Coal and Coverage:

Exploring Turkey's Energy Landscape and Insurance Industry

2023

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Introduction

Background

Turkey's energy landscape has evolved significantly over the past few decades. With its growing economy, Turkey has seen an increase in energy demand, leading to diversified energy sources. Coal -especially domestic coal called lignite- has historically played a crucial role in meeting this demand. However, with the global shift towards sustainability, renewable energy, and climate change mitigation, Turkey faces pressures and challenges in aligning its energy policy.

Purpose of the Research

This research seeks to explore the complex dynamics of Turkey's coal industry, the role and strategies of the insurance sector, the public debate, legal regulations, and the engagement of civil society. It aims to provide a nuanced understanding of these interrelated aspects to inform policymakers, businesses, activists, and other stakeholders.

Turkey's Phase-Out of Coal

History, Current Status and Future Projections of Coal in Turkey's Energy Mix

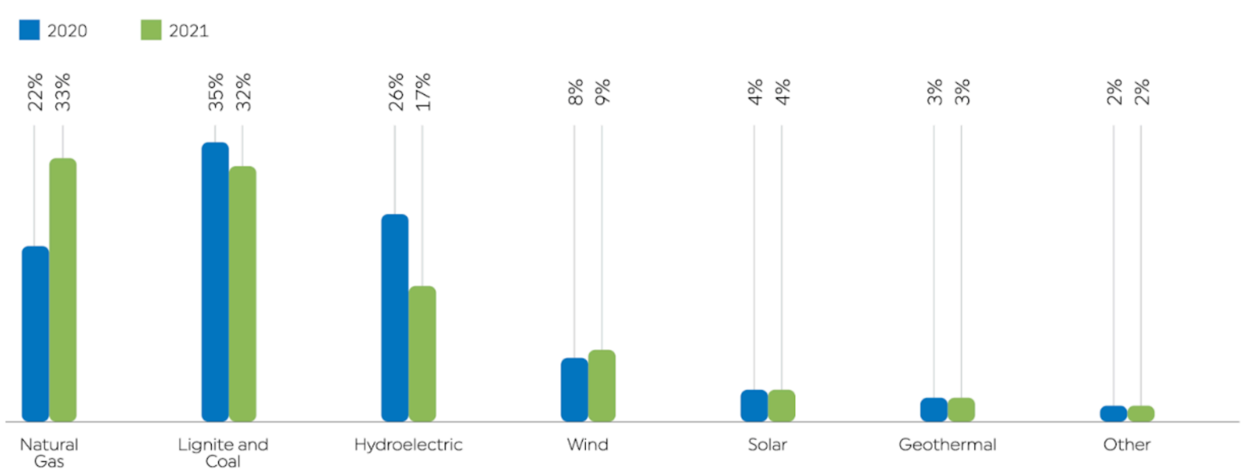
Turkey's reliance on coal dates back to the early 20th century. In the Ottoman Empire period, coal was discovered in various regions, and by the formation of the Turkish Republic in 1923, coal mining had become an essential part of industrialization efforts. The discovery of lignite (domestic coal) deposits across Turkey led to the establishment of numerous coal-fired power plants, mainly in the latter half of the 20th century. The diversification helped reduce dependence on imported energy.

Turkey has been a middle income country and has had current account deficit problems since many years. Both the Turkish economy and the demand for energy have been growing rapidly especially between 2000 and 2010. With its expanding energy needs mostly being met by fossil fuels -in particular lignite (domestic coal)- firing power plants for generating electricity.

According to the data announced by Türkiye Elektrik İletim A.Ş. (TEİAŞ), Turkey's total installed capacity reached 105,135 MW by the end of July 2023. As of the day, the distribution of installed capacity by resources is as follows: 30% hydro, 24.1% natural gas, 20.7% coal, 11% wind, 9.9% solar, 1.6% geothermal and 2.6% other sources.

If we look at the energy generation by source in the years of 2020 and 2021, the main sources of electricity generation were natural gas, coal and hydros.

TURKEY'S ELECTRICITY GENERATION DATA BY SOURCE (ANNUAL CHANGE, 2020-2021)



Source: TEİAS

Turkey has made strides in investing in renewable energy sources and these efforts are aligned with global trends, although coal remains a persistent part of the energy mix. Coal prices, which rapidly rose worldwide in 2021, resulted in an increase in the costs of electricity generation from this source, while the generation of thermal power plants running on imported coal-based raw materials was suppressed. Turkey has recently intensified its efforts to reduce its import bill by returning to domestic alternatives.

The Strategy of the State and Ministry of Energy, existing policy and existing development plan have two pillars; (1) "local/indigenous" and (2) "renewable". (1) Indigenous resource focus is mainly on utilizing lignite resources which obviously ignore carbon in exchange of addressing current account deficit problem and the presumed security of supply. However, it looks like the interest from investors is very limited. (2) The policy to support and incentivize renewable investments had paid off and Turkey had taken a significant step forward to increase installed capacity on hydro, wind and solar.

Mainly by taking advantage of Turkey's enormous solar energy potential and using more wind power, Turkey's energy needs could be met without using coal. According to the IEA's Renewable Energy Market Report, Turkey accelerated its breakthroughs in the field of renewable energy and is expected to be the 5th country in Europe and the 12th in the world to increase its renewable energy capacity the most in the 2021-2026 period. The report predicts that the renewable energy capacity that will be utilized in our country in the same period will increase by 53%, 48% of which will come from solar, 30% from wind, 14% from hydroelectricity, nearly 7% from biofuels, and the rest from geothermal investments.

On the other hand, Turkey also ratified the Paris Agreement in the Grand National Assembly of Turkey and Turkey became the 192nd country to be a party. Turkey's role in international agreements, such as the Paris Agreement, has led to ongoing discussions and pressures to reduce carbon emissions, impacting future coal usage strategies.
Turkey also announced its goal of becoming net-zero emissions by 2053.

Public Debate Overview

The debate around coal in Turkey is dynamic and multifaceted, reflecting the complexity of balancing economic growth, energy security, environmental protection, and social welfare.

The Turkish government's stance on coal has generally been characterized by a commitment to energy security and economic growth. Coal is viewed as a domestic resource that can reduce dependence on energy imports. Supporters of the coal industry also cite its contributions to economic growth, energy independence, and employment, especially in coal-rich regions. Public authorities and some industrial sectors emphasize coal's role in ensuring energy security and independence, reducing reliance on energy imports.

On the other side environmental activists, NGOs, and some political groups emphasize the urgent need to transition away from coal, pointing to its environmental and health impacts, including air pollution and greenhouse gas emissions. According to the most recent data announced by TURKSTAT (Turkish Statistical Institute), Turkey's total greenhouse gas emissions increased by 3% in 2020 compared to the previous year and reached 524 million tons (Mt) carbon dioxide equivalent (CO_2e). It is quite clear that Turkey needs to reduce its emissions rapidly to achieve its 2053 net-zero target. Non-governmental organizations and think-tanks working on climate in Turkey state that it should achieve an absolute reduction of emissions of at least 35% to 340 $MtCO_2e$ by 2030 compared to 2020 to reach its net-zero target, emphasizing that this remains realistic.

Public debates and policy assessments have emphasized the lack of an official and definitive phase-out date for coal. However, the different perspectives of different stakeholders create a complex landscape for coal phase-out, which requires detailed strategic planning.

Impact of the Insurance Sector on Coal Mining and Plants in Turkey

Overview of Coal Power Plants

Before analyzing the insurance sector's approach to the issue, it would be useful at this point to give information about the existing coal power plants in Turkey. There are 32 coal power plants operating at 30 MWe and above. In order to better understand the picture, it is useful to analyze them in 2 groups.

1. Aged Assets

These are 13 power plants (only 1 is operated by the state), with the average age of 34 and with ~6.860 MW installed capacity consisting of 36% of the total coal fired fleet. Nearly all are lignite assets and majority of them are not properly maintained because of being on the privatization list for a long time.

Power Plant	Owner	Location	Age	Type of Coal	Capacity (MWe)	Parent Company	Privatization Cost (USD)
Seyitömer	Çelikler Seyitömer Elektrik	Kütahya - Tavşanlı	48	Lignite	600	Çelikler Holding	2.248 billion
Tunçbilek	Çelikler Orhaneli Tunçbilek Elektrik	Kütahya - Tavşanlı	44	Lignite	365	Çelikler Holding	521 million
Orhaneli	Çelikler Orhaneli Tunçbilek Elektrik	Bursa - Orhaneli	29	Lignite	210	Çelikler Holding	
Yatağan	Elsan Elektrik	Muğla - Yatağan	39	Lignite, fuel-oil	630	Aydem Enerji ●	1.091 billion
Afşin Elbistan A	Çelikler (operational rights)	K.Maraş - Afşin Elbistan	37	Lignite	1355	Çelikler Holding	1.000 billion (+)
Soma B	Soma T.S Elektrik	Manisa Soma	36	Lignite	990	Konya Şeker	685.5 million
Yeniköy	Yeniköy - Kemerköy Elektrik	Muğla - Milas	35	Lignite, fuel-oil	420	IC İçtaş, Limak	2.671 billion
Kemerköy	Yeniköy - Kemerköy Elektrik	Muğla - Milas	27	Lignite, fuel-oil	630	IC İçtaş, Limak	-
Çayırhan	EÜAŞ	Ankara Nallıhan	34	Lignite	620	EÜAŞ	985 million
Kangal	Kangal T.S Elektrik	Sivas - Kangal	32	Lignite	457	Konya Şeker	350 million
Çatalağzı (CATES)	Aydem Enerji	Zonguldak Çatalağzı	31	Hard coal	315	Aydem Holding ●	
Kardemir Karabük D.Ç	Kardemir Karabük D.Ç	Karabük	23		77.5		
Gebze Çolakoğlu	Marmara Elektrik	Kocaeli - Gebze	21	Import coal, fuel-oil	190	Çolakoğlu Grubu	-

● Listed company

Most of the main companies after privatization are major holdings, investing not only in the energy sector but also in the construction business (Çelikler Holding, Cengiz Holding, Limak, Konya Şeker) None of the asset owner are listed, only Aydem Yenilenebilir Enerji as a sister of Aydem Enerji is listed. As an example, Yeniköy-Kemerköy Power Plant was privatized in 2014 with the value of 2.671 billion USD. IC İçtaş- Limak equal partnership is the new owner.

2. New Assets

18 power plants (only 2 are operated by the state), with the average age of 9 and with ~12.300 MW installed capacity consisting 64% of the total coal fired fleet.
For lignite-based assets; the portfolio of Eren Holding, Diler Holding, İzdemir Demir Çelik, Odaş is consisting of only thermal power plants; in other words they have not any other type of power plants in their portfolio.

For import coal-based assets; other than İsken Sugözü all import coal power plants in Turkey are equal or less than 10 years old. In other words, they are not

Power Plant	Owner	Location	Age	Type of Coal	Capacity (MWe)	Parent Company
İsken Sugözü	İskenderun Enerji	Adana - Yumurtalık	18	Import coal	1210	STEAG, OYAK
Afşin Elbistan B	EÜAŞ	K.Maraş-Afşin Elbistan	17	Lignite	1440	EÜAŞ
İçdaş Biga	İçdaş Çelik Enerji	Çanakkale Biga	16	Import coal	405	İçdaş
Çan (18 Mart)	EÜAŞ	Çanakkale Çan	16	Lignite	320	EÜAŞ
Silopi (Ciner)	Silopi Elektrik	Şırnak Silopi	12	Asphaltit	405	Ciner Holding, GSD Holding
ZETES 1	Eren Enerji	Zonguldak Çatalağzı	11	Import coal, hard coal, lignite	160	Eren Holding
ZETES 2	Eren Enerji	Zonguldak Çatalağzı	11	Import coal, hard coal, lignite	1230	Eren Holding
ZETES 3	Eren Enerji	Zonguldak Çatalağzı	5	Import coal, hard coal, lignite	1400	Eren Holding
İçdaş Bekirli	İçdaş Çelik Enerji	Çanakkale Biga	10	Import coal	1200	İçdaş
Çoban Yıldız	Konya Şeker	Konya Çumra	8		37	Konya Şeker
Atlas İskenderun	Atlas Enerji	İskenderun	7	Import coal	1200	Diler Holding
İzdemir II	İzdemir Elektrik	İzmir Aliağa	7	Import coal	350	İzdemir Demir Çelik ●
Polat 1	Polat Elektrik	Kütahya Tavşanlı	7	Lignite	51	Polat Holding
Bolu Böynük	Aksa Enerji ●	Bolu Göynük	6	Lignite	270	Kazancı Holding
Tufanbeyli	Enerjisa Üretim	Adana Tufanbeyli	5	Lignite	450	Sabancı Holding, EON ●
Cenal	Cenal Elektrik	Çanakkale Biga	4	Import coal	1320	Cengiz Holding, Alarko Holding ●
Çan-2	Çan-2 Termik A.Ş. ●	Çanakkale Çan	3	Lignite	330	Odaş Enerji ●
Soma Kolin	Hidro-Gen Enerji	Manisa Soma	2	Lignite	510	Kolin

● Listed company

As an example Bolu-Göynük owned by Aksa Enerji has 390 million USD investment cost (without mining costs) and Cenal owned by Cengiz-Alarko has 1.2 billion USD.
In the light of these examples, it is estimated that the asset size of all coal power plants of the two types, which have been implemented through privatization and investment -whether they are aged or new- is approximately 20 billion USD.

Insurance Companies in the Turkish Market and Their Relationship with the Coal Industry

Insurance Companies Operating in the Turkish Market

In terms of premium volume, developed countries continue to play an important role as the largest countries. According to OECD, in 2022 and 2023 North America is expected to make the largest contribution to global non-life premium volume with a total annual market volume of USD 113 billion. In the same period, China and Developed EMEA countries will add USD 49 billion and USD 30 billion annually to global non-life premium volume, respectively.

Turkey has also increased its premium volume to reach TL 96.3 billion in 2021 and exceed TL 100 billion (around USD 7 billion) in 2022. In a local insurance market of this size, there are 2 different types of players:

International Companies: Several major international insurance companies operate in Turkey, bringing global expertise and aligning with international practices. Their relationships with coal may vary based on global corporate policies and local market dynamics.

Local Companies: Turkey has a robust selection of local insurance companies with diverse ownership structures, ranging from private, public, mixed, to joint-stock, and others. These firms may have unique approaches to the coal industry based on national interests and economic considerations.

As non-life insurance sector players the top 5 companies are:

Company	Total Premium (TL, 2021)	Market Share
Türkiye Sigorta A.Ş.	11.7	11%
Anadolu Sigorta	10.7	10%
Allianz Sigorta	9.9	9%
Aksigorta	7.0	6%
Axa Sigorta	5.9	6%

As can be seen from the figures, since the insurance sector in Turkey is not yet large enough, all insurance in the CM&P sector is underwritten by consortiums consisting of players outside Turkey. International companies apply their global CM&P insurance strategies in Turkey, aligning their local practices with international standards.

Türkiye Sigorta A.Ş

Türkiye Sigorta, which is the leader of the industry, has been incorporated by gathering the local public insurance companies of our country. TVF Finansal Yatırımlar Anonim Şirketi (Turkish Wealth Fund) is the main shareholder -81.10% of the shares- of Türkiye Sigorta. Shares traded at İstanbul Stock Exchange (Borsa İstanbul (BIST)) are 18.90%.

The company's focus on sustainability is quite new. In 2021, they have started to work on sustainability to improve the Environmental, Social and Governance (ESG) performance of the company and to understand how their insurance activities are affected by global sustainability. To this end, the Company established a sustainability committee, determined its policies in this area and published its first sustainability report in 2022. No information was found for CM&P in this report or related policies.

Anadolu Sigorta

Milli Reasürans Şirketi, a subsidiary of İş Bankası, has 57.31% of the shares of Anadolu Sigorta. 30.69% of the shares are quoted on İstanbul Stock Exchange (Borsa İstanbul (BIST)).

In 2019 Anadolu Sigorta published its first Sustainability Report and signed the United Nations Global Compact (UN-Global Compact-UNGC). Then, it is declared that they designed their Environmental and Social Risk Management System in order to reduce their negative impact arising from insurance and investment activities and to increase their positive impact. However, no information on coal phase-out or coal phase-out was found in these policies.

Their first integrated Sustainability Report was published and certified by GRI Standards in 2022. They also Started CDP Carbon Disclosure Project Climate Change reporting.

On the other hand, İş Bankası, the main shareholder of the company and one of the largest private banks in Turkey, added "loans for financing greenfield investments of coal- and natural gas-fired thermal power plants" to the exclusion list in 2020 and "new coal mine investments" in 2021.

Allianz Sigorta

Allianz Sigorta Türkiye has been part of the Allianz Group since 2008 and acts in line with the Allianz Group's policy regarding coal-based business models. Their policy includes restricting investments in coal-based infrastructure, avoiding coverage for coal power plants and mines, and imposing thresholds for coal-based companies based on their electricity generation or revenue from thermal coal.

Furthermore, to support the growth of renewable and low-carbon energy, Allianz permits projects in this category while gradually reducing coal exposure, with the ultimate goal of fully phasing out coal-based business models by 2040 at the latest.

Aksigorta

Aksigorta is a subsidiary of Akbank and 28% of the shares are quoted on İstanbul Stock Exchange (Borsa İstanbul (BIST)). Although Aksigorta's sustainability policy does not explicitly mention coal, it is stated as follows "Aksigorta does not provide products and services or make investments within the scope of fund management activities in sectors and activities that have a negative impact on climate emergency, ecosystem and community welfare and safety and where it is not possible to mitigate these impacts."

On the other hand, Akbank - the main shareholder of the company and one of the largest private banks in Turkey- added "coal-fired power plants" to its non-financing activities (exclusion) list in 2021.

Axa Sigorta

Axa Sigorta is 93% owned by Axa Holding and 7% by Ziraat Bankası, the largest state-owned bank.

Axa Sigorta states that it acts in harmony with Axa Group on environmental issues. In 2017 Axa Group announced that they will not underwrite coal-related businesses.

Although there is no such clear statement about coal in Axa Sigorta's statements, they have also focused on climate change and aim to reduce their global carbon footprint by 25% and to increase the amount of green investments to 12 billion euros.

Insurance companies' approach to coal

Considering the transaction volumes of these top 5 insurance companies, which account for 42% of the Turkish market, it is obvious that these companies are not capable of insuring any coal-based asset in Turkey.

Historically European insurance companies (such as Allianz, Aviva, Fidelis, Hannover Re, KBC, Mapfre, Munich Re, SCOR, Swiss Re, Zurich Re) have been active in the Turkish market as consortiums to insure coal-based assets. However, in alignment with global trends, some insurers -particularly Europe originated- have begun reassessing their relationships with the coal industry. Divestment, restrictions, and new sustainable investment strategies are emerging in the market, reflecting shifting attitudes and pressures.

To cease insurance coverage for coal-based assets, there is a subsequent shift towards alternative insurance providers in China and the EMEA (Europe, Middle East, and Africa) region. In response to the decisions of the aforementioned insurance giants, coal mining companies in China and the EMEA region have sought alternative options. Some have turned to local and specialized insurers that may still be willing to underwrite coal projects. Additionally, there is a growing trend of considering parametric insurance, which provides coverage based on predefined triggers such as weather events or production levels. Certain insurers assess the risks associated with the CM&P sector and may increase costs or impose limitations based on revenue generated from coal. Another notable trend is the increasing collaboration between coal-based enterprises and insurers specializing in renewable energy and sustainable projects. This shift demonstrates a strategic effort by coal companies to diversify their operations and align with evolving environmental standards.

So, the decisions of major insurance companies to withdraw coverage for coal-related assets have significantly impacted the coal industry. As coal projects seek new insurance solutions, a range of approaches is being adopted, including (1) seeking alternative insurers, (2) exploring parametric insurance, and (3) partnering with renewable energy insurers.

Legal Regulations Regarding Insurance and CM&P in Turkey

Regulatory Framework for Insurance Industry

As of the date of this report, Turkey does not have specific legal regulations that dictate the cooperation between the insurance sector and the coal industry. General insurance regulations and business laws apply, but the absence of specific rules related to coal creates a space for varied practices and interpretations.

Insurance Law:

Insurance Law No. 5684: This law governs the general principles and provisions regarding insurance and reinsurance activities in Turkey, including the insurance of CM&P.
Regulatory Bodies: The Insurance Supervision Board and the Undersecretariat of the Treasury are responsible for overseeing the compliance and enforcement of insurance regulations.

Environmental Regulations:

Environmental Impact Assessments (EIA): Insurance of CM&P must comply with EIA regulations, assessing the potential environmental impacts of mining and power plant projects.
Alignment with International Standards: Turkey's alignment with various international agreements on climate change and environmental protection indirectly affects the insurance industry.

Occupational Safety and Health Regulations:

Mining Safety: Specific regulations govern safety and insurance in mining activities, including occupational health and safety standards.

Responsibility and Compliance: Mining companies must adhere to these regulations, and insurance policies must reflect compliance with safety standards.

Legal Provisions Specific to CM&P

Licensing and Permitting:

Mining Licenses: Legal regulations stipulate the criteria for obtaining mining licenses, including insurance requirements for liability and environmental risks.

Power Plant Permits: Power plants, including coal-fired plants, must adhere to specific permitting and insurance requirements.

Insurance for Environmental Liability:

Mandatory Coverage: CM&P operators may be required to have insurance coverage for potential environmental damage, depending on the risk assessments.

Claims and Compensation: Legal provisions outline the procedures for claims and compensation related to environmental damage.

Regulations on Foreign Investment and Participation:

Foreign Insurance Providers: Legal provisions govern the operation of foreign insurance companies in Turkey, including their ability to insure CM&P.

Compliance with Local Laws: International insurers must comply with local regulations, including those specific to CM&P.

Conclusion

The strategies of insurance companies regarding the coal industry in Turkey are multifaceted and reflect a balance of global trends, local realities, risk management considerations, and stakeholder interests. While there is a lack of specific legal regulations targeting the cooperation between the insurance sector and the CM&P industry, the existing legal framework, along with international influences, shapes the practices and evolution of this relationship.

The present research explored various dimensions of Turkey's energy landscape, specifically focusing on the phase-out of coal, public debate, insurance sector's impact on coal mining and plants (CM&P), the presence of insurance companies in the Turkish market, their strategies related to the CM&P sector, legal regulations, and major civil society entities dealing with climate change.

As Turkey's energy landscape continues to evolve, the strategies of insurance companies are poised to evolve in tandem. A proactive approach to risk management, coupled with a responsiveness to emerging environmental and social paradigms, will likely shape future strategies in this domain. Even in the absence of a regulatory framework obligation, the insurance industry's commitment to responsible business practices, especially in European companies, is evident between profitability and sustainability in the absence of clear rules.

In essence, the strategies of insurance companies operating within Turkey's coal industry encapsulate a dynamic equilibrium between localized demands and global imperatives. These strategies exemplify the sector's capacity to adapt, innovate, and contribute to the broader transition towards a more sustainable energy future. The fluid interplay between legal frameworks, international influences, and stakeholder interests underscores the intricate tapestry within which these strategies are woven, ultimately reflecting the industry's commitment to navigating uncharted waters with prudence and foresight.

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