtinalara-meydan-okuyor/>, accessed:29-12-2024.

generate significantly more energy than onshore turbines. All turbines operate on a principle that uses the aerodynamic blade design to harness lift forces from the wind, causing the blade to rotate. This rotation is transformed into electricity by a generator, transferred to a converter platform and transmitted to the mainland through cables as renewable energy. Offshore wind turbines are typically more costly than their onshore counterparts and are primarily used in large-scale projects that generate 10 MW or more. Wind turbines are a widely used and efficient form of renewable energy, and have the potential to become a leading energy source during the next 3-4 years.¹⁹⁹

There are some crucial distinctions between wind and solar energy resources. Areas designed for wind turbine installation are usually installed away from urban areas due to size and detrimental effects on the environment such as causing plane turbulence and posing a threat to living creatures in their surroundings. The rapid technological advances that are visible in the wind energy sector are a result of the competition among component manufactures in terms of factors such as weight, performance and cost. Efforts during the previous 5 years have focused specifically on the development of floating wind energy.²⁰⁰

¹⁹⁹ “Açık deniz rüzgâr türbini çalışma prensibi ve çeşitleri,” *Yeşil Enerji*, 22 August, 2023, Web: <https://yeserenerji.com/acik-deniz-ruzgar-turbini-calisma-prensibi-ve-cesitleri/>, accessed:30-12-2024.

²⁰⁰ “Principle Power, iki yeni yarı dalgıç yüzer rüzgâr türbiniyle WindFloat portföyünü genişletiyor,” *Rüzgâr Enerjisi*, 18 September, 2024, Web: <https://www.ruzgarenerjisi.com.tr/principle-power-iki-yeni-yari-dalgic-yuzer-ruzgar-turbiniyle-windfloat-portfoyunu-genisletiyor/>, accessed:30-12-2024.

4. TÜRKİYE-EU RELATIONS AND RENEWABLE ENERGY POLICIES: A COMPARATIVE ANALYSIS

4.1. The Effect of the Crises on Renewable Energy Policies: Relations Between Türkiye and the EU

Past crises, whether economic (2001, 2008 and 2024), conventional crises (1973,1979, 2010 and 2020), or climate crisis/global warming, continue to have both positive and negative effects on EU-Türkiye relations, both directly through commercial policies and indirectly through renewable energy policies. On the positive side, the crises have bolstered efforts to stabilise bilateral relations, although these efforts have been somewhat countered by the creation of profound and unreasonable political tensions. As a consequence of these adverse effects, Türkiye and the EU have both withdrawn from aspects of their bilateral relations that have left some targets unobtainable.

The most positive outcome of the 2001 economic crisis has been the concerted efforts made to increase installed power capacity from the renewable energy sources of both Türkiye and the EU. For Türkiye, the main motivation is its desire to rid itself of the financial burden of energy imports through the exploitation of clean and sustainable energy sources. The 2001 economic crisis led both Türkiye and the EU to recognise the need for research and development in the renewable energy sector.²⁰¹ The 2001 crisis has prevented the required level of investment into renewable energies being made. The relationship between Türkiye and the EU in the field of renewable energy first began at the Cardiff Summit, which can be considered a milestone in the development of common sustainable development policies between Türkiye and the EU, as it launched a subsequent range of meetings that continued from 1998 to 2001. There is no doubt that the Cardiff Summit served to accelerate Türkiye's process as a candidate country, as highlighted in the 1998 country development report published by the EU.²⁰²

The 2008 economic crisis popularised two core notions: the “*green economy*” and “*green development*.”. These notions framed the increase in sustainable development and represented an attempt to reverse the effects of the 2008 financial crisis in both Türkiye

²⁰¹ Deniz Koca and Yunus Yoldas, “2000-2020 Yılları Arasında Türkiye’de Uygulanan Kamusal Enerji Arz Güvenliği Politikaları”, *Dumlupınar University Journal of Feas*,10(2022):13-14.

²⁰² “Adaylık Süreci,” *İktisadi Kalkınma Vakfı*, accessed:05-01-2025,
Web:<https://oldweb.ikv.org.tr/icerik.asp?konu=adayliksureci&baslik=Adayl%FDk%20S%FCreci>

and the EU.²⁰³ In regard to the importance of bilateral relations, the 2008 economic crisis spurred an increase in electricity prices both in Türkiye and the EU. The rising electricity prices triggered an increase in inflation of the rate of 2,5 percent in Türkiye and the EU. The 2008 economic crisis not only affected the energy sector relationship between Türkiye and the EU, it also led to a downturn in trade relations between Türkiye and other countries as well as with the EU countries, especially in 2009.²⁰⁴ The decline in investments in the renewable energy sector was the most damaging outcome of the 2008 economic crisis for both Türkiye and the EU.²⁰⁵

The impact of the 2024 financial crisis on renewable energy deserves its own assessment, which considers how it differs from the financial crises of 2001 and 2008. The 2024 economic crisis triggered positive developments in the renewable energy sector, leading to a gradual increase in investments, especially into solar and wind energy in this period. Despite the financial losses and the pressures imposed on countries, the governments of Türkiye and the EU continued to invest in an attempt to meet their year-end targets, and many countries did achieve their stated targets by year-end.²⁰⁶

Conventional crises around the world, the 1973 Petroleum Crisis, the 1979 Iranian Revolution, the 2010 Arab Spring, and the 2020 Russia-Ukraine War, have impacted Türkiye-EU renewable energy relations in different ways. In a historical context, the 1973 and 1979 crises impacted diplomatic relations between Türkiye and the EU, leading to the EU placing embargoes on Türkiye, although the effects of the escalating petroleum prices were less severe on Türkiye. The Cyprus issue was at the heart of the diplomatic crisis between Türkiye and the EU due to its conflict with the EU's interests, but despite its political basis, fundamental interests in the field of energy were also indirectly affected.²⁰⁷

²⁰³ Selen Arlı Yılmaz, "Yeşil İşler ve Türkiye'de Yenilenebilir Enerji Alanındaki Potansiyeli," *T.C Kalkınma Bakanlığı Uzmanlık Tezi*, May, 2014, Web: http://www.surdurulebilirlikalkinma.gov.tr/wp-content/uploads/2016/06/Ye%C5%9Fil_%C4%B0%C5%9Fler_ve_T%C3%BCrkiyede_Yenilenebilir_Enerji_Alan%C4%B1ndaki_Potansiyeli.pdf, accessed: 07-01-2025.

²⁰⁴ Muhammet Kırıcı, "2008 Ekonomik Krizinin Avrupa Birliği Üyesi Ülkelere ve Türkiye'ye Etkisi: Ekonometrik Bir Analiz", (Master's thesis, Ufuk University, Institute of Social Science, 2019), 27-28.

²⁰⁵ İsa Altınışık, Hasan Sencer Peker, and Rıfat Karakoç, "2008 Küresel Finansal Krizinin Avrupa Yenilenebilir Enerji Sektörüne Etkisi", *Gümüşhane University E-Journal Institute of Social Science*, 5(2012): 146-156.

²⁰⁶ Didem Damyaz, "Bloomberg NEF: Yenilenebilir enerji sektörü 2024'ün ilk yarısında 313 milyar dolar yeni yatırımla ivmesini koruyor," *Temiz Enerji*, 28 August, 2024, Web: <https://temizenerji.org/2024/08/28/bnef-yenilenebilir-enerji-sektoru-2024un-ilk-yarisinda-313-milyar-dolar-yeni-yatirimla-ivmesini-koruyor/>, accessed: 10-01-2025.

²⁰⁷ Yavuz Altaşlı and Murşit Işık, "Türkiye'de Yaşanan Ekonomik Krizlerin İstihdam Üzerine Etkileri (1980-2013)", *Süleyman Demirel University the Journal of Faculty of Economics and Administrative Sciences* 22, 2(2017): 570-571.

The 2010 Arab Spring crisis also affected bilateral relations between Türkiye's close political ties with Middle East neighbours. This competitive pressure transformed into diplomatic tensions between Türkiye and the EU. Despite the recent increase in the production of energy from renewable energy sources in the EU and Türkiye, particularly in the last 15 years, the requirement for fossil fuels is still increasing for various purposes, of which the most crucial is energy production. The Russia-Ukraine War, which broke out in February 2020, attests to these developments.²⁰⁸

The Russia-Ukraine war is not only a political conflict between two countries, but also a strategic war with energy policies, geopolitical power and energy supply at its heart. What was initially a political disagreement between two countries has gradually escalated into a war that is perpetuated by the open support given by the European nations and the United States. The resulting disruption in energy supplies to Europe has led to an energy crisis in the EU that has only worsened during the last 2 years, demonstrating once again, the vital importance of renewable energy sources. As a consequence of the conflict is that the remaining EU countries that still rely heavily on fossil fuels have started to revise their energy policies with a view to gaining energy independence.²⁰⁹ This has meant that many EU countries have started to increase their installed renewable energy capacity, especially from solar and wind energy sources.²¹⁰

The climate crisis, approximately in the last 25 years, is creating anxiety in the international arena and amongst many international agencies. This rising anxiety is prompting many countries to develop their renewable energy policies in an attempt to adjust to the requirements of the international system. Accordingly, as a global issue, the climate crisis is also affecting the international policies. In this context, primarily the United Nations, but also other regional and international organisations, have attempted to

²⁰⁸ Gizem Masatlı, "Avrupa Birliği'nin Arap Baharı Sonrası Dönemde Orta Doğu'daki Demokrasi Teşviki Politikalarının Değerlendirilmesi", (Master thesis, Dokuz Eylül University, Institute of Social Sciences, 2022), 27-102.

²⁰⁹ "Impact of the Russia's invasion of Ukraine on the markets: EU response," *Council of the European Union*, 15 January, 2024, Web: <https://www.consilium.europa.eu/en/policies/eu-response-russia-military-aggression-against-ukraine-archive/impact-of-russia-s-invasion-of-ukraine-on-the-markets-eu-response/>, accessed: 11-01-2025.

²¹⁰ "The energy leap," *Council of the European Union*, 14 October, 2024, Web: <https://www.consilium.europa.eu/en/energy-leap-how-eu-countries-russia-crisis-supply/>, accessed: 11-01-2025.

spearheaded other countries global action. For instance, Türkiye, with other EU candidate countries, is taking steps in accordance with the EU's climate policies.²¹¹

Consequently, the economic, conventional, and climate crises that have occurred have all left their mark on the bilateral relations between Türkiye and the EU. As part of Türkiye's primary goal of reaching complete energy independence, it is continuing its efforts to meet the zero-carbon targets required for EU membership. Although Türkiye's accession journey has been tumultuous, the country has never given up on the installed renewable energy capacity goals for 2035 and 2050, which were agreed upon during integration negotiations with the EU. If the EU were to change its attitude towards Türkiye, it could benefit from Türkiye as an important source of energy, as well as a military and strategic power.²¹²

4.2. A Comparative Analysis of EU-Türkiye Renewable Energy Policies

The purpose of this section is to gain a better understanding of the established modes of relations between Türkiye and the EU through an analysis of the renewable energy policies of the EU and Türkiye. This analysis will take the form of a comparative analysis of the main indicators of the institutional and legal regulations, the financial and incentive mechanisms, and the energy strategies and practices.

Comparative analysis can provide a crucial indication of how policies, interests, ideas and institutions shape the actions of policymakers. Türkiye, since first applying for EU membership, has strived to increase its installed renewable energy capacity, particularly during the last 20 years. The renewable energy policies of Türkiye and the EU will be compared in this section to first identify the fundamental similarities between the two, and this will be followed by an analysis of the main disruptions based on the different indicators.

4.2.1. Main indicators

This comparative analysis is conducted on third levels, the first level is the addressing of institutional and legal regulations: the second level is financial and incentive

²¹¹ Naz Beykan, "Türkiye'de İklim Değişikliğine Uyum Eyleminin Güçlendirilmesi Projesi," *T.C Çevre ve Şehircilik Bakanlığı*, September, 2021, Web: <https://iklim.gov.tr/db/turkce/dokumanlar/avrupa-birligi--8230-18-20220808232623.pdf>, accessed: 13-01-2025.

²¹² Nurdan Bayraktar Golder, "No:236, Avrupa Komisyonu 2020 Türkiye Raporu Hk." *T.C Avrupa Konseyi Nezdinde Türkiye Daimi Temsilciliği*, 06 October, 2020, Web: <https://avkons-dt.mfa.gov.tr/Mission/ShowAnnouncement/377659>,access:30-01-2025.

mechanisms, and the third level is the European Union Emission Trading System. The intuitional and legal regulations and European Union Emission Trading System will be discussed in terms of their theoretical and practical similarities, while the financial and incentive mechanism will be addressed in terms of their differences, according to financial conditions and political differences, within the energy sector. Three different indicators examined for the analysis of the financial and incentive mechanisms: employment, trade, and energy prices, and the differences explained. In short, the similarities and differences between the renewable energy policies of Türkiye and the EU will be analysed and compared based on indicators related to each of these aspects as a reference point, and an explanation of their effects on Türkiye-EU relations will be conducted.

4.3. Türkiye-EU Relations: An Analysis of the Steps Taken by Türkiye in Accordance with its EU Accession Process

There are fundamental similarities between Türkiye's energy policies and its strategy to achieve EU integration. This strategy and policies aim not only to fulfil requirements to the EU, but also to address Türkiye's internal legislative framework related to the energy sector. One of the main steps in Türkiye's integration process relates to the alignment of its energy policies with those of the EU. However, throughout Türkiye's long-term accession process, regulations have focused more on meeting internal requirements than on falling in line with the EU and have prioritised energy efficiency and increasing the electricity generated from renewable sources, in line with the country's zero-carbon emissions goal.

4.3.1. Institutional and legal regulations

Since taking its first steps towards integration with the EU as a candidate country, Türkiye has enacted a number of intuitional and legal regulations to comply with the EU legal structure. These include Renewable Energy Law No. 5346 (2005), Electricity Market Law No.6446 (2013), the National Energy Efficiency Action Plan (2017---2013), and the Emission Trading System (ETS). These legal regulations have been developed considering the legislation and regulations enacted by the EU, and their similarities with EU legislation and core purposes will be highlighted under this heading.

Renewable Energy Market Law No.5346 (2005) was developed to comply with 2001/77/EC and 2003/30/EC. The primary purposes of the Renewable Energy Market Law No.5346 are to increase the use of renewable energy sources for the generation of

electricity, to decrease greenhouse emissions to encourage sensitivity to the environment and to support social and financial development. As for the EU, 2001/77/EC and 2003/30/EC also aim to increase the use of renewable energy sources for energy production, encourage economic, and social development and raise environmental awareness. An analysis of these legal regulations reveals that the Renewable Energy Law No.5346 has similar goals to 2001/77/EC and 2003/30/EC.²¹³ While 2009/28/EC was abrogated due to the difficulty in achieving the target for electricity generation from renewable energy in all member states,²¹⁴ the Renewable Energy Market Law No.5346 is still in force in Türkiye, which can be attributed to its more reasonable renewable energy generation targets than those defined in 2009/28/EC.²¹⁵

Electricity Market Law No. 6446 (2013) was developed to comply with the EU Third Energy Package (2009), both of which aim to increase the production of electricity from renewable energy sources by providing more freedom in the renewable energy market. As a further benefit, introducing a free market to the energy sector can accelerate the development of the necessary technologies required for the generation of electricity from renewable energy sources.²¹⁶

The National Energy Efficiency Action Plan (2017-2023) was developed in accordance with the 2012/27/EU Energy Efficiency Directive., both of which seek to increase energy efficiency in the energy area of usage. Furthermore, both regulations seek to increase the use of renewable energy in the public and private sectors, while also raising awareness of the need for energy efficiency. In other words, both legal regulations, seek to raise and promote energy efficiency in the public and private sectors.²¹⁷

²¹³ “Directive 2001/77/EC of the European Parliament and of the Council,” 31 December, 2020, Web: <https://www.legislation.gov.uk/eudr/2001/77/contents>, accessed: 01-02-2025.

²¹⁴ “Türkiye Ulusal Yenilenebilir Enerji Eylem Planı 2014”, *T.C Enerji ve Tabii Kaynaklar Bakanlığı*, Web: <https://www.yumpu.com/tr/document/read/36876285/turkiye-ulusal-yenilenebilir-enerji-eylem-planı>, access: 03-02-2025.

²¹⁵ “5346 Yenilenebilir Enerji Kaynaklarının Elektrik Enerji Üretimi Amaçlı Kullanımına İlişkin Kanun,” *Mevzuat*, <https://www.lexpera.com.tr/mevzuat/kanunlar/yenilenebilir-enerji-kaynaklarinin-elektrik-enerjisi-uretimi-amacli-kullanimina-iliskin-kanun-5346>, accessed: 01-02-2025.

²¹⁶ “Fasıl 15: Enerji”

²¹⁷ “Enerji Verimliliğinde Kurumsal Kapasitenin Geliştirilmesi için Teknik Destek Projesi,” *T.C Enerji ve Tabii Kaynaklar Bakanlığı Enerji Verimliliği ve Çevre Dairesi Başkanlığı*, 21-23 January, 2023, Web: https://evcedruzgar.enerji.gov.tr/duyurular_haberler/document/Sunum%201-2%20Enerji%20Verimlili%C4%9Fi%20Direktifi%20Kapsam%C4%B1daki%20%C4%B0zleme,%20%C3%96l%C3%A7me,%20Do%C4%9Frulama%20ve%20Raporlama%20%C5%9Eartlar%C4%B1.pdf, accessed: 07-02-2025.

Advantages of the regulations applied by Türkiye and the EU:

- The main advantage of these regulations has been to increase electricity generation from renewable energy sources.
- The legal regulations have contributed to a decrease in greenhouse emissions and the use of fossil fuels, while also raising awareness of the need for energy efficiency in the public and private sectors and encouraging greater global cooperation.
- The legal regulations have contributed to social and economic development thanks to the increased use of renewable energy sources. The development of the renewable energy sector has also contributed to a gradual decline in unemployment in many countries.
- These legal regulations have increased the use of renewable energy in the public and private sectors.

Disadvantages of the legal regulations applied by Türkiye and the EU:

- After Türkiye enacted regulations for integration with the EU, the EU repealed its regulation due to the inability of the EU member states to comply with its demands.
- Türkiye has started to regulate to meet its internal requirements following the repeal of the EU regulations.
- Although these two legal regulations were enacted with a common goal, both Türkiye and the EU have adapted them to their internal structures while maintaining alignment with the shared goal.
- As a result of the above, the impacts of these legal regulations in the membership process have begun to decline in both Türkiye and the EU. The reduced effect of these similar legal regulations has been underlined in the national reports published annually by the EU.
- Türkiye enacted its legal regulations only after 4-5 years. In other words, Türkiye's development in the renewable energy field has been slow due to its EU integration process.

Through these legal regulations are similar, Türkiye has made a number of contributions to the EU in the field of renewable energy:

- During the crisis in the energy market witnessed over the last two years, Türkiye, in particular, has provided energy transfer through its partnerships with neighbouring

EU countries, suggesting that Türkiye could be an important energy producing centre for the EU.²¹⁸

- The legal regulations applied in Türkiye have encouraged technological developments in the field of renewable energy, particularly in solar and wind energy. Many companies operating in the EU have invested in the production of wind energy systems in Türkiye.²¹⁹
- In the terms of the free market, the renewable energy companies in the EU have accelerated their operations in Türkiye through private and public energy companies. Among private and public companies, the agreements have been organised regarding renewable energy systems and related technological developments.²²⁰
- Thanks to Türkiye's investments and projects in renewable energy infrastructures, Türkiye is seen as a candidate country by member countries of the EU.²²¹

4.3.1.1. The foundation of the European union emission trading system

The aim of the European Union Emission Trading System (EETS) is to reduce carbon dioxide levels within a trading framework, with the primary goal being to minimise the greenhouse gas emissions of the industrial and energy sectors. The system also promotes the generation of electricity from renewable energy resources as a means of further reducing greenhouse gas emissions. The emission trading system has thus gained significant importance for private companies, and while the conditions of the system are binding and companies are sanctioned for contraventions, companies tend to accept their responsibility as being a social requirement.²²²

²¹⁸ Sertaç Aksan, “Bulgaristan Örnek Oldu: Diğer AB ülkeleri Türkiye’nin kapısını çalabilir,” *TRT Haber*, 13 January, 2023, Web: <https://www.trthaber.com/haber/ekonomi/bulgaristan-ornek-oldu-diger-ab-ulkeleri-turkiyenin-kapisini-calabilir-737874.html>, accessed: 11-02-2025.

²¹⁹ “AB: Türkiye Rüzgarda Bizim İçin Güvenilir Bir Partner,” *Bloomberght*, 25 October, 2023, Web: <https://www.bloomberght.com/ab-turkiye-ruzgarda-bizim-icin-guvenilir-bir-partner-2340726>, accessed: 11-02-2025.

²²⁰ “Yani Başımızdaki Dev Pazar Avrupa Birliği,” Türkiye Cumhuriyeti Ticaret Bakanlığı, 17 February 2023, Web: <https://ticaret.gov.tr/dis-iliskiler/avrupa-birligi/yani-basimizdaki-dev-pazar-avrupa-birligi>, accessed: 11-02-2025.

²²¹ “AB Komisyonu: Türkiye, Avrupa’nın Enerji Güvenliğinde Önemli ve Güvenilir Transit Ülke,” *Temiz Enerji*, 13 October, 2022, Web: https://temizenerji.org/2022/10/13/ab-komisyonu-turkiye-avrupanin-enerji-guvenliginde-onemli-ve-guvenilir-transit-ulke/?gad_source=1&gclid=Cj0KCQjwytS-BhCKARIsAMGJyrtkwINWzWhZT9VFU-21DQasZl-V1fwWoH7T5czWEHze2ezWPVUK3saAniMEALw_wcB, accessed: 11-02-2025.

²²² “What’s the EU ETS?,” *European Commission*, Web: https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/what-eu-ets_en, accessed: 13-02-2025.

Milton Friedman's claim that "*businesses have a singular responsibility to pursue profit as long as they operate within the rules*" has become outdated.²²³ Currently, there are very few companies that continue to prioritise profit maximisation, having instead recognised the importance of their social responsibilities. In today's world, many companies struggle with the climate crisis, which has become an essential part of social responsibility. According to U.S. Secretary of State Anthony J. Blinken explained this fact as follows: "*Climate is not trading card, it's our future*" in other words, the struggle against the climate crisis should not be a commercial obligation but treated rather as a social responsibility that requires the collective action of all nations.²²⁴ In this regard, the EU, as a supra-national structure, has created a new trading system for private companies in support of its member states and candidate countries, through which companies are able to reduce their greenhouse emission levels as a part of their social responsibility.²²⁵

Efforts to address the climate crisis prior to 2000 were carried out primarily by the United Nations, although the EU has taken on a more active role since that date. The action plan formulated in 2000 as part of the first European Climate Change Programme gained greater importance with the launch of the second phase in 2005, when the EETS entered the playing field.²²⁶ The EETS, under the leadership of the EU, is built around a regulatory framework that addresses the climate crisis and global warming.²²⁷ The lack of obligations conditions between 1970 and 2000, meant that countries generally did not take tangible steps in the struggle against the climate crisis.

The EETS was initially applied in two phases, covering the 2005—2007 and 2008—2012 periods, with the initial goal being to gain insight into the issue. However, there have been numerous setbacks, which have contributed to the failure of the project to meet targets.²²⁸ Targets were then set for subsequent years. The third phase of the EETS spans

²²³ "A Friedman doctrine – The Social Responsibility of Business is to increase its profits," *New York Times*, 13 September, 1970, Web: <https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html>, accessed: 14-02-2025.

²²⁴ "Climate Crisis", *U.S Department of State*, Web: <https://www.state.gov/policy-issues/climate-crisis/>, accessed: 17-02-2025.

²²⁵ John Mertz, "The Social responsibility of business. Ignore Milton Friedman." Web: <https://www.jonmertz.com/perspectives/the-social-responsibility-of-business-ignore-milton-friedman>, accessed: 16-02-2025.

²²⁶ "What's the EU ETS?," *European Commission*, Web: https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/what-eu-ets_en, accessed: 13-02-2025.

²²⁷ Seven Erdoğan, "İklim Değişikliğine Karşı Verilen Küresel Mücadele ve Avrupa Birliği", *MANAS Sosyal Araştırmalar Dergisi* 7, 4(2018):709-710.

²²⁸ Simone Borghesi, Massimiliano Montini, and Alessandra Barreca, *The European Emission Trading System and Its followers: Comparative Analysis and Linking Perspective* (Switzerland: Springer, 2016), 1-5. <https://books.google.com.tr/books?hl=tr&lr=&id=XqAFDAAAQBAJ&oi=fnd&pg=PR5&dq=european+emi>

from 2013 to 2020 and is significant due to the inclusion of EU member states. Since 2013, electricity producers in the EU have been obliged to buy all the necessary allowances for their electricity generation. The EETS system, which spans from 2021 to 2030, is in its 4th phase as of 2024. The EETS was modified in 2023, as part of the EGD to bring it in line with the 2030 climate target to decrease net greenhouse gas emissions by at least 55 percent.²²⁹

4.4. Türkiye-EU Relations: Key Distinctions in the Steps Taken by Türkiye in its Accession Process

Despite the similarities between Turkish regulations and the EU, among the distinctions that exist between Türkiye and the EU in the field of renewable energy are the financial and incentive mechanisms applied to the energy sector. That is to say, while the theoretical goals of the regulations of the two bodies in the renewable energy sector may be similar, there are differences in how they are targeted stemming from the expectations of the liberalisation of the energy markets on the EU side. The privatisation process of the electricity generation sector aims to ensure a competitive and equitable market environment, but the divergence in the approaches to application gives rise to differences in the renewable energy sector's workforce, energy prices, and trade. The first distinction between Türkiye and the EU relates to Türkiye's YEKA and YEKDEM projects, and the EU's distinctive REN (Renewable Energy) and RPS. (Renewable Portfolio Standard) incentive mechanisms. As will be discussed below, although Türkiye and the EU's incentive mechanisms in the field of renewable energy may initially appear similar, there are differences in their scope and content.

The second distinction relates to the Carbon Border Adjustment Mechanism (CBAM), published in the Official Journal of the EU in 2013, which aims to balance the carbon values of domestic and imported products, including electricity, cement, hydrogen, fertiliser etc.²³⁰ Under CBAM, importing companies within the EU are required to obtain carbon certificates that align with procedures set out by the World Trade Organisation. The importance of CBAM for Türkiye relates to its contribution to the decarbonisation

ssion+trading+system&ots=b_4G6Dz7Sk&sig=GRed_MuL05jZ_bYHQJHDiLXvLY&redir_esc=y#v=onepage&q=european%20emission%20trading%20system&f=false

²²⁹ "European Union Emission Trading System", *International Carbon Action Partnership*, Web: <https://icapcarbonaction.com/en/ets/eu-emissions-trading-system-eu-ets>, accessed: 20-02-2025.

²³⁰ "Carbon Border Adjustment Mechanism (CBAM)", *the EU*, 19 May, 2024, Web: https://www.ab.gov.tr/carbon-border-adjustment-mechanism-cbam-_53747_en.html, accessed: 21-02-2025.

processes of the companies operating in the energy sector. As Türkiye has a national decarbonisation mechanism, it is obliged to make payments to the EU to reduce its carbon levels through trade. As such, CBAM will have a significant impact on Türkiye's financial indicators given its ongoing economic woes.²³¹ CBAM is also expected to affect the fulfilment of expectations highlighted in the national reports published by the EU during Türkiye's EU integration and the accession processes with the EU. The following section will present an analysis and comparison of the YEKA, YEKDEM, REN and RPS mechanisms.

4.4.1. Financial and incentives mechanism

4.4.1.1. YEKDEM

The Renewable Energy Support Mechanism (*Yenilenebilir Enerji Destekleme Mekanizması*—YEKDEM) is an incentive programme that came into effect in Türkiye in 2011. The programme provides a price guarantee within a specific time frame for electricity produced from renewable energy sources in Türkiye. The primary purpose of YEKDEM is to increase the production of electricity from renewable energy sources through incentives offered to private companies that operate in the country. The primary advantage of YEKDEM is the contributions it makes to increasing the use of renewable energy sources for the generation of electricity.²³² On the other hand, the main disadvantage of the programme is that it primarily serves the most financially robust companies, although it could be revised to create a more equitable system.²³³ YEKDEM incentivises the generation of electricity from solar, wind, hydro, geothermal, and bioenergy sources, through public funds within a specified timeframe.²³⁴

YEKDEM is a far-reaching programme with various facets, including incentive time, various incentives, price guarantees, and domestic production incentives. Within the context of YEKDEM, the incentive time frame is almost between 10 and 15 years. The main goal of the YEKDEM is to encourage the utilisation of domestic production

²³¹ "Sınırdaki Karbon Düzenleme Mekanizması", *Yeşil Büyüme*, Web: <https://yesilbuyume.org/sinirda-karbon-duzenlemesi-mekanizmasi/>, accessed:21-02-2025.

²³² "YEKDEM (Yenilenebilir Enerji Kaynaklarını Destekleme Mekanizması) Nedir?," *Aden Enerji*, 21 July,2024, Web: <https://adenenerji.com/yekdem-yenilenebilir-enerji-kaynaklarini-destekleme-mekanizmasi-nedir/>, accessed:21-02-2025.

²³³ Yunus Yener, "YEKDEM değişmelidir," *TMMOB Makina Mühendisleri Odası*, 04 February,2024, Web: <https://www.mmo.org.tr/merkez/basin-aciklamasi/yekdem-degismelidir>, accessed:25-02-2025.

²³⁴ "5 Soru ile YEKDEM Nedir," *Enerji Ajansı*, 14 February,2024, Web: <https://enerjiajansi.com.tr/yekdem-nedir/>, accessed:23-02-2025.

equipment, incentivise domestic industries in the field of renewable energy and increase renewable energy capacity in electricity generation in the country. As a secondary goal, the mechanism seeks to contribute to efforts to tackle climate change through the use of renewable energy sources and to reach the country's energy independence as soon as possible.²³⁵

How are energy prices determined under YEKDEM for electricity produced from renewable energy sources in Türkiye? Technological investments determine energy prices, although YEKDEM price can also be shown an alteration according to the country's energy goals and the market conditions. To what extent does the domestic equipment support aspect of the local production incentive within YEKDEM refer? Domestic equipment support aims to promote the usage of domestic materials, particularly in solar and wind energy systems, in electricity power plants.²³⁶ YEKDEM investments were initially based on the US Dollar (USD) index, but, due to the rising exchange rate and the resulting burden on consumers, the government opted to switch to the Turkish Lira index.²³⁷ YEKDEM energy prices are regularly announced by Energy Exchange Istanbul (*Enerji Piyasaları İşletme Anonim Şirketi—EPİAŞ*).²³⁸ Under the YEKDEM programme, electricity producers sell their electricity on the free market, but are responsible for paying the YEKDEM cost to the state.²³⁹

The rise of renewable energy incentives through the YEKDEM programme in the production of electricity has been characterised by significant abnormalities. Many of the companies that had been able to achieve in this programme to the assistance of credit were then discovered to have made unreasonable returns in the manner that had infringed the regulatory provisions. The EMRA responded by imposing financial fines on such companies that had been found to have been involved in illegal activities. Despite the fact that Türkiye still focuses on increasing the capacity of renewable energy sources within the electricity sector, deficiencies of the YEKDEM system have impaired the process. Similar

²³⁵ “5 Soru ile YEKDEM Nedir”

²³⁶ “5 Soru ile YEKDEM Nedir”

²³⁷ “YEKDEM Nedir? YEKDEM Nasıl Oluşur,” *VTC Enerji*, Web: <https://www.vtcenerji.com/yekdem-nedir-yekdem-nasil-olusur/>, accessed:23-02-2025.

²³⁸ “5 Soru ile YEKDEM Nedir”

²³⁹ “YEKDEM,” *EPİAŞ*, 15 May, 2023, Web: <https://www.epias.com.tr/uzlastirma/yekdem/>, accessed:23-02-2025.

to the issues observed in the YEKA scheme, the YEKDEM programme has ultimately fallen short of its intended objectives.²⁴⁰

4.4.1.2. YEKA

The amount of electricity generated from renewable energy sources is of crucial importance for both the achievement of zero-carbon targets and of energy independence. In this context, YEKA (*Yenilenebilir Enerji Kaynak Alanları*—YEKA) was created by the Turkish government in an attempt to reduce energy prices in the generation of electricity across the country. The fundamental purposes of YEKA are to decrease energy costs in electricity production from renewable energy sources, while also increasing both the ratio of renewable energy power plants, and the labour workforce operating in this field.²⁴¹

Within the scope of YEKA, and due to increased energy costs, renewable energy technologies play a central role in the generation of electricity. Through YEKA, research and development have also gained importance in increasing the use of domestic technological components, particularly in solar and wind energy systems. Türkiye can become a key centre of electricity production from renewable energy sources due to its location, if it can draw maximum benefit from its potential correctly. The YEKA programme possesses a tendering procedure in an attempt to determine investment companies. The programme framework devised by the MENR, which is based on technical and administrative studies was announced in the Official Gazette. Within the scope of YEKA, electricity generated by power plants is purchased by the public in line with market conditions.²⁴² In 2024, an updated YEKA model was announced by the Minister of Energy and Natural Resources. This model included transmission fee exemptions, international arbitration for foreign investors, removed capacity costs, and minimum domestic material usage levels.²⁴³ Türkiye, since the foundation of YEKA, has reported that the country has adjudicated to 7,8 GW in solar and wind energy capacity. However, the expected capacity has so far reached 1,90 GW within the scope of YEKA. There is a need, therefore, for

²⁴⁰ “YEKDEM Kapsamında Yapılan Haksız Ödemeler ve İade Süreçleri,” *Mondaq*, Web: <https://www.mondaq.com/turkey/renewables/1130180/yekdem-kapsam%C4%B1nda-yap%C4%B1lan-haks%C4%B1z-%C3%96demeler-ve-%C4%B0ade-s%C3%BCreci>, accessed:26-06.2025.

²⁴¹ “Yenilenebilir Enerji Kaynak Alanları (YEKA) Modeli ve Uygulamaları,” *T.C Enerji ve Tabii Kaynaklar Bakanlığı*, Web: <https://enerji.gov.tr/eigm-yenilenebilir-enerji-uretim-faaliyetleri-yeka-modeli>, accessed:25-02-2025.

²⁴² “Yenilenebilir Enerji Kaynak Alanları (YEKA) Modeli ve Uygulamaları”

²⁴³ “YEKA’da model değişti, Asgari fiyat geldi, ilk ihale Ocak’ta,” *Enerji Günlüğü*, 21 October, 2024, Web: <https://www.enerjiGUNlugu.net/yekada-model-degisti-asgari-fiyat-geldi-ilk-ihale-ocakta-60813h.htm>, accessed:25-02-2025.

Türkiye to review its renewable energy procedures and to recognise and develop the financial conditions of private companies in the renewable energy sector.²⁴⁴

The YEKA incentive auctions are periodically held by the government, with initial announcement made by the MENR to invite interested companies. These auctions are accompanied by detailed public disclosures regarding the specific projects. However, a recurring issue has emerged where companies that win tenders later transfer or sell their rights rather than carrying out the project themselves. This practice disrupts the intended outcome of government-led efforts to expand the country's effective energy capacity. The failure to implement projects after the transfer of tender rights is the primary reason why these incentives have not translated into real progress. As a result, the YEKA mechanism, much like the YEKA system, has contributed only to an increase in installed renewable energy capacity on paper. It has failed to deliver measurable gains in actual energy production within the sector.²⁴⁵

4.4.1.3. Renewable energy portfolio standard (RPS)

The Renewable Energy Portfolio Standard can be considered a supplementary incentive mechanism which aims to increase the use of renewable energy sources in the renewable energy sector. The support provided takes the form of tax incentives, which play a crucial role in reducing start-up costs, as well as accelerating and increasing the use of clean energy sources. In the EU, while tax incentives exist with all the members of the Block, few EU countries implemented RPS. While the RPS is not mandatory in EU member countries, the tax incentive is considered in the EU as being a political decision.²⁴⁶

The primary tax incentives offered in the EU are income tax credits, which take the form of a secondary supplementary mechanism. The most comprehensive tax programme implemented by the EU in the field of renewable energy can be considered as being the income tax derived from the use of fossil-fuels. The Netherlands was the first country to adopt the RPS in 1998. The RPS system received strong support from the EU in its early stages, and while there was vocal position from Spain and Germany in the later periods,

²⁴⁴ Bahadır Sercan Gümüş, "Güneş ve rüzgar ihalelerinde yeni hedefler, eski problemler," 27 February, 2025, Web: <https://ember-energy.org/tr/analizler/gunes-ve-ruzgar-ihalelerinde-yeni-hedefler-eski-problemler/>, accessed: 27-02-2025.

²⁴⁵ "Yenilenebilir Enerji Kaynakları Alanları (YEKA) Modeli ve Uygulamaları"

²⁴⁶ Ali Çelikkaya, "Avrupa Birliği Üyesi Ülkelerde Yenilenebilir Enerjiye Sağlanan Teşvikler Üzerine Bir İnceleme," *Sayıştay Dergisi*, 104(2017):1-3.

countries such as the United Kingdom, Poland, and Belgium are still applying the mechanism.²⁴⁷

The RPS can be described as a quantity-based incentive policy that requires a certain proportion of energy to be produced from renewable energy sources. The primary disadvantages of the RPS mechanism are that the price is determined by the market, and that there is a lack of price differentiation based on the technology used in renewable energy sources. In other words, the RPS mechanism has restricted technological advancements in the renewable energy sector, as it encourages the use of low-cost renewable energy technologies, which has led to it being adopted by only a few member states. The main advantage of the system are the certificates issued by the EU for the production of electricity from renewable energy sources through, which additional income can be generated. The EU sets quotas for producers that generate electricity from renewable energy sources. If the quotas are not met, the operator is required to purchase certificates from other companies. The system is thus considered to be simple and transparent. Consequently, the EU has prioritised the implementation of a feed-in tariff mechanism rather than the RPS mechanism.²⁴⁸

4.4.1.4. Feed-In tariff

The EU operates a unique renewable energy incentive feed-in tariff programme in which electricity generated from renewable energy sources is subjected to exceptional rules, providing competitive advantages to the producers. The feed-in tariff incentive system resembles YEKDEM in Türkiye, in that it falls outside the scope of the EU's feed-in tariff programme. The EU applies guarantees to incentivise renewable energy production that far outweigh those provided in Türkiye.²⁴⁹ The feed-in tariff, which is at the heart of the EU's renewable energy incentive strategy, differs from country to country, and the incentive programme can be considered the cheapest and most effective in operation in the Block. Within the scope of the feed-in tariff, electricity generated from renewable energy sources is purchased by the public for 20—25 years at prices that can vary under the influence of various factors, including technological developments and kWh produced. In this regard, solar energy investments can be considered costlier than those made into wind energy due to the necessary expenditure on maintenance and repairs in the context of the

²⁴⁷ Ibid, 1-4.

²⁴⁸ Ibid, 6-7.

²⁴⁹ Ibid, 1-7.

feed-in tariff. While a fixed-price feed-in tariff incentive system is implemented in Spain, Slovenia, Hungary, Bulgaria, Estonia, Denmark, and Germany, the Czech Republic implements a premium model in its feed-in tariff incentive system that provides protection from fluctuations in prices. The fixed guarantee model has thus been more effective as a renewable energy incentive in the 27 EU member states.²⁵⁰

Table 6. Share of Renewable Energy Sources in Gross Final Energy Consumption²⁵¹

Türkiye and the EU The Share of Renewable Energy Sources in Gross Final Energy Consumption.	
Türkiye	17,2 percent
The EU in total	21,8 percent

Source: Republic of Türkiye Exchequer and Audit Department Journal 104(2017)

4.4.2. Key distinctions between Türkiye and the EU in the renewable energy sector

This section presents a comparison of employment in the renewable energy sector, energy trade volumes, and the prices of energy from renewable and conventional sources in Türkiye and the EU. These fundamental indicators have been selected to facilitate an assessment of the adequacy of the renewable energy policies in Türkiye and the EU, and to investigate the extent to which Türkiye meets the expectations of the EU in terms of renewable energy in the context of its EU integration process.

These key indicators were selected as a result of an extensive literature review, as they are academically referenced in Alpaslan Bayraktar’s doctoral dissertation and are frequently mentioned in academic studies and reports by prominent energy agencies and companies such as the IEA, IRENA, CleanEnergyWire, and Enerdata. The literature review revealed that the four indicators selected for this thesis—employment, trade, energy prices, and carbon dioxide emissions—are commonly used as primary indicators in cross-country energy comparisons.

²⁵⁰ Ibid, 1-8.

²⁵¹ Countries with the Highest Share: Latvia, Sweden, Austria and Finland. Countries with the Lowest Share: the UK, Luxembourg, Southern Cyprus, Netherland, and Belgium.

4.4.2.1. Employment in the renewable energy sector

In 2022, some 1.69 million people were employed in the renewable energy sector across the EU, with the largest number recorded working in the solar photovoltaics sector. (346.900), followed by the biomass sector 331.700. Among the 27 member states, Germany continues to report the highest rate of renewable energy employers.²⁵² Most people employed in Türkiye's renewable energy sector are working in the solar and hydropower segments of the market, which together account for approximately 41.000 full-time jobs. Türkiye has the second largest hydroelectric capacity in Europe.²⁵³

Table 7. Employment in renewable energy sector

Employment in Renewable Energy Sector		
Energy Source	The EU	Türkiye
Solar Photovoltaic	346.900	41.000
Biomass	331.700	11.000
Wind	273.500	5000
Biofuels	149.700	1000
Hydropower	78.600	41.000
Biogas	49.300	11.900
Solar Thermal (Cooling/Heating)	26.700	-
Geothermal	6200	6000
Municipal & Industrial Waste	-	2000

The European Union	Türkiye	Total in the world
1.2 million	118.900	8.1 million

Source 1: <https://www.statista.com/statistics/1500323/european-union-employment-renewable-energy-by-sector/#statisticContainer> (2024), accessed:11.03.2025

Source 2: <https://www.irena.org/Data/View-data-by-topic/Benefits/Renewable-Energy-Employment-by-Country> (2023), accessed:11.03.2025.

²⁵² “Germany remains highest EU renewable employer” *Journalism for the Energy Transition*, 26 May, 2026, Web: <https://www.cleanenergywire.org/news/germany-largest-eu-renewables-employer-industry-wants-transport-ets>, accessed:05-03-2025.

²⁵³ “Number of employees in the renewable energy sector in Turkey in 2023, by technology,” *Statista*, <https://www.statista.com/statistics/893602/renewable-energy-employment-numbers-turkey/>, accessed:2025-03-05.

4.4.2.2. Trade

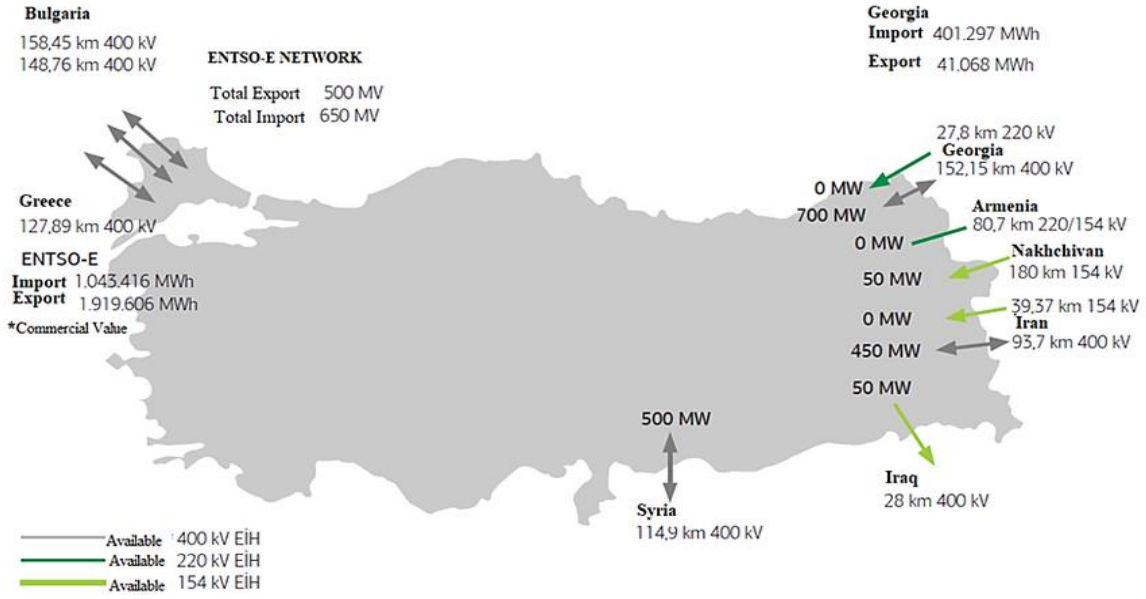


Figure 12. Interconnected Lines and ENTSO-E MAP²⁵⁴

Türkiye's geographical position between the West and East, secures it a significant role in trade of energy, including petroleum, coal, natural gas, and electricity, between the countries in the region, and contributes in no small part to its economic development and to the EU membership process. Bulgaria and Greece are particularly important neighbours for Türkiye due to its ongoing EU integration and accession process. By taking significant steps in this direction, Türkiye moves closer to its goal of becoming a key supplier of energy to the Union. As can be seen in Figure 12 above, however, Türkiye's trade of electricity with the EU has long been at minimal levels. Increasing its trade of electricity with the EU would advance Türkiye's road to EU membership and provide the country with a secure base as a powerful energy actor in the region. In this regard, the steps taken by private companies in the renewable energy sector in Türkiye are of great importance for the country's EU membership process and its trade of electricity with the EU. There is no doubt that while the liberalisation of Türkiye's electricity generation sector is continuing, its energy policies must be brought in line with those of the EU if the trade of electricity is to be increased.²⁵⁵

²⁵⁴ ENTSO-E, "Interconnected Lines and ENTSO-E MAP," Accessed: 12-03-2025, Web: <https://www.teias.gov.tr/>

²⁵⁵ "Türkiye'nin Elektrik ihracatı dün İthalatın Yarısında Kaldı", *Dünya Gazetesi*, 04 July, 2024, Web: <https://www.dunya.com/ekonomi/turkiyenin-elektrik-ihracati-dun-ithalat-in-yarisinda-kaldi-haberi-735192>, accessed: 10-03-2025.

The energy crisis resulting from Russia's decision to cut off supplies of natural gas to the EU has upset the energy balance in the region, although the integration of Türkiye's electricity system with the European electricity grid has somewhat readdressed this.²⁵⁶ While the primary purpose of the UCPTE²⁵⁷ was to reactivate the electricity generation and transmission capabilities of Western Europe, the changing circumstances resulting from the outbreak of war between Russia and Ukraine in February 2020, meant that the trade of electricity between Türkiye and the EU was propelled to the top of the agenda.²⁵⁸ It should be noted, however, that given its dependence on its neighbours not only for fossil-fuels, but also electricity, Türkiye's electricity imports outweigh its export to other countries.²⁵⁹

It is clear that Türkiye must make urgent investments to increase the capacity of its electricity transmission infrastructure if it is to increase its trade of electricity with Bulgaria and Greece. Such investments have been largely ignored by the JDP since it came to power in 2002. According to Alpaslan Bayraktar, the Minister of Energy and Natural Resources, Türkiye is switching focus to the development and integration of its electricity transmission infrastructure with other countries in the region in an attempt to increase the nation's electricity transmission capacity for the years to come.²⁶⁰

A major power outage occurred on April,28,2025, affecting nearly all of Spain and Portugal, along with a small portion of southern France. The blackout originated in Spain,

²⁵⁶ "Russia's Gazprom halts gas supply through Ukraine after end of transit deal", *Anadolu Ajansı*, Web: <https://www.aa.com.tr/en/economy/russias-gazprom-halts-gas-supply-through-ukraine-after-end-of-transit-deal-/3439363>, accessed: 10-03-2025.

²⁵⁷ This founders of the UCPTE devised an energy policy independently of the network development initiatives. At the time of its establishment in 1951, the UCPTE served as the representative of the national electricity companies, including those engaged in production, and thus, the abbreviation UCPTE was used. The UCPTE was launched with only 7 member states, but its membership started to increase gradually in the first quarter of 1951, reaching 24 members. Its transition has increased with the expansion of the EU, although, for some countries, their UCPTE membership preceded their EU accession. The UCTE was established as a collective of electricity companies that were seeking to improve their systems while at the same time ensuring energy security. The transformation of the group can be traced back to a directive published by the European Commission in 1996. Along with this modification, the electricity transformation transformed into a single construction. In 1999, the group transitioned into the Association of European Transmission System Operators for Electricity (ETSO), bringing together UCTE, ETSO, and other structures connected under the European Network of Transmission System Operators for Electricity in 2009. (ENTSO-E)

²⁵⁸ "Union for the Coordination of the Transmissions of Electricity (UCTE) Developed Country Case Study", *Economic Consulting Associates*, October,2009, Web:https://www.esmap.org/sites/esmap.org/files/BN004-10_REISP-CD_UCTE-Developed%20Country.pdf,accessed: 10-03-2025.

²⁵⁹ "Türkiye'nin Elektrik ihracatı dün İthalatın Yarısında Kaldı", *Dünya Gazetesi*,04 July,2024, Web: <https://www.dunya.com/ekonomi/turkiyenin-elektrik-ihracati-dun-ithalatın-yarisında-kaldi-haberi-735192>,accessed:10-03-2025.

²⁶⁰ "Bakan Bayraktar: Türkiye'nin Yunanistan ve Bulgaristan ile Gaz Hattı Kapasitesinin Artması Gerektiğini Bildirdi," *Anadolu Ajansı*, 09 October, 2024, Web:<https://www.aa.com.tr/tr/enerjiterminali/genel/bakan-bayraktar-turkiyenin-yunanistan-ve-bulgaristan-ile-gaz-hatti-kapasitesinin-artmasi-gerektigini-bildirdi/43846>,accessed:10-03-2025.

but due to the interconnected nature of the European electricity grid, it quickly spread to nearly the entire Portuguese grid and parts of the French network. This event highlighted the vulnerability of shared power infrastructures, prompting concern among other European countries including Türkiye given their connection to the continental grid. Within seconds, approximately 15 gigawatts of electricity supply were lost due to the collapse of the system. In Spain and Portugal, large part of population were left without electricity during several days. The outage also caused serious disruption of rail and air carriers in the Iberian Peninsula. The grid operator in Portugal REN said the incidence was caused by a failure in the electricity network in Spain. Nevertheless, Red Electrica, a Spanish company in charge of energy delivery, explained the issue by problems related to the passage of the nation to the use of renewable energy. It was not only in grid stability that this crisis showed a loss but there was also a major shortcoming in energy storage technologies as well. Spain, which is significantly dependent on solar power sourced energy, failed to implement its backup energy supplies, demonstrating a significant failure in technological readiness.²⁶¹

Another crucial point should be raised in relation to ENTSO-E members. Since the integration of Türkiye's electricity network with the ENTSO-E framework, there has been a decrease in reserve capacity. Before integration, the primary frequency control reserve held within the system were equal to the capacity of the largest generation unit, however, this reserve has been reduced to 300 megawatts since the connection was made. In short, the revenues generated through trade associated with the ENTSO-E rely not only on Türkiye, but also on the activities of other ENTSO-E members.²⁶²

²⁶¹ “İspanya ve Portekiz tarihi elektrik kesintisinin nedenini bulmaya çalışıyor,” *BBC News Türkçe*, 28 April, 2025, [Web:https://www.bbc.com/turkce/articles/c2lzy7k1djgo#:~:text=%C4%B0ki%20%C3%BClkenin%2060%20milyona%20yak%C4%B1n,olay%C4%B1%22%20sonucu%20meydana%20geldi%C4%9Fini%20belirtti,accessed:25-06-2025](https://www.bbc.com/turkce/articles/c2lzy7k1djgo#:~:text=%C4%B0ki%20%C3%BClkenin%2060%20milyona%20yak%C4%B1n,olay%C4%B1%22%20sonucu%20meydana%20geldi%C4%9Fini%20belirtti,accessed:25-06-2025).

²⁶² Yıldız Durukan, Doruk Özkök, Algi Özkaya, H. Mehmet Kara, “Türkiye'nin Elektrik Sisteminin Avrupa Elektrik Sistemine Bağlantısı”, *Enerji ve Çevre Dünyası Dergisi*, 93(2012):1-9.

4.4.2.3. Energy and renewable energy prices

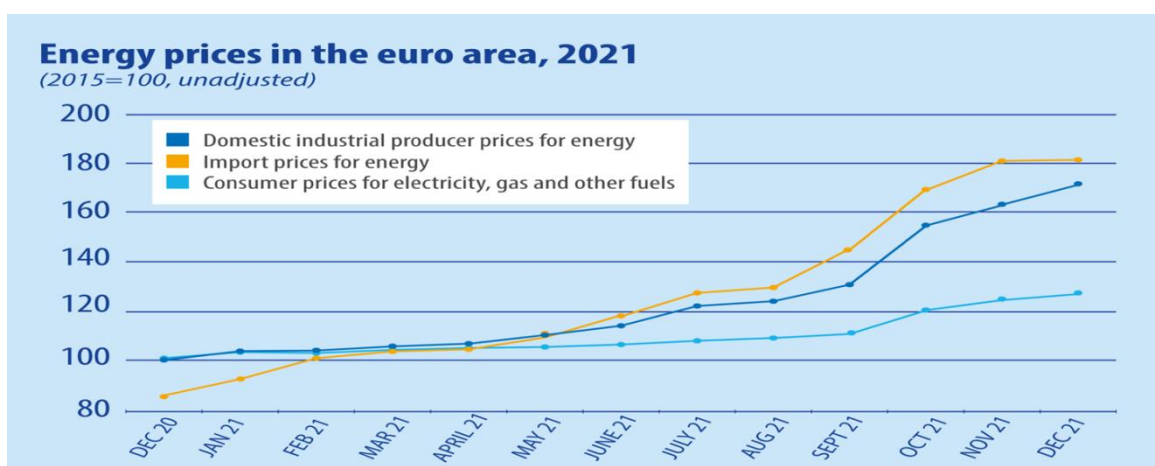


Figure 13. Energy Prices in the Euro Area, 2021

Source: Eurostat²⁶³

As can be seen in Figure 13, energy prices in the EU gradually increased in 2021, much of which can be attributed to the Russia-Ukraine War. The decline in prices observed in 2025 can be attributed to the decreasing effects of the Russia-Ukraine war.

Although energy prices within the EU began to gradually decline following the Russia-Ukraine war, in Türkiye, prices have continued to rise due to several factors such as energy import dependency, problems in gas supply, the prolonged financial crisis following 2008 and the resulting economic difficulties faced by energy companies. While the Turkish government has attempted to suppress the effects of these price increases to maintain political stability, the financial hardship faced by companies has nonetheless led to notable increases in energy prices.

²⁶³ "Energy prices on the rise in the euro area in 2021," *Eurostat*, 10 February, 2022, Web: <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20220210-2>, accessed: 15-03-2025.

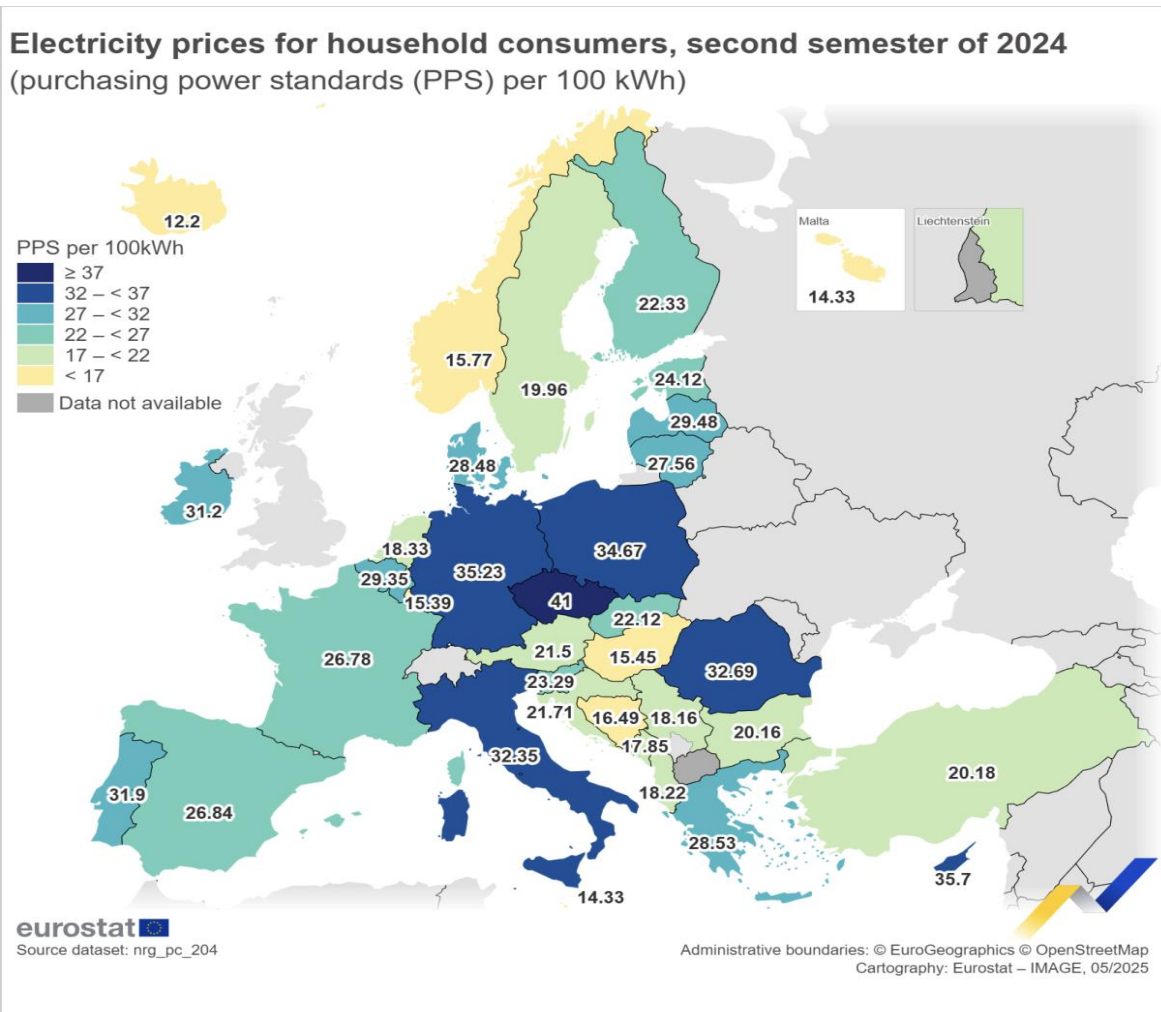


Figure 14. Electricity Prices for Household Consumers, 2024

Source: Eurostat²⁶⁴

The variations in energy prices from country to country in the EU can be seen in Figure 14. According to Eurostat data, the energy prices in the EU candidate countries are relatively more affordable and more reasonable than in other EU member states due to the effect of market conditions.

Moreover, taxes imposed on renewable energy in Türkiye are significantly higher compared to those in the EU, placing additional financial strain on energy-producing companies. These taxes, in turn, directly impact energy prices. As of the 2024-2025 period, rising energy prices have also been influenced by increased taxation introduced as part of economic plans and programs aimed at mitigating the ongoing economic crisis. Consequently, the rise in energy prices within the country has had a detrimental effect on companies operating in the energy sector.

²⁶⁴ “Electricity price statistics” *Eurostat*, October, 2024, Web: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics, accessed: 16-03-2025.

Figure 14 presents electricity prices for household consumers in 2024, expressed in Purchasing Power Standard (PPS), and examines EU member states and candidate countries across six categories. The electricity price categories range from over 37 PPS to below 17 PPS per 100 kWh.²⁶⁵ This graph indicates that, in terms of purchasing power, Türkiye ranks lower compared to Europe's leading countries in the energy sector. As previously discussed in this thesis, this situation is largely due to the comprehensive energy system established within the EU, which was created through mechanisms developed by certain energy companies and is designed to encompass all member states.

Figure 14 essentially illustrates that Europe, on average, enjoys higher energy purchasing power than Türkiye. This discrepancy largely stems from the underperformance of Türkiye energy companies. The primary reason for this underperformance is the government's unsystematic energy policies and the limited number of impartial, structurally sound companies capable of energy production similar to those in the EU. As mentioned earlier, the incentives provided in Türkiye for renewable energy are predominantly allocated to government-affiliated companies. Although these companies claim that their projects will be completed in the short term, they often extend into the long term. This leads to Türkiye being rated as insufficient in EU progress reports.

4.4.2.4. CO₂ emissions

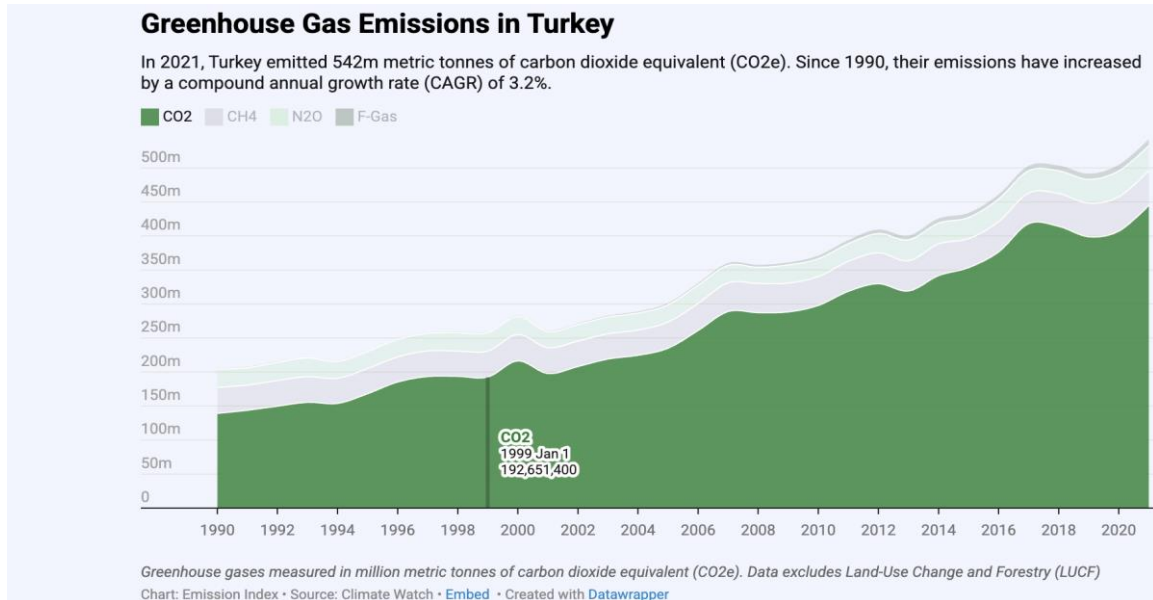


Figure 15. Levels of Carbon Dioxide in Türkiye (1990-2020)

Source: <https://www.emission-index.com/countries/turkey>, accessed:20.03.2025.

²⁶⁵ “Electricity price statistics”

As can be seen in Figure 15, the levels of CO₂ in Türkiye have gradually increased due to the consumption of fossil fuels, primarily for the generation of electricity. This increase is also highlighted in the country reports published by the EU. However, it can be understood that Türkiye's current CO₂ level has steadily started to decrease thanks to increased renewable energy capacity. However, Türkiye's CO₂ emissions have still not reached the expected level set by the EU. As stated in the previous sections of this thesis, as can be seen in Figure 15, Türkiye has experienced an increase in CO₂ emissions since 2010, this is despite the accelerated transition to renewable energy and the increasing share of renewable energy sources in overall energy consumption.²⁶⁶ As can be seen in Figure 16, the EU has witnessed a decline in CO₂ emissions since 2019.

As seen from Figure 15 and 16, although Türkiye is undergoing a privatisation process in its electricity generation sector and the process is being carried out within the framework of certain plans, programs and incentives, it still lags behind the EU in terms of carbon dioxide emissions. This situation undeniably affects the country's EU integration process. In the country reports published by the European Commission, this is highlighted as a negative aspect. However, the primary cause of this cannot be attributed to the government policies. Responsibility also lies with private companies. Due to the preferential treatment given to companies close to the government especially in the allocation of incentives, and the failure to complete projects within the stipulated timelines or the cancellation of projects after a certain period, Türkiye's carbon dioxide emission score is significantly affected.

²⁶⁶ "EU'S CO₂ footprint continues to decrease" Eurostat, 24 May,2022,
Web:<https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20220524-1>,accessed:10-03-2025.

EU27 CO₂ emissions from fossil fuels

Projection of historical sources using CREA CO₂ tracker in Gt / year

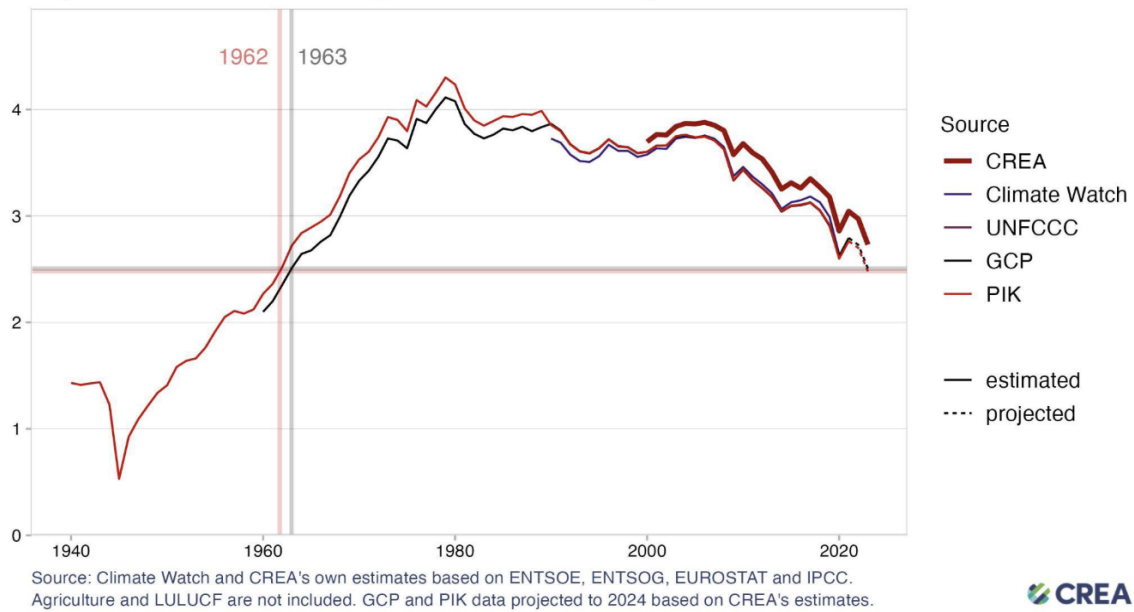


Figure 16. Levels of CO₂ Emissions from Fossil Fuels for the 27 EU nations.²⁶⁷

4.5. Evaluation

Under this heading, the study aims to analyse the success of Türkiye's EU integration process as discussed and supported by quantitative data above---the relationship between privatisation and renewable energy, the renewable energy activities during the JDP era, and the role of private companies in Türkiye's integration process. The finding, broadly speaking, suggest that the private companies have not carried out this role particularly successfully. In general sense, both Türkiye as a whole and, more specifically, the energy companies acting as stakeholders in this process still have a long way to go. First and foremost, the Turkish government should abandon its policy of favouring companies that are politically close to it while marginalising others, and instead maintain impartial relations with all firms.

Secondly, global developments such as financial crises, conventional wars, the climate crisis, and global warming also have an impact on Türkiye's EU integration process. These factors influence the country's overall performance and should not be

²⁶⁷ Centre for Research on Energy and Clean Air, "EU27 carbon dioxide Emissions from fossil fuels," Accessed:20-03-2025, Web:<https://energyandcleanair.org/publication/eus-co2-emissions-from-fossil-fuels-drop-8-to-reach-lowest-levels-in-60-years/>

attributed solely to the government or private companies, particularly when Türkiye fails to meet EU's expectations. These same global dynamics also negatively affect the EU itself.

When all the above-mentioned outcomes are considered together, the thesis clearly demonstrates that despite privatisation efforts and certain successful steps, Türkiye has not yet reached the expected level in the energy sector. These developments also provide an answer to the central research question of this thesis.

In general terms, the answer to the research question is that private companies in Türkiye do not possess the capacity to significantly advance the country's EU integration in the energy sector. The reasons for this incapacity include government policies, global developments (such as conventional wars, the climate crisis, global warming, and financial crises), and the underperformance of energy companies, which are key actors in this process. Due to these factors, Türkiye has not been able to meet the EU's expectations in the field of energy, particularly in the renewable energy. In order to fulfil these expectations, the most crucial solution is for Türkiye to reduce its dependency on energy imports as soon as possible. This dependency can only be addressed through more neutral, fair, and efficient incentive programs that support the proliferation of renewable energy companies, or by building a system similar to that of Germany. Such steps could allow Türkiye to meet EU expectations in a shorter timeframe.

5. CONCLUSION

This thesis investigates Türkiye's approach to renewable energy during the JDP era and its effect on the country's integration process with the EU. More specifically, the study assesses the importance and influence of renewable energy, and solar and wind energy in particular, through the lens of neoliberalism theory. As can be understood from the findings of the study, there is need for more comprehensive planning in Türkiye if the country is to achieve the desired installed power capacity and energy independence from solar and wind energy sources. As a result of this study, the relationship between Türkiye and the European Union has been examined within the framework of energy policies, and the effects of Türkiye's renewable-based electricity policies on the EU integration process have been identified.

The concept of neoliberalism as a mode of governance is explained in the first chapter, and the emergence of neoliberal theory from ordoliberal theory is examined. To emphasise their impact on the energy sector, the contrasts between neoliberalism, liberalism, and ordoliberalism are outlined, followed by an explanation of how the transition to neoliberalism began in practice. The emergence of neoliberalism from the remnants of ordoliberalism as a theoretical divergence can be considered as being of great importance. Upon taking into consideration the scope of "energy," neoliberalism accelerated the adoption of neoliberal policies following the 1973 oil crisis and the 1979 Iranian Revolution, and the resulting dominance of populist approaches was thus inevitable, leading to the emergence of a new trend, and signalling the birth of a new approach (the private sector) in the global energy sector.

The second chapter maps the historical connections between renewable energy and privatisation and explains the transition to renewable energy and the changes in Türkiye's energy regime, as a result of the pronounced application of neoliberal policies in the 1980s. The second chapter also seeks to clarify the impact of the privatisation on the renewable energy sector on the relations between Türkiye and the EU.

This thesis concludes that there is no relationship between privatisation and renewable energy in terms of their impact on the EU harmonisation process within the context of private sector activities in the electricity market. This thesis also finds that, following state incentive programmes, including YEKA and YEKDEM, Türkiye has made noteworthy progress in the field of renewable energy, particularly in solar and wind energy

systems. The study also provides a general elucidation of Türkiye's ongoing efforts to reach its zero-carbon targets and to align with the EU in the field of renewable energy, and thus to spur its accession. It is noted that the policies implemented by the JDP since 2002 have failed to keep pace with those of the EU. Türkiye, for this reason, has a contradictory structure in its energy policies. While it strives to align with the EU in the field of renewable energy, as indicated in Chapter 2, the financial incentives and legal regulations put in place, suggest that Türkiye is acting in a way that is somewhat more aligned with its own internal structure and economy.

Blame, however, for the late recognition of the importance of renewable energy should not be laid solely at the door of the JDP government and private sector. As stated in Chapter 2, Türkiye's activities in this field have also been affected by financial downturns, conventional conflicts, wars, and ecological crises. Accordingly, companies operating in the energy sector other than those that are more well-established have encountered challenges in maintaining their presence in the market due mainly to the effects of economic and conventional conflicts and wars.

In Chapter 3, it is shown that although the objectives behind financial incentives and legal regulation of Türkiye and the EU are the same, in Türkiye the targets for renewable energy are set at more reasonable levels. This is further evidence that Türkiye acts in accordance with its own internal structure. The quantitative data presented in this thesis suggests that Türkiye must make more of an effort to develop EU alignment and progress upon its membership journey by leveraging its energy resources. Chapter 3 also discusses the potential EETS's integration of Türkiye and the country's lack of an emission trading system and carbon border adjustment mechanism, both of which have caused delays in the fulfilment of the EU's stated targets, as elucidated in the national reports published by the EU. Despite increasing the amount of renewable energy derived from solar and wind energy sources, through YEKA and YEKDEM, as detailed in Chapter 4, there have been delays in fully meeting the targeted capacity. In other words, although existing capacity has been reported as high, the expected electricity production rates from these energy sources have not been reached, as discussed in Chapter 3.

Transition to renewable energy—namely clean energy—is one of the long-terms energy goals of many countries, including Türkiye and the EU. Türkiye serves as a model for other countries thanks to its renewable energy vision underpinned by its local geography and privatisation initiatives; however, it still significantly underperforms. As noted in relevant sections of this thesis, Türkiye must scale up its efforts to reduce fossil

fuel consumption. For this purpose, Türkiye can also take inspiration from the EU countries listed at the top of global renewable energy rankings.

The renewable energy model and practices of Germany, as discussed in both the literature review and the EU section of this study, can help Türkiye increase its installed renewable energy capacity and facilitate technological progress in this field.

At this point, it is necessary to define what installed power capacity means. First, maximum efficiency must be obtained from the installed capacity. Failure to obtain full-capacity efficiency means that full potential output is not achieved due to the lack of necessary technology. More specifically, installed power capacity can be defined as the maximum amount of energy that can be produced by one of the installations within a given renewable energy source. In other words, it is the maximum power output a power plant can generate and transmit under specific conditions.²⁶⁸

For instance, if a region has a 300 MW natural gas power plant, 200 MW solar plant, and a 100 MW hydroelectric plant, then the installed power capacity of that system is 600 MW (300+200+100). If the necessary conditions are met, this installation is capable of generating 600 MW of energy. However, to reach this full capacity, various conditions, such as appropriate technology and the resource's supply potential, must also be fulfilled. This leads to an important conclusion: installed capacity does not mean that a plant is operating at full output. To illustrate further, a high installed capacity in Türkiye does not directly indicate that the country produces or is currently capable of producing that full amount of energy. It simply means that this amount can be produced if resource-specific and technological conditions are met. Failure to achieve full-capacity production stems from inefficiencies in the resources themselves or lack of supporting technology and storage systems. Due to the failed YEKA and YEKDEM projects implemented by the JDP in its efforts to increase renewable energy capacity in Türkiye's electricity sector, the country's installed capacity remains largely a matter of statistics. As a result of irregularities within these projects, actual energy output from renewable sources in the electricity sector has not been achieved. Unsuccessful project management undermines the country's goal of achieving complete energy independence.

In particular, many academic studies have examined the efficiency of energy generation from renewable sources. What does this mean exactly? To explain through an

²⁶⁸ "Elektrik Faturasındaki Terimler Ne Anlama Geliyor," Aydem Perakende, 22 December, 2022, Web: [https://www.aydemperakende.com.tr/blog/elektrik-faturasindaki-terimler-ne-anlama-geliyor#:~:text=Kurulu%20G%C3%BC%C3%A7%20\(kWh\)%3A%20Kurulu,Ba%C4%9Flant%C4%B1%20g%C3%BCc%C3%BC%20olarak%20da%20adland%C4%B1r%C4%B1l%C4%B1r,accessed:28.04.2025](https://www.aydemperakende.com.tr/blog/elektrik-faturasindaki-terimler-ne-anlama-geliyor#:~:text=Kurulu%20G%C3%BC%C3%A7%20(kWh)%3A%20Kurulu,Ba%C4%9Flant%C4%B1%20g%C3%BCc%C3%BC%20olarak%20da%20adland%C4%B1r%C4%B1l%C4%B1r,accessed:28.04.2025).

example: imagine one lighting pole powered by a fossil-fuel plant. Many academic studies indicate that lighting poles powered by renewable energy often produce less light intensity than those powered by fossil fuels. This underperformance demonstrates the current technological shortcomings in renewable energy. This issue is referred to as “energy inefficiency” in academic literature. If future studies can resolve problems related to solar energy storage and solar cell inefficiency, then the efficiency of solar energy could match that of fossil fuels.

For Türkiye’s development in renewable energy, the models of Germany, France, and Italy, pioneers in the EU in this field, can serve as valuable references to guide and shape its strategy. Türkiye should accelerate progress by selecting one of these countries as a role model to meet the expectations of the EU. As previously discussed in this thesis, EU reports indicate that Türkiye has made limited progress in renewable energy and has failed to meet the targets of the EU Energy harmonisation packages.

This limited progress should not be attributed solely to the government. The private sector has also played a significant role, especially since the privatisation of energy production in Türkiye. After privatisation, the private sector assumed much of the responsibility. Nevertheless, Türkiye can achieve success in renewable energy if the government provides incentives and tax breaks to the private sector without political bias and supports all companies in this field fairly and transparently. Therefore, the government must act without seeking political gains or showing preferential treatment. This is the only way for Türkiye to ensure a positive link between privatisation and the advancement of renewable energy.

Political coherence in the EU drives its success in renewable energy, leading to the conclusion that the EU outperforms Türkiye in this field. This has been one of the most fundamental structural problems in the energy policies of the JDP government since 2002. Although Türkiye takes action in line with its own unique strategies and goals, these strategies are not long-term, unlike the EU model. The EU’s renewable energy strategies progress systematically. With its model, the EU offers opportunities to more national and international investors, while Türkiye’s model primarily includes only national investors.

All the explanations above aim to demonstrate the shortcomings in Türkiye’s model. In other words, companies operating in renewable energy in Türkiye could increase their installed power capacities by entering into more agreements with global renewable energy companies and countries can provide financial support to the Turkish companies involved in the clean energy transition and help them operate more strategically. This would not

only allow Türkiye to make progress toward long-term strategic goals but also contribute indirectly to the reduction of carbon emissions in the country.

In the EU, actors involved in renewable energy production include international players, supported by local communities. In Türkiye, by contrast, the sector is largely controlled by political actors and the government, with support primarily from pro-government groups. More specifically, there should be no political discrimination among companies operating in renewable energy in Türkiye. All companies, regardless of political affiliation or connection to the government, should be encouraged to participate in the country's transition to clean energy and full energy independence.

5.1. Conclusion, Discussion and Recommendations

Based on the findings of this thesis, it is important to offer some suggestions for future research to contribute to this area. While this thesis is positioned within a broader academic context, it focuses on a subject that has received relatively limited attention, highlighting many areas for future study. There is a need to suggest research areas that remain underexplored in the literature and are open to further development. This thesis analysed the energy policies of Türkiye between 2002 and 2024 in the context of the EU harmonisation process. It also examined the role of energy companies in the privatisation process and efforts to facilitate the transition to renewable energy from both historical and comparative perspectives. However, the study has limitations due to its scope and methodology. This thesis focuses primarily on Türkiye. In this regard, future research could approach the subject from a EU-focused perspective. While Germany has been extensively studied²⁶⁹, examining Italy and France could help address gaps in the academic literature. The documents used in this study include official reports, documents and quantitative data. Future studies could enrich the research by including interviews with energy industry representatives, managers of economic actors in renewable energy, and energy ministers, allowing for a multi-dimensional analysis. As this thesis focuses primarily on national policy, future research could delve deeper into the socio-economic impacts of these policies, thereby expanding the scope of the field.

This thesis addressed Türkiye's renewable energy policies under the JDP comparing them with those of the EU. For a more systematic comparison, future studies could focus on countries leading the EU in renewable energy, such as Germany, France, and Italy. This

²⁶⁹ Bayraktar, "A Multidimensional Analysis Of Turkish German Low Carbon Energy Transitions," 9-203.

thesis mainly examined energy policies from economic and political perspectives. However, the social dimension of energy policies also warrants a comprehensive investigation. Future academic research can explore social issues such as energy injustice, and energy poverty. Further studies focused on these areas would help close these academic gaps.

This thesis covers a specific period. A comparative analysis could be conducted between the period covered here and that of a potential new government elected in the upcoming elections, specifically regarding renewable energy policies and the EU harmonisation process. Such a study could offer a more detailed and comparative understanding of Türkiye's position in the energy sector by highlighting the actions and policies of different governments over the years. This comparison could more clearly illustrate the successes and failures of the JDP in the field of renewable energy.

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