

# EÜAŞ

## **A briefing for investors, insurers and banks**

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# 1. EÜAŞ OVERVIEW

## A. Production figures, legal status

EÜAŞ (Electricity Generation Company) founded in 2001, is a Public Economic Enterprise and an affiliated establishment of the Ministry of Energy in Turkey, and the biggest electricity producing company in the country.

It currently has 6,426 employees according to its [2018 Annual Report](#), and 14 billion TL in paid-in capital.

EÜAŞ's main [responsibility](#) is operating thermal and hydropower plants, as well as the lignite sites covered by the licences it owns - 59% of the 17.5 billion tons of lignite resources in Turkey.

The company owned 49 hydropower plants, seven thermal power plants and one wind power plant at the end of 2018, with a total installed power of 18,489 MW (12,832 MW of hydraulic, 5,656 MW of thermal and 7.2 MW of wind power) according to its 2018 market report.

EÜAŞ is also playing a central role in the planned nuclear power plant project in İğneada.

Since July 2018, EÜAŞ has also been active in wholesale electricity, after the state-owned company Turkish Electricity Trading and Contracting Company (TETAŞ) merged with EÜAŞ.

		Installed power (GWe)		Electricity production/sales (TWh)	
		2017	2018	2017	2018
EdF [18,41]	(Fransa)	129,30	126,50	580,8 /	584,0 /
Enel [30]	(İtalya)	84,92	85,62	249,9 / 284,8	250,3 / 295,4
Engie <sup>3*</sup> [78]	(Fransa)	59,00	59,60	252,0 /	221,0 /
Iberdrola [32,52]	(İspanya)	48,45	47,45	137,6 /	145,6 /
RWE [21]	(Almanya)	43,27	41,70	200,2 / 261,1	176,0 / 216,1
Uniper [75]	(Almanya)	35,32	35,26	133,2 / 725,9	127,2 / 707,0
Vattenfall [25]	(İsveç)	28,56	28,50	109,3 / 157,3	112,3 / 174,1
Endesa [23]	(İspanya)	23,68	23,77	78,6 / 96,5	74,19 / 89,6
<b>EÜAŞ</b>	<b>(Türkiye)</b>	<b>19,90</b>	<b>18,49</b>	<b>47,1 /</b>	<b>45,8 /</b>
Statkraft [45]	(Norveç)	17,48	17,83	62,6 /	61,7 /
PGE [63,64,65]	(Polonya)	16,27	16,23	56,8 / 65,8	65,9 / 76,8
CEZ [34, 35]	(Çekya)	14,87	14,96	62,9 <sup>4*</sup> / 37,0 <sup>5*</sup>	63,1 <sup>4*</sup> / 37,6 <sup>5*</sup>
Fortum [36]	(Finlandiya)	13,72	13,72	73,2 / 93,9	74,6 / 104,0
EnBW [31]	(Almanya)	13,01	13,40	50,2 / 122,0	53,5 / 136,8
E.ON [20,50]	(Almanya)	10,33	10,94	47,7 / 202,9	52,4 / 205,6

*Installed capacity and electricity generation figures of EÜAŞ compared with Europe's biggest energy firms, from EÜAŞ's 2018 electricity market report*

## Production

In 2018, EÜAŞ produced 44.4% of its electricity from thermal power plants (40% lignite and 60% natural gas), 55.5% from hydropower, and 0.1% from wind power. Due to privatisations (10 existing coal plants have been transferred to private ownership as well as many hydropower plants) EÜAŞ's share in Turkey's total electricity generation has dropped to 15.09% in 2018 (46 billion kWh) down from 45.2% in 2010.

EÜAŞ's 2018 production (45.8 billion GWh) was its lowest output since 1989 meaning its share in Turkey's total production has more than halved since 2010, when it was 95,532 GWh.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
TR	194.813	211.208	229.395	239.497	240.154	251.963	261.783	274.407	292.589	303.413
EÜAŞ	84.530	95.532	92.351	90.575	80.118	70.469	55.319	46.509	47.094	45.799
%	43,3	45,2	40,3	37,8	33,4	28	21,1	16,9	16,1	15,1

*EÜAŞ's share in Turkey's total electricity generation*

EÜAŞ's coal plants contributed 2.7% of the country's total electricity production in 2018: Afşin Elbistan B with 1.87% and Çan with 0.81%.

Including EÜAŞ's four natural gas plants, the contribution of EÜAŞ's fossil fuel burning plants in Turkey's overall electricity production in 2018 was 6.7%.

In 2018, 37% of Turkey's electricity came from coal (21% imported hard coal, 16% local lignite and hard coal, with lignite constituting 90% of the local coal), followed by renewables with 33% and natural gas with 30%, according to EÜAŞ's 2018 report.

Despite the shrinkage, EÜAŞ is still the biggest electricity producing company in the country due mostly to its hydroelectric and natural gas plants, and it owns the licences of 59% of the 17.5 billion tons of lignite resources in Turkey, according to EÜAŞ's 2018 annual report.

## Legal status

Elektrik Üretim A.Ş. (EÜAŞ), which translates to “electricity production joint stock company,” was founded in March 2001, following the enactment of the electricity market law no. 4628, which aimed to liberalise the electricity market (the law has been amended and renamed as “Law on the Organization and Duties of the Energy Market Regulatory Authority”.)

EÜAŞ is an “affiliated establishment” of the Ministry of Energy, along with TKİ (Turkish Coal Enterprise), BOTAŞ (Petroleum Pipeline Company) and various others.

EÜAŞ produces and sells electricity in line with the electricity market law (no. 6446) and is required to follow the public procurement law (no. 4734) in its tenders, however this has some major exceptions. EÜAŞ can buy electricity and fuel below a certain limit - as well as related services - without holding a public procurement contract/licence, according to the Court of Accounts 2012 report on EÜAŞ.

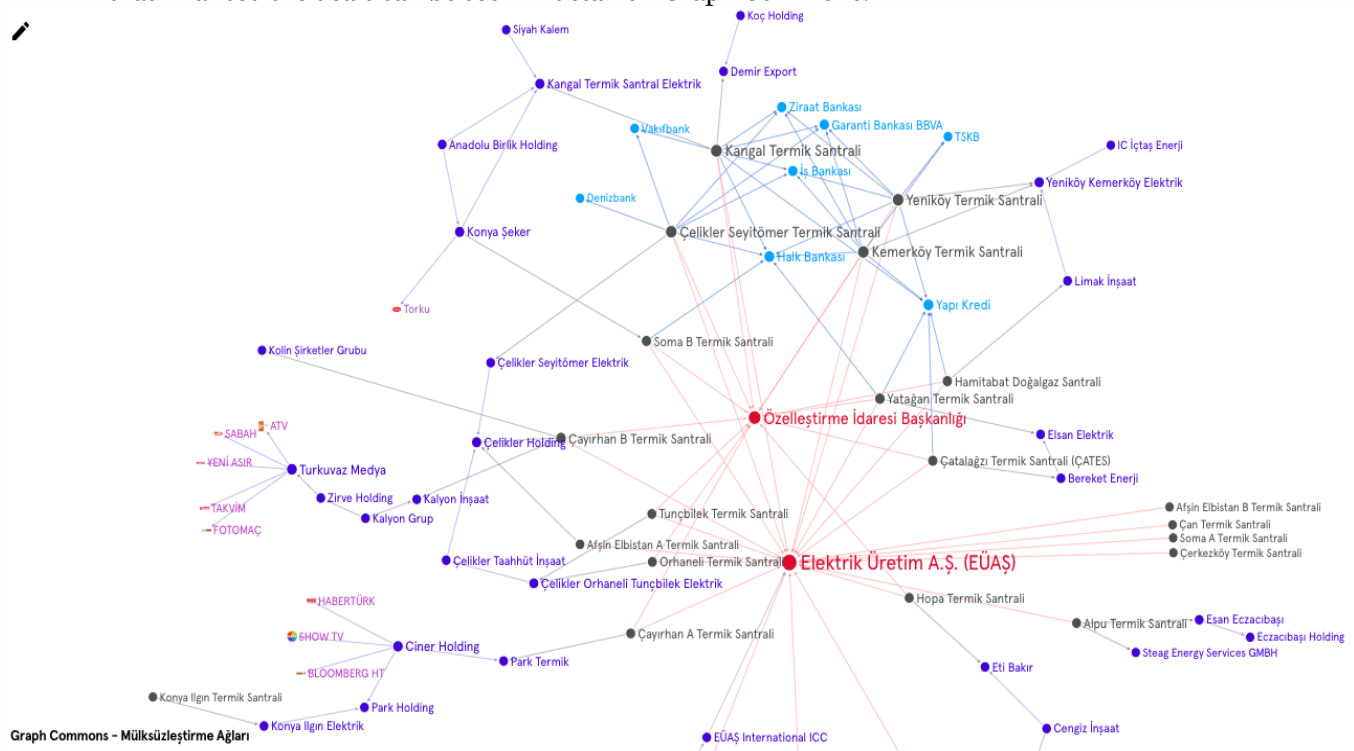
EÜAŞ is defined as a “Public Economic Enterprise” by law, which means all of its capital belongs to the state, and is tied to [decree no. 233](#). There are two types of public economic enterprise and EÜAŞ, like TKİ (Turkish Coal Enterprise), TPAO (Petroleum Corporation), BOTAŞ (Petroleum Pipeline Corporation) and ÇAYKUR (Tea Enterprise), is an “Economic State Enterprise” that is meant to operate in line with trade principles and seek profit.

## B. Privatizations

EÜAŞ has privatised most of its coal plants since 2012. As can be seen in the list below, 10 coal plants have been transferred to private ownership. Many of EÜAŞ's hydropower plants have also been privatised.

The privatisations have proved to be problematic, delaying divestment from coal - (old plants of retirement age have been transferred to new owners who started to rehabilitate the plants with the aim of increasing their efficiency and capacity) when instead they could have been shut down.

An interactive [network map](#) of EÜAŞ's privatised coal plants, and the new owners and the banks that financed the deals can be seen in detail on Graph Commons.



Most of these companies are major holdings, investing not only in the energy sector but also in the construction and the business of running media outlets.

### EÜAŞ coal plant privatisations since 2012

#### 2012-2013

- Kütahya Seyitömer (600 MW, privatised for USD 2.248 billion)
- Sivas Kangal (457 MW, USD 985 million)

#### 2013-2014

- Zonguldak Çatalağzı (300 MW, USD 350 million)
- Muğla Kemerköy and Yeniköy (1050 MW total, USD 2.671 billion)
- Muğla Yatağan (630 MW, USD 1.091 billion)

#### 2014-2015

- Bursa Orhaneli (210 MW, USD 521 million including Tunçbilek)
- Kütahya Tunçbilek (365 MW, USD 521 million including Orhaneli)
- Manisa Soma B (SEAS) (990 MW, USD 685,5 million)

#### 2016-2017

- Ankara Çayırhan B (mine reserves to be given for plant construction - the first electricity sale guarantee agreement)

#### 2018

- Afşin Elbistan A (transfer of operating rights)

#### In progress

- Eskişehir Alpu (mine reserves to be given for plant construction)
- Tekirdağ Çerkezköy (mine reserves to be given for plant construction)
- Afşin Elbistan C

Two major law changes have been made that enabled the privatisations of these coal plants and sites.

**In July 2012**, via a “bag law” that included changes to various laws, the mining law (no. 3213) was changed with an additional “temporary” clause that allowed certain lignite sites to be privatised by the Privatization Authority. Three months after the law change, the flood of EÜAŞ’s coal plant privatisations started with the Seyitömer (600 MW) and Kangal (457 MW) coal plants - the plants were sold, and the mine sites they cover were privatised via a “transfer of operating rights.”

**In June 2016**, changes in the electricity market law (no. 6446) made way for “new generation” privatisations: The government eased the bureaucratic procedures for building coal plants by taking over tasks such as obtaining the EIA (Environmental Impact Assessment) approval, land expropriation, and obtaining building permissions, thus handing out the coal sites to the developer in a ready-to-build state, as well as giving a guarantee to the firm to buy electricity from them with a price (USD) set during the procurement. With this law amendment, EÜAŞ’s primary role was redefined as the developer of coal projects, with the duty to prepare the EIA report, and run the privatisation tenders for private companies to buy these assets and operate them.

EÜAŞ’s coal site in Ankara, Çayırhan, was the first coal site to be privatised with this new law: procurement was approved in March 2017. Attempts were also made to develop EÜAŞ’s Alpu site in Eskişehir utilising the same law, but the procurement procedure has been repeatedly cancelled since no companies entered the seven tenders held by EÜAŞ so far and is yet to be completed.

#### Seyitömer

Seyitömer, built in 1973 in Kütahya, was the first EÜAŞ coal (lignite) plant privatised after the 2012 law change.

The privatisation negotiations took place on 28 December 2012 and the contract was signed on 17 June 2013, between the Privatisation Authority (ÖİB), EÜAŞ, and the company founded by

Çelikler Holding - the winner of the tender - as required by tender provisions, Çelikler Seyitömer Elektrik A.Ş.

While the plant and its immovables were sold, the mine sites' operating rights were transferred until 2054, according to Çelikler's [website](#) and Court of Accounts 2012 EÜAŞ [report](#).

EPDK (Energy Market Regulation Authority) gave them a generation licence (EÜ/4447/02616) for 49 years, from 2013 to 2062, according to the [database](#) on EPDK's website.

The 600-MW-plant was considered “the most profitable” of EÜAŞ's portfolio given its location and site, and produced 1.7% of the country's electricity the previous year, according to Çelikler Holding's [announcement](#) of the deal.

In February 2013, Alim Işık, a MHP member of parliament from Kütahya, with the support of other MPs, asked for a [parliamentary investigation](#) into the Seyitömer privatisation, after MPs claimed it was sold for significantly less than its market value, and against the public interest. The investigation proposal details that both the Seyitömer coal plant and the SLİ (Seyitömer Lignite Facility) were privatised (SLİ until 2054) for an amount equivalent to four years of their net profit, despite SLİ's mine reserve comprising capacity to feed the plant for nearly 30 years.

As of January 2020, production at Seyitömer coal plant was suspended by the Ministry of Environment and Urban Affairs due to lack of compliance with environmental legislation. Following the [Turkish President's veto of a draft legislation](#) which would give derogations from environmental regulations, operations of the five coal plants privatised by EÜAŞ including Seyitömer were suspended until they complete their investments to comply with the environmental legislation.

## **Kangal**

The three units of the Kangal plant were completed in 1989, 1990 and 2000, totalling 457 MW, according to the new operator's [website](#).

Kangal was bought for USD 985 million by a [consortium](#) of Anadolu Birlik Holding's Konya Şeker and Siyah Kalem. Final negotiations took place on 8 February 2013. The deal was approved by the competition board on 13 August 2013, and the same day, EPDK issued an electricity generation licence for 49 years, until August 2062. (According to the new operator's website, Konya Şeker Sanayi ve Ticaret A.Ş. owns 51% and Çoban Yıldızı Elektrik Üretim A.Ş. owns 49% - both owned by Anadolu Birlik - and it seems that Siyah Kalem has withdrawn.)

Although it has been privatised, the government is still actively supporting the lignite plant in various ways. In January 2018, it was announced in the [official gazette](#) that land would be seized in order to extract coal needed to fuel the plant, as decided by the Council of Ministers in November 2017.

Furthermore, the Ministry of Environment [announced](#) in March 2018 that an EIA would not be required for a proposed expansion of the coal mine. The current amount of coal produced is 5.184 billion tons per year, and the plan is to increase that to 8.226 billion tons per year for a period of 14 years.

The new operator has already increased production, compared to when the plant was managed by EÜAŞ. In the first four years (the end of 2013 until October 2017), production increased over 53.04% compared to EÜAŞ's last five years. The company has also explored around 50 million tons of extra reserves, which need to be kept in the ground to avoid deepening the climate crisis.

As of January 2020, production at Kangal coal plant was suspended by the Ministry of Environment and Urban Affairs due to lack of compliance with environmental legislation.

Following the [Turkish President's veto of a draft legislation](#) which would give derogations from environmental regulations, operations of the five coal plants privatised by EÜAŞ including Kangal were suspended until they complete their investments to comply with the environmental legislation.

### **Kemerköy, Yeniköy**

Both plants are in Muğla. [Yeniköy](#) (420 MWe) started operating in 1986-1987 and [Kemerköy](#) (630 MWe) in 1993-1995.

On 26 August 2013 the privatisation board (ÖYK) decided that both plants, and Yeniköy Lignite Facility's (YLI) movables and immovables would be privatised via "asset sales"; while the Kemerköy port and five lignite sites (10413, 32234, 20058131, 20068010 and 72706) would be privatised via "transfer of usage rights", according to the privatisation authority [website](#) on "EÜAŞ power plant privatizations".

Major conglomerates, Limak and İC İctaş (50% each in shares) took over both plants on 23 December 2014.

İctaş Energy representatives told the [media](#) that Yeniköy and Kemerköy coal plants would be rehabilitated in 2019, leading to a 200 MW increase. American General Electric is part of the rehabilitation works.

In 2019, EBRD [invested](#) USD 100 million in a stake of İctaş Sürdürülebilir Enerji Yatırımları, the renewable arm of İC Energy Holding: an equity investment, in the form of capital increase. Despite, EBRD's claim of their client being "an existing renewable energy entity with a portfolio of operational renewable power generation assets only", it is actually misleading. "İctas Yenilenebilir Enerji Üretim ve Ticaret A.S." is not "an existing renewable energy entity"; it was the main energy company of the group (Trade Registry no 137278) founded in 1998 and its name was changed from "İC İctaş Hydroelectric and Thermal Energy Production and Trade Company" (İC İctaş Hidroelektrik Ve Termik Enerji Üretim ve Ticaret AŞ) to "İctaş Renewable Energy Production and Trade Company" (İctaş Yenilenebilir Enerji Üretim Ve Ticaret AŞ) on 8 March 2018.

EBRD's investment was disclosed on 15 May 2018, and it seems very likely that the company was preparing for this investment by changing its name, removing "thermal energy" from its title and changing it to "renewable" just two months before EBRD's announcement.

Following the [Turkish President's veto of a draft legislation](#) which would give derogations from environmental regulations in December 2019, operations of the five coal plants privatised by EÜAŞ were suspended until they complete their investments to comply with the environmental legislation. Yeniköy and Kemerköy plants were allowed to continue their operations due to their ongoing retrofits and were granted environmental permissions. The Union of Chambers of Turkish Engineers and Architects (TMMOB) issued a brief in opposition to the Ministry of Environment and Urban Affairs in January 2020 since the details of how these plants comply with environmental legislation are not shared publicly.

### **Yatağan**

Yatağan, a 630 MWe power plant in Muğla, started operating between 1982-85.

On 12 June 2014, Elsan won the tender for the Yatağan coal plant for USD 1.091 billion. Elsan is owned by Bereket group which privatised the Çatalağzı plant in 2014 as well, meaning the firm privatised two coal plants from EÜAŞ in 2014.



General Electric is involved in the renovation of Yatağan. In 2016 the company [announced](#) plans to renovate the plant and extend its lifespan, along with a 44 MW increase.

Following the [Turkish President's veto of a draft legislation](#) which would give derogations from environmental regulations in December 2019, operations of the five coal plants privatised by EÜAŞ were suspended until they complete their investments to comply with the environmental legislation. Yatağan coal plant was allowed to continue their operations due to their ongoing retrofits and were granted environmental permissions. The Union of Chambers of Turkish Engineers and Architects (TMMOB) issued [a brief in opposition](#) to the Ministry of Environment and Urban Affairs in January 2020 since the details of how these plants comply with environmental legislation are not shared publicly.

## **Çatalağzı**

EÜAŞ's Zonguldak Çatalağzı coal plant (314.68 MWe) contract of sale was signed on 22 December 2014, between EÜAŞ, the privatization authority (ÖİB) and Çates Elektrik Üretim A.Ş., founded by Bereket Enerji.

An EIA [application](#) was submitted in January 2017 by ÇATES to build another plant (660 MWe) that will burn imported coal. The reason, according to the EIA, is that Zonguldak doesn't have the hard coal reserves required to feed this new plant. A port is also planned for the ships needed to transport the coal.

In this application it's stated that the original plant was exempt of an EIA procedure, because it was functioning before 7 February 1993, according to a decision in September 2012.

As of January 2020, production at Çatalağzı coal plant was suspended by the Ministry of Environment and Urban Affairs due to lack of compliance with environmental legislation. Following the [Turkish President's veto of a draft legislation](#) in December 2019 which would give derogations from environmental regulations, operations of the five coal plants privatised by EÜAŞ including Çatalağzı were suspended until they complete their investments to comply with the environmental legislation.

## **Orhaneli and Tunçbilek Privatizations**

For EÜAŞ's Orhaneli (Bursa) and Tunçbilek (Kütahya) plants, the “sale and transfer of operating rights contract” was signed on 22 June 2015, between the privatisation authority, EÜAŞ and “Çelikler Orhaneli Tunçbilek Elektrik Üretim A.Ş.”, a company founded by Çelikler Taahhüt İnşaat ve Sanayi A.Ş., which had won the tender.

EPDK gave Çelikler Orhaneli Tunçbilek Elektrik Üretim A.Ş a generation licence for 49 years, from 22 June 2015 to 22 June 2064, according to EPDK.

As of January 2020, production at Tunçbilek coal plant was suspended by the Ministry of Environment and Urban Affairs due to lack of compliance with environmental legislation. Following the [Turkish President's veto of a draft legislation](#) in December 2019 which would give derogations from environmental regulations, operations of the five coal plants privatised by EÜAŞ including Tunçbilek were suspended until they complete their investments to comply with the environmental legislation. Orhaneli Coal Plant, despite lack of compliance with the pollution thresholds in the legislation was allowed to continue its operation. The Union of Chambers of Turkish Engineers and Architects (TMMOB) issued [a brief in opposition](#) to the Ministry of Environment and Urban Affairs in January 2020 with a press statement.

## Soma B

This 990 MW coal plant in Manisa, Soma, was built between 1981-1985.

In January 2015, Konya Şeker Sanayi ve Ticaret A.Ş. won the privatisation tender for Soma B and sites for USD 685.5 million. The company [plans](#) to rehabilitate the plant to increase production.

In addition to the five coal plants whose operations were suspended by the Ministry of Environment and Urban Affairs due to lack of compliance with environmental standards, [operation at Soma B was partly suspended](#). Four units of the existing six units of the plant continued production to provide heating for households during winter. The Union of Chambers of Turkish Engineers and Architects (TMMOB) issued [a brief in opposition](#) to the Ministry of Environment and Urban Affairs in January 2020 with a press statement arguing the closure of two units not causing any significant reductions in electricity production or air pollution.

## Afşin Elbistan A

Afşin Elbistan A (1355 MW) was taken over by Çelikler in 2018 through a “transfer of operating rights” lasting 20 years, making this the fourth plant the group has privatised from EÜAŞ: they had previously taken over Çayırhan B, Orhaneli and Tunçbilek.

Construction of the lignite plant started in the early 70s and energy production started in 1984: it was the biggest public investment ever undertaken in Turkey at the time, according to information on EÜAŞ's [site](#).

According to the Court of Accounts' 2012 EÜAŞ report, citizens have sued EÜAŞ for harming agricultural sites in Kahramanmaraş by burning low calorie lignite coal, and releasing heavy metals and ash from the Afşin Elbistan plants. These lawsuits resulted in favour of citizens in 2012 with almost TL1.5 million in damages paid for Afşin B, and TL 1 million for Afşin A. As of June 2013, there were 1069 ongoing lawsuits regarding agricultural damage. The Court of Accounts recommended that EÜAŞ take the necessary environmental precautions.

In June 2017, according to media [reports](#), the head of a union announced that the plant was the oldest in Turkey, and had been put out of operation in March 2017 because it had to be rehabilitated.

The plant hadn't operated for two years, and reopened once Çelikler took it over. The low-rank lignite burnt in the plant contains high levels of humidity leading to excessive levels of ash output after burning. There are numerous accounts from local media detailing the extent to which the region - especially the villages of [Çoğulhan](#) and Alemdar villages - has been blanketed in soot since the plant was privatised and has been back operating at full capacity without a filter. Local activists published accounts claiming the Ministry of Environment organized an inspection visit due to complaints. [According to a newspaper article](#) the visit was kept secret and ended up with a small fine given to Çelikler. No official information was shared with the public regarding the inspection. Activists complained that EÜAŞ got an EIA approval for an ash dumping site approximately 500 meters from the nearest village, without even notifying the heads of villages nearby, let alone the residents (The EIA was approved for the “Kışlaköy Ash Storage Facility” in April 2019, according to EÜAŞ's 2018 report). Çelikler is using the EIA obtained by EÜAŞ.

Ali Öztunç, a parliament member from Kahramanmaraş, raised the issue in the parliament in 2018, [claiming](#) the privatisation process was not transparent. Öztunç was still [pushing](#) the government to install a filter to the plant as of October 2019. As of January 2020, the plant's operations were suspended following the [Turkish President's veto of a draft legislation](#) which

would give derogations from environmental regulations. By the end of January, it is announced by Çelikler that [basic filters would be installed by June 2020](#) and the plant would restart its operations. No clear details of how the filter would make the plant comply with Turkish environmental regulation was shared by authorities.

As of January 2020, production at Afşin Elbistan A coal plant was suspended by the Ministry of Environment and Urban Affairs due to lack of compliance with environmental legislation. Following the [Turkish President's veto of a draft legislation](#) which would give derogations from environmental regulations, operations of the five coal plants privatised by EÜAŞ including Afşin Elbistan A were suspended until they complete their investments to comply with the environmental legislation.

In January 2019, officials from the company held a [meeting](#) where they announced that two new units would be constructed, and the lignite site's capacity would be increased.

## **2016 - today: EÜAŞ's "new generation" privatisations, Çayırhan B**

Since a law change in mid 2016, EÜAŞ has switched to a new mode of privatisation for new coal plant developments, where it takes over the entire process regarding permissions that need to be obtained, and commits to buying electricity from the new plant to be built, with a price set during the tender.

The Ministry of Energy and Natural Resources developed this project to increase "renewable energy sources and local coal sources" used in electricity generation. For this, a new law was passed by the parliament in June 2016 (no. 6719), which included a change in the electricity market law (no. 6446), according to the [privatization council](#).

These changes allowed the government to "ease" the bureaucratic procedures of building coal plants, by taking over the process of obtaining the EIA approval, land expropriation, and getting building permissions, thus handing out the coal sites to developers in a ready-to-build state, according to the [2017 annual report](#) of the Ministry of Energy and Natural Resources,

EÜAŞ also guarantees it will purchase electricity from the firms with a price set during the procurement negotiations.

EÜAŞ's Ankara, Çayırhan B was the first coal site to be privatised with this new law: the tender was approved in March 2017. The site in Alpu, Eskişehir, is planned to be the second one to be privatised by EÜAŞ this way.

### **Çayırhan B**

EÜAŞ's Ankara, [Çayırhan B](#) coal site was the first one to be privatised using this new law. The public procurement was approved in March 2017. Kolin, Kalyon and Çelikler consortium won the "transfer of operating rights" tender with a price set at USD 60.4 per MWh, and a new company was founded (Çayırhan Elektrik Üretim ve Madencilik A.Ş.) which will have the operating rights of the planned 800 MW coal plant for 35 years, according to the official gazette [announcement](#). The transfer of operating rights contract was signed between the privatization council, EÜAŞ, and Çayırhan Elektrik Üretim ve Madencilik A.Ş.

The purchase guarantee is for 15 years, according to an [article](#) by state owned Anadolu Agency, quoting a press meeting held on 13 October 2016 by the head of the privatization council, Mehmet Bostan, and undersecretary of the Ministry of Energy, Fatih Dönmez. According to their presentations, EÜAŞ would take care of the EIA, eminent domain and building permissions, and thus the investor would not be financially burdened. The tender process, consists of candidates submitting their offers in closed envelopes, before negotiations take place. The offer with the lowest price per MWh wins. After 35 years, the property is returned to EÜAŞ.

According to EÜAŞ's 2017 report, the utility was responsible for the pre-feasibility reports of Çayırhan B; contributed to the preparations for procurement documents to be submitted to the privatization authority; attained the EIA; took care of the eminent domain process, and completed all urban plans needed for construction.

Celal Koloğlu from Kolin, speaking to [AA](#) (in [English](#)) after the tender on 6 February 2017, said the electricity sale agreement will last 15 years, including the construction of the plant.

The price of electricity has been criticised as being too high, and being quoted in US dollars. (350 Ankara [compared](#) the 22.65 krş/kWh price with the 2016 wholesale producer average 14.57 krş/kWh, the Chamber of Electrical Engineers compared it to the 2017 average in the market (16,81 krş/kWh) stating the Çayırhan price was 1.34 times higher: 1 TL equals 100 Kuruş.)

An EPC contract was signed with Chinese Harbin Electric International to build the 800 MW coal plant, according to [media](#) reports in July 2019.

### C. Current coal plants and lignite sites

Two functioning coal plants remain with EÜAŞ after the past five years of privatisations: Afşin Elbistan B (1440 MW) in Kahramanmaraş, and 18 Mart Çan (320 MW) in Çanakkale.

In 2018, Afşin Elbistan B produced 1.87% of Turkey's total power generation (303 billion kWh) and Çan produced 0.81% according to EÜAŞ's 2018 annual report.

EÜAŞ also owns Soma A, a small plant in Manisa not used for electricity production.

#### **Afşin Elbistan B**

Still owned and operated by EÜAŞ, Afşin Elbistan B produced 1.87% of Turkey's total power generation in 2018. Built in the early 2000s, the plant [uses](#) low calorie lignite for fuel.

Its production dropped due to a major landslide in the Çöllolar site that feeds the power plant, in February 2011. The accident cost 11 workers their lives. At the time of the accident the site was run by Park Termik, owned by Ciner group.

#### **18 Mart Çan**

Still owned and operated by EÜAŞ, Çan contributed 0.81% of Turkey's total power generation in 2018.

French Alstom and Türk Teknotes A.Ş., began construction of the plant in 2000, financed with export credits EÜAŞ secured from France in 2002. According to news reports, the plant entered into full scale operation in August 2006.

In the April 2016 [hearing](#) and October 2014 [hearing](#) of the parliament's Public Economic Enterprise Commission on EÜAŞ, the general manager of EÜAŞ listed Çan among plants that were being prepared for privatisation.

Despite questions regarding its compliance with the existing emission criteria, 18 Mart Çan coal plant was granted environmental license and allowed to continue its production as of January 2020, leading to [opposition and reaction](#).

## Soma A

This small plant in Manisa entered into operation in the mid 1950s and doesn't produce electricity, according to data from EÜAŞ's 2018 annual report. Media [reports claim](#) the plant has been out of action since 2010.

According to the Ministry of Energy's 2016 [report](#), Soma A is used as a research and development plant, and remains under EÜAŞ.

Interestingly, in April 2016, parliament members [asked for a parliamentary investigation](#) into Soma A, which they said was active, despite having already been in operation for its expected lifetime, and causing excessive pollution.

## Coal sites

EÜAŞ still owns 59% of the 17.5 billion tons of lignite reserves in Turkey, according to its 2018 report.

At the end of 2018, EÜAŞ's total coal reserves amounted to 10.398 billion tons, according to EÜAŞ's 2018 market [report](#).

According to the same report, EÜAŞ's coal sites are:

- Afşin-Elbistan: The Afşin Elbistan Basin in Kahramanmaraş is the biggest lignite resource in Turkey, with 4.7 billion tons, which constitutes approximately 27% of the total lignite resources in Turkey.
- Konya/Karapınar and Karaman/Ayrancı: The sites have 1.58 billion tons of lignite resources. (The Ministry of Environment and Urbanization ministry decided an EIA would be unnecessary for the coal search activities in Konya and Karaman sites.)
- Eskişehir/Alpu: The site has 1.364 billion tons of resources.
- Afyonkarahisar/Dinar: The site has 819 million tons of resources.
- Tekirdağ/Malkara: The site has 618 million tons of resources.
- Tekirdağ/Çerkezköy: The site has 507 million tons of resources, 72 million tons of reserve.
- Ankara/Çayırhan: The site has 567 million tons of resources and 313 million tons of reserve.

## D. New coal projects

More coal plant projects are in line: EÜAŞ is doing technical work to prepare lignite sites in Çayırhan-2, Eskişehir-Alpu, Afşin Elbistan, Tekirdağ-Çerkezköy, Karapınar Ayrancı, Afyonkarahisar-Dinar, Tekirdağ Malkara so that private sector developers can take them over and build coal plants, according to EÜAŞ's 2017 annual [report](#).

According to EÜAŞ's 2018 report, EIA reports are being prepared for the planned Afşin-Elbistan C coal plant, Karapınar-Ayrancı coal plant and Afyonkarahisar-Dinar coal plant.

According to a [report](#) prepared by the Investment Office of the Presidency, EÜAŞ is planning to develop coal plants in Afşin Elbistan, Konya Karapınar and Ankara Çayırhan. TKİ (Turkish Coal Enterprise) has plans to build plants in Eskişehir Alpu, Manisa Soma, Adana Tufanbeyli, Kütahya Tunçbilek, Tekirdağ Saray, Bingöl Karlıova, and Bolu Göynük. MTA (Directorate of Mineral Research and Exploration) has plans to build a plant in Afyon Dinar.

Since EÜAŞ, TKİ and MTA are all public entities that collaborate in various ways including land transfers, EÜAŞ is likely to get involved with the coal plants planned by TKİ and MTA as well, at least to obtain EIA permits, and as the main tendering body once these projects come to the tendering stage. Çatalca-Çerkezköy in Tekirdağ and Vize Kırklareli are also listed as lignite reserves to be developed via Power Purchase Agreements in line with the June 2016 amendment in the electricity market law, which allows for “new generation” privatisations with eased bureaucracy, explained in detail under the privatisations chapter.

## Alpu

Eskişehir Alpu’s mine reserves are planned to be privatised, in return for a plant construction by the chosen private company. Alpu’s [final EIA](#) was approved on March 2018.

The planned coal plant in Eskişehir’s fertile agricultural areas has been subject to intense protests since it was announced.

EÜAŞ has held seven tenders for the site, the last one in June 2019, however no companies entered the tenders and they all had to be cancelled.

Eczacıbaşı’s ESAN and their subsidiary Palaris have conducted studies of the site to determine the reserves, according to the EIA, as well as TKİ’s [website](#), which mentions a meeting in March 2018. German STEAG has also conducted its own studies of the site for the pre-feasibility report, according to the EIA.

## Çerkezköy

EÜAŞ has a coal plant project ongoing in Thrace (region geographically located in the European portion of Turkey). The area earmarked for development is Çerkezköy, which incorporates Istanbul’s Silivri and to a lesser extent in Tekirdağ’s Çerkezköy districts, according to [changes](#) to the urban plan by the Ministry of Energy in October 2016. The changes to the plan involved eliminating clauses that banned coal plants in the area, which had protected forests and agricultural land, according to previous urban plans.

On 22 Feb 2017 the official gazette published a report claiming the site was expropriated and land was seized by EÜAŞ in line with demands from the Ministry of Energy on 30 December 2016, and rubber-stamped by the Council of Ministers on 23 January 2017. The coal reserves are owned by EÜAŞ, and the site covers 545,52 hectares. Çerkezköy municipality and various citizens filed law-suits against the decision and the court issued a suspension of execution in their favour in September 2017.

EÜAŞ submitted another EIA application on 8 January 2018. In the application, EÜAŞ stated that coal will only be extracted from the two sites it owns in Tekirdağ, Pınarca, essentially cancelling the other sites it had earmarked for development in Istanbul. EÜAŞ confirmed that it continues to assess further sites with approximately 495 tons of combined coal reserves .

Following campaigns and lawsuits by NGOs and local communities, the EIA was cancelled by the Ministry of Environment in February 2019. However, it is possible that the project will surface again as it is listed as a strategically important energy project by the Turkish government in a number of its vision documents.

## 2. FINANCIAL AND ECONOMY RISKS

### Public incentives for coal plants

Turkey continues to provide significant subsidies to coal mining and coal-fired power through state-owned enterprises, despite, as a member of the G20, committing to phase-out fossil fuel subsidies in 2009; and, as a signatory of the Convention on Biological Diversity, committing to phasing-out environmentally harmful subsidies, including fossil fuels by 2020. However, the government continues to promote coal mining and coal-fired power production as an energy security measure.

According to a 2019 [report](#) by the Overseas Development Institute (ODI) on coal subsidies, support for coal resulting from annual expenditures of EÜAŞ in primary materials and supplies is estimated at TL 953 million (USD 272 million) per year (2016–2017 average).

According to EÜAŞ's 2018 annual report, the company spent almost TL 4 billion on primary materials and supplies. 40% of the company's electricity generation is powered by coal, suggesting that approximately TL1,6 billion (278 million USD) was spent on the coal side of its operations.

The government also supports energy producers through price and purchase guarantees if they use local coal. These dynamics render the coal projects extremely dependent on state support. Despite all governmental subsidy schemes favouring coal (both local and imported), the impact of cheaper renewable energy sources on electricity prices, and comparatively high operational costs of aged plants, operators struggle to achieve profits. As a result, coal and natural gas plant owners have lobbied the government for access to additional payments through capacity mechanisms.

### Capacity mechanisms

In November 2017, the head of Turkey's Energy Market Regulatory Authority (EMRA) announced that capacity mechanisms would be introduced specifically for electricity producers running on natural gas and local coal due to oversupply in the Turkish electricity market. The need for capacity mechanisms was justified as "local coal and natural gas power stations hesitating to operate due to high operation costs on top of low electricity prices in the market". The mechanism was put into use starting in 2018. As of 2019, imported coal and hydroelectric plants can also benefit from capacity payments. At the end of each year, plant operators must apply to TEİAŞ (Turkish Electricity Transmission Company) to benefit from the capacity payments the following year. TEİAŞ decides whether to grant payments based on a series of indicators, including their capacity usage ratio in the year of application. The list of plants to benefit from capacity payments, and the amounts, are renewed every year. For 2020, 42 power stations, 20 of which are coal plants, will have access to monthly capacity payments.

According to data from Turkish grid operator TEİAŞ, nine coal plants privatised by EÜAŞ since 2012 have received a total of almost TL 173 million worth of capacity payments from August to October 2019, averaging TL 57.6 million per month.

	October (TL)	September (TL)	August (TL)
<b>Çatalağzı</b>	5.431.490,47	2.873.574,79	3.481.358,02
<b>Orhaneli</b>	3.624.675,86	1.917.664,63	2.323.265,49

<b>Tunçbilek</b>	6.300.031,85	3.333.083,76	4.038.056,68
<b>Seyitömer</b>	10.356.216,74	5.479.041,8	6.637.901,4
<b>Kangal</b>	7.887.985,09	4.173.203,5	5.055.868,23
<b>Soma B</b>	17.087.757,63	9.040.418,97	10.952.537,3
<b>Yatağan</b>	10.874.027,58	5.752.993,89	6.969.796,47
<b>Kemerköy</b>	10.874.027,58	5.752.993,89	6.969.796,47
<b>Yeniköy</b>	7.249.351,72	3.835.329,26	4.646.530,98
<b>Total</b>	<b>79.685.564,5</b>	<b>42.158.304,49</b>	<b>51.075.111,0</b>

Despite all the incentives, the government has been unable to realise various coal plant projects, such as the plant planned in Alpu, Eskişehir. Construction hasn't started in the Çayırhan B plant planned in Ankara, although the tender was completed in early 2017. One factor is the stagnant economy, and the slump in the Turkish Lira in the summer of 2018, which meant huge losses for many energy companies that have debts in foreign currencies. Campaigns by environmental activists influencing public opinion is another factor.

### Bank debt and risky loans

Almost all of EÜAŞ's coal plant privatisations were sponsored by Turkish banks, which started to cause financial trouble with Turkey's economic crisis of 2018 and the massive devaluation of the Turkish Lira in the summer of 2018. The energy sector, which expanded rapidly with reckless borrowing - especially in the past half decade - was badly affected by this crisis due to their foreign debt. Many energy companies needed to ask for restructuring deals from banks due to their immense debt loads.

One example was Bereket, which privatised two plants from EÜAŞ - Çatalağzı and Yatağan in 2014. Bereket's financial troubles were covered by international media outlets such as Bloomberg, which wrote in 2018 that "Bereket's debt load is the third-biggest among companies that have so far requested restructuring ... The company is also in discussion with local banks on its loan portfolio of around \$4 billion, which has become more challenging to repay amid a plunge in the nation's currency." In March 2019, according to [Bloomberg HT](#) as well as other Turkish media, Bereket restructured its debts worth USD 4.6 billion with nine banks. Bereket had the highest "group 2 debt", meaning risky loans held under close watch, in the energy sector.

### International pressure for divestment from fossil fuels

As a state-owned enterprise subsidising fossil fuels, EÜAŞ, has been on the radar of groups working on divestment. It has been on the Global Coal Exit List (GCEL); the world's largest coal company database (which lists companies that have a coal share of revenue/power generation above 30% and operate more than 10 GW of coal capacity) since 2017. The GCEL also includes Turkish companies that took over the transfer of operation rights of EÜAŞ's privatised coal plants.

Many global institutions, including Norway's Government Pension Fund, Axa Insurance etc. use the GCEL list to make their fossil fuel divestment decisions. This renders EÜAŞ, and the new owners of its former coal assets, financially vulnerable.



### 3. THREAT TO HUMAN LIFE AND ENVIRONMENT

Despite intense campaigning, protests and lawsuits by locals, environmental activists and NGOs, the Turkish government continues to support and encourage the coal industry.

Residents of Turkey suffer from very high levels of air pollution - Turkey ranks as one of the two worst countries (along with South Korea) within the OECD in terms of highest levels of particulate matter (PM) pollution, according to a 2019 study by the Health Effects Institute.

The government has also exempted privatised coal power plants from compliance with environmental regulations since 2014. This exemption expired at the end of 2019 and five of those plants faced suspension of operations. There are [serious questions](#) on the level of compliance of the rest of the privatised coal fleet with industrial emission limits.

Muğla, a city located close to the Mediterranean Sea in the south of Turkey, famous for its beaches and olive groves, is an example of the government's prioritisation of coal, while abandoning sectors such as tourism and agriculture that could provide a quality livelihood to residents. Despite years of ongoing local struggle, including many residents putting cases before the courts, three coal plants owned by EÜAŞ in Muğla were privatised - Yatağan, Yeniköy and Kemerköy - and their rehabilitations, and coal mine expansions, are going on. Residents of Muğla have been complaining about a range of negative impacts due to the three coal plants, including public health issues such as lung diseases and the destruction of agricultural land such as fertile olive groves. All three plants are exempt from EIA procedures (due to a much disputed regulation that stipulates investments made before 1993 can be kept exempt from EIA procedures), according to Freedom of Information requests by the Ecology Collective Association (EKD).

All three were privatised using funds from Yapı Kredi, a bank partially owned by Italian bank UniCredit. The case of Muğla was the focus of an investigative [article](#) by l'Espresso magazine in 2019 October.

## 4. NON-ALIGNMENT WITH THE PARIS AGREEMENT

Turkey has signed the Paris Climate Agreement in 2016, but not ratified it. It is now the only G20 country which has not yet ratified the agreement.

According to the latest climate science, limiting warming to 2°C by 2100 means that the net emissions of greenhouse gases need to be reduced by 40-70% by the time we reach 2050, and brought to zero by the end of the century. Respecting the more stringent limit of 1.5°C will require reducing emissions of greenhouse gases even more rapidly in the coming years and decades, and bringing them to zero by the middle of the century.

This has two implications for coal power. First, research has shown that no new investments in fossil power infrastructure – notably coal – are feasible from 2017 at the latest<sup>1</sup>. Second, [existing coal needs to retire early](#): even with the construction of no new coal plants, emissions from coal power generation in 2030 would still be 150% higher than what is consistent with the well below 2°C limit.

More and more investors acknowledge [climate science research](#) that supports the need to phase out coal by 2030 in the Organisation for Economic Co-operation and Development (OECD) countries and in the European Union; by 2040, in China; and by 2050, in the rest of the world. Moreover, OECD countries should phase out gas by 2035 and oil by 2040. In the European Union, a quarter of the coal plants already in operation will need to be switched off before 2020, and a further 47% should go offline by 2025.

The analysis above underscores how ambitious climate action is incompatible with continued coal power generation in developed economies. That in turn illustrates the risk of investing in new coal plants or upgrading existing coal plants which run the growing risk of becoming stranded assets.

Investors, insurers and banks that wish to minimise financial risks and maximise returns must therefore drive the development by EÜAŞ of a business strategy that is aligned with the Paris Agreement.

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<sup>1</sup> Pfeiffer, Millar, Hepburn, Beinhocker (2016), The '2°C capital stock' for electricity generation: Committed cumulative carbon emissions from the electricity generation sector and the transition to a green economy, in Nature

## 5. RECOMMENDATIONS

Given a coal plant's lifespan averages 35 years, and considering the plants' negative impacts on public health, the environment, as well as the burdens it places on the economy, we recommend that EÜAŞ shuts down its coal plants, stops extracting new coal reserves, and ends its efforts to privatise its coal assets. We also recommend that the new owners of EÜAŞ's old and dirty coal plants should avoid spending money on investments that will make them run for longer, and instead start planning how to decarbonise their portfolios while ensuring their closures are supported by a transition plan developed by decision makers, which is just and fair for workers, their families, and local communities.

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This paper was issued **by the Europe Beyond Coal campaign in January 2020.**

*Europe Beyond Coal is an alliance of civil society groups working to catalyse the closures of coal mines and power plants, to prevent the building of any new coal projects and hasten the just transition to clean, renewable energy and energy efficiency. Our groups are devoting their time, energy and resources to this independent campaign to make Europe coal free by 2030 or sooner. [beyond-coal.eu](http://beyond-coal.eu)*

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