

MW100 Türkiye

**Türkiye power generation evolution
and top 100 players by capacity**

February 2025

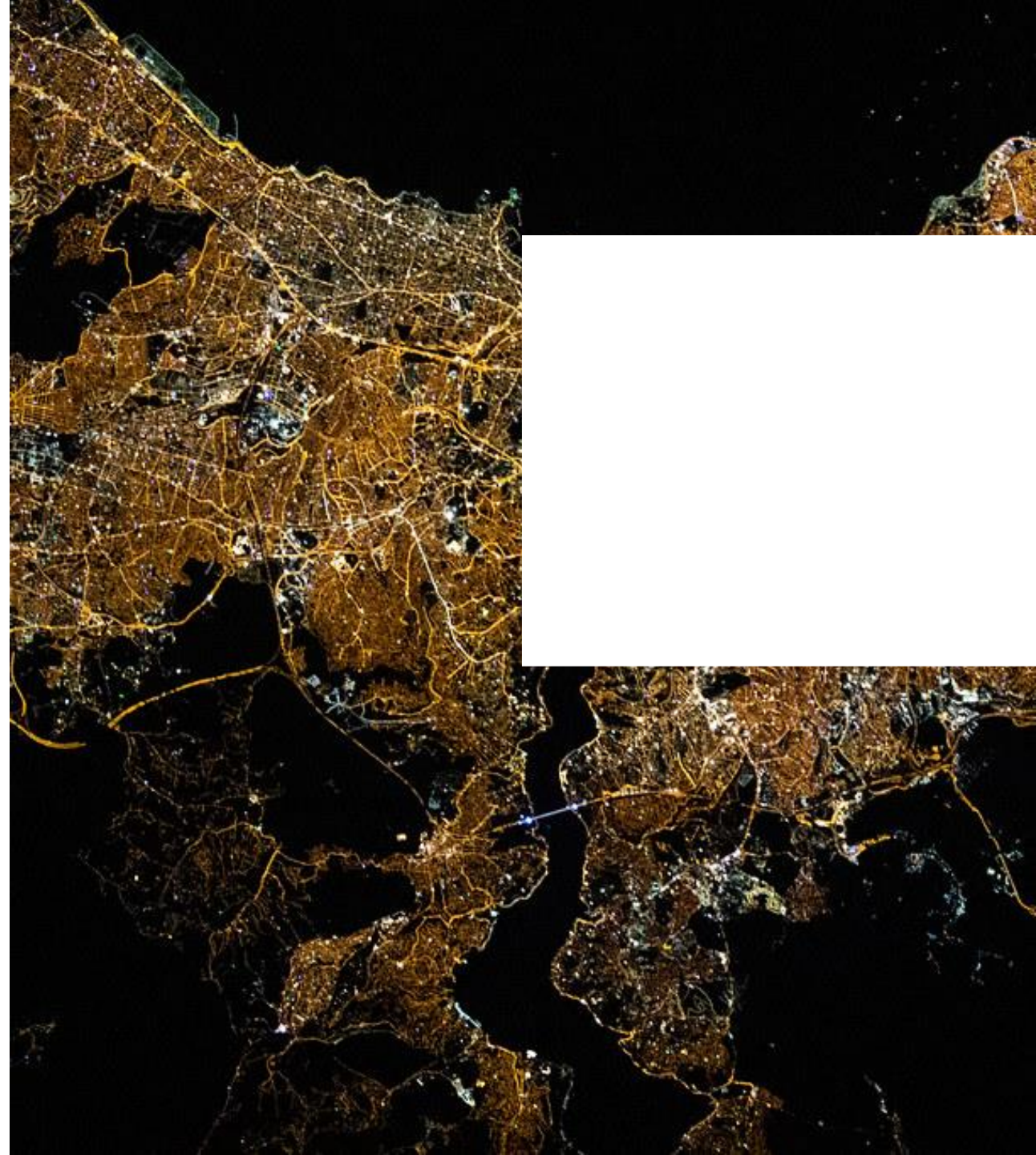
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KEARNEY



Evolution of power generation industry

Türkiye's power generation industry has evolved significantly over the past 15 years



The country's power generation capacity has more than doubled over the past 15 years with a diversified source of power, including wind, hydropower, and solar

Significant capacity additions

- In the past 15 years, capacity additions have occurred across all major energy sources; hydropower, and solar plant additions made 52% of total additions.

Capacity additions continued in 2024

- The power generation industry added 8.7 GW in 2024, a record-breaking 8% annual increase compared with 2023.
- The new installations were mainly driven by renewable energy sources, which constituted 93% of the total increase.

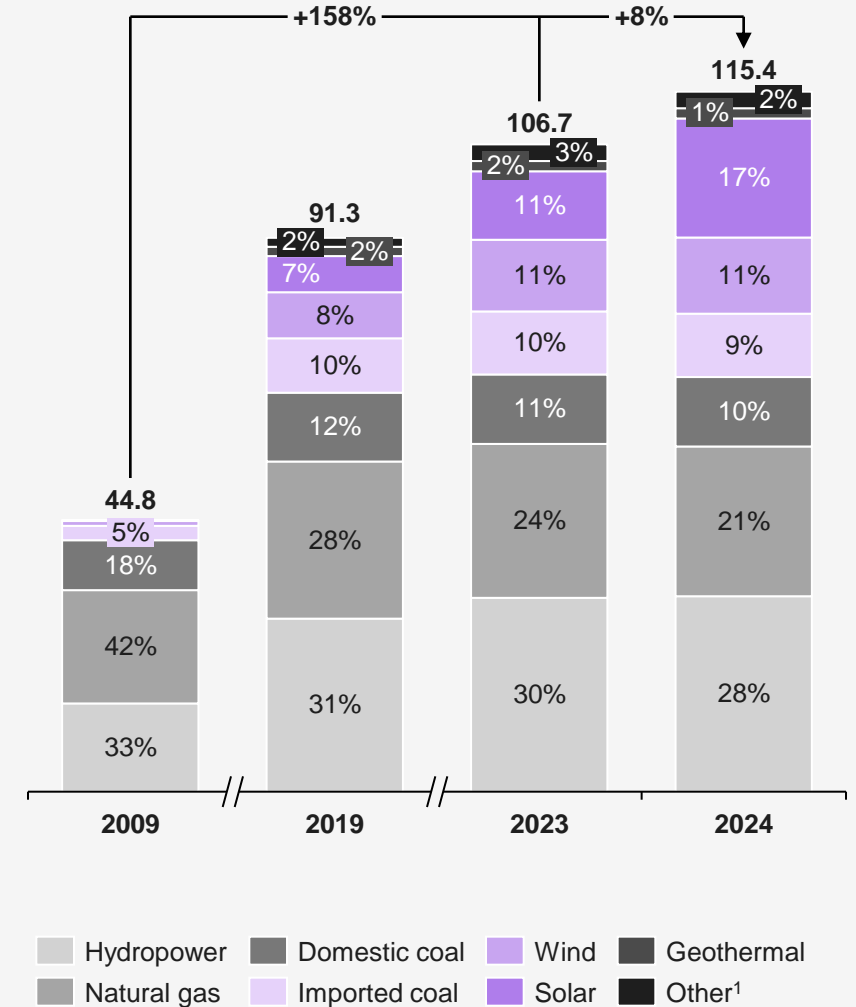
Solar has been the main source of capacity additions in the energy transition

- The highest capacity additions occurred in solar power, reaching 19.6 GW—a 73% increase from the previous year.

Natural gas and coal capacities stayed nearly the same in the energy transition period

- Due to increased investments for renewables, capacities of natural gas and coal have remained relatively stable compared with the previous year.

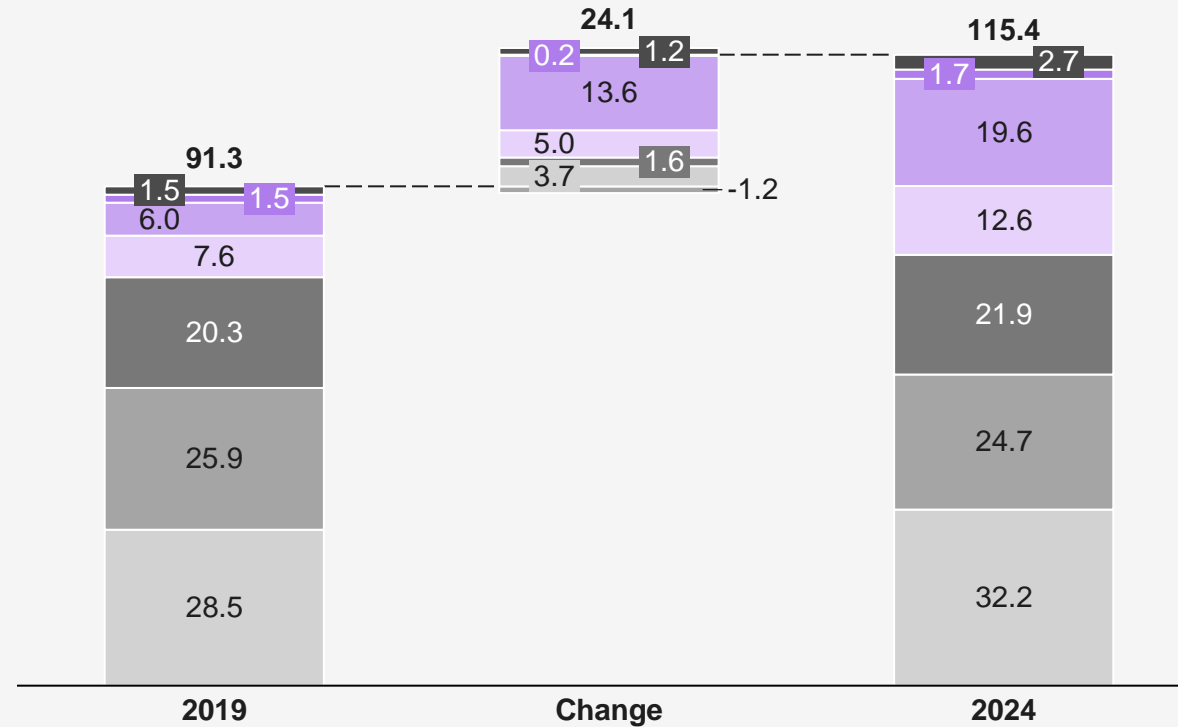
Türkiye power generation capacity by source (GW)



¹ Other includes sources such as fuel oil, waste heat, and biomass.
Sources: TEİAŞ, EPDK, EPIAŞ, ETKB, EÜAŞ, TÜİK; Kearney analysis

Over the past five years, capacity additions have been driven by renewable energy sources

Energy capacity additions (GW)



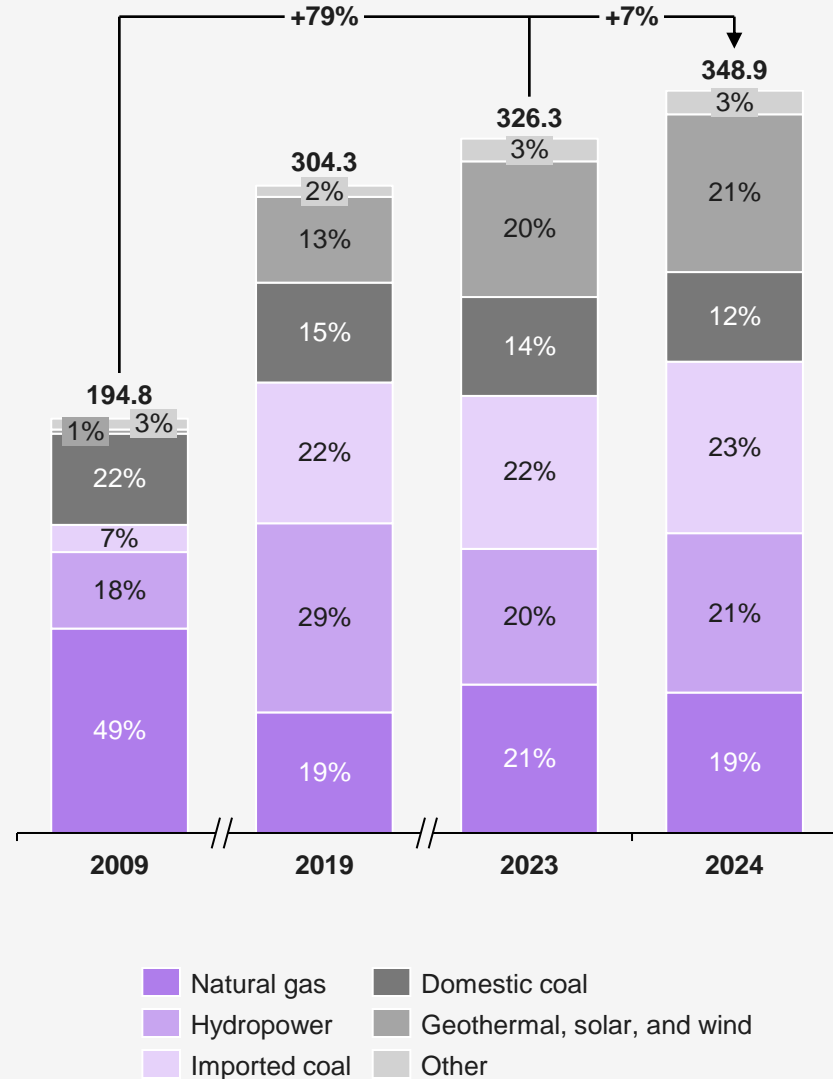
	CAGR (%, 2019–2024)
Geothermal	+2.7%
Solar	+26.7%
Wind	+10.6%
Coal	+1.5%
Natural gas	-1%
Hydropower	+2.5%

Power generation capacity has increased more than 25% over the past five years

- Reported total installed capacity is 115.4 GW, which consists of 28% hydropower, 21% natural gas, and 19% coal.
- Natural gas capacity was the only declining category.
- Capacity additions in renewables are the main driver of growth as the total share of renewables in total capacity addition was 93%.
- Solar power showed the largest increase in capacity over the previous five years, with a total capacity increase of ~13.6 GW.

With a 7% increase, 2024 saw record growth in electricity generation compared with 2023

Türkiye electricity generation by source (TWh)



Electricity generation has increased by 1.8 times over the past 15 years

Electricity generation in 2024 was 349 TWh in 2024, a nearly 7% increase compared with 2023 due to growing demand, especially from industrial and commercial consumers.

- The share of geothermal, solar, and wind energy has nearly doubled over the past five years.
- The combined share of geothermal, solar, and wind increased by 20 pps from 1% to 21% in the past 15 years.

Energy generation from natural gas and domestic coal decreased compared with the previous year

- Increased investments in renewables resulted in a 5.4% decline in natural gas generation and a 9.4% decline in domestic coal generation vs. 2023.
- Thanks to new projects coming online in 2024, electricity generation from geothermal, solar, and wind increased by 16% vs. 2023.

The energy transition to renewable energy supports Türkiye's goals to shift into domestic sources of energy in the long term

Renewable capacity has recorded significant growth over the past five years

- Capacity additions in hydropower, solar, and wind power plants are leading the growth and make-up ~93% of renewable capacity additions in the past five years.

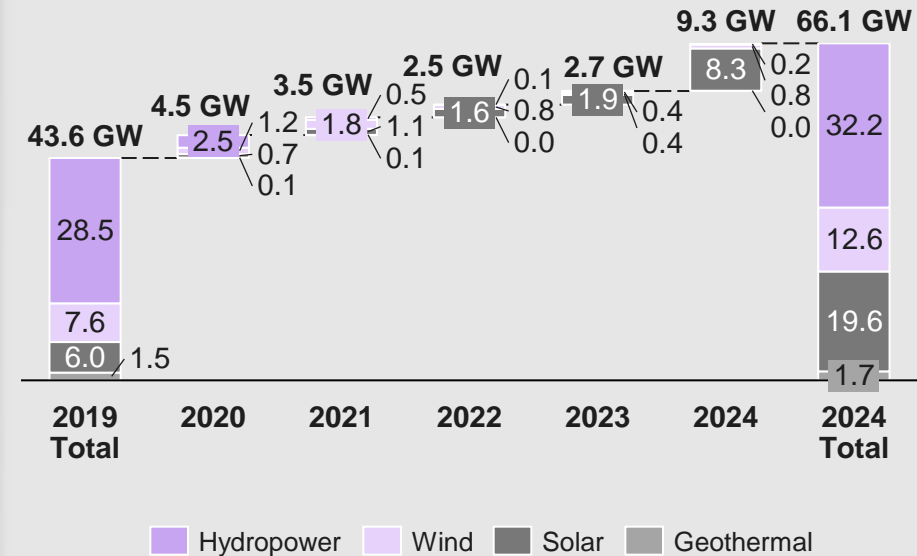
Total renewable energy generation is consistently increasing

- With significant capacity additions and state-led incentives, total generation of renewable energy has more than tripled in the past 15 years.

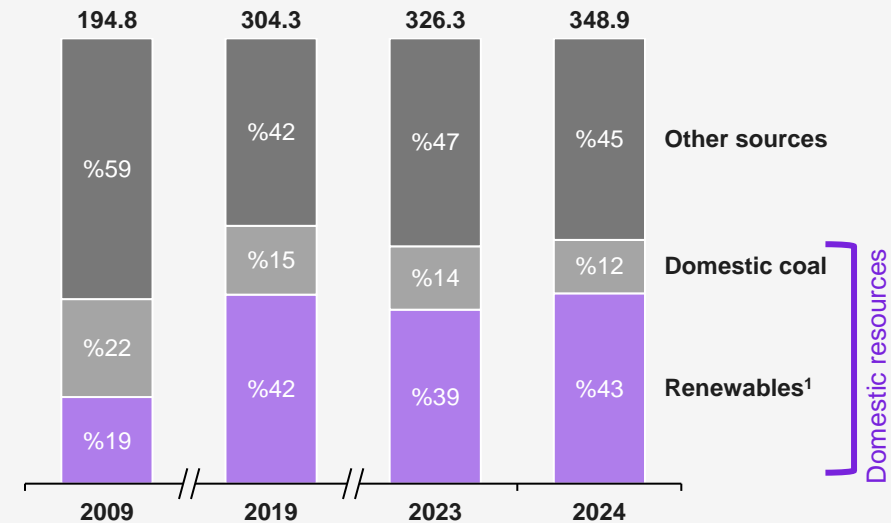
Share of domestic sources is increasing

- With increases in renewable energy sourced production and capacity additions in domestic coal, share of domestic sources is increasing.

Renewable energy capacity additions



Share of renewables in electricity generation (TWh)



¹ Renewables include hydropower, geothermal, solar, and wind. Sources: TEİAŞ, EPDK, EPIAŞ, ETKB, EÜAŞ, TÜİK; Kearney analysis

In Türkiye's energy transition, storage-integrated solar (SPP) and wind (WPP) power plants enhance the reliability of renewable energy systems by providing a continuous source of electricity

SPPs and WPPs present significant opportunities for Türkiye's renewable energy ecosystem

Storage-integrated wind and solar power plants regulation



In July 2022, Türkiye published a regulation in the Official Gazette, enabling electricity storage-integrated solar (SPP) and wind (WPP) projects to obtain pre-licenses without competition.



Regulations allow investors to gain additional capacity rights by integrating energy storage systems into existing power plants.



At the end of 2023, EMRA Chairman Mustafa Yılmaz announced that investment demand for storage-integrated wind (WPP) and solar (SPP) projects had reached \$280 billion, with about \$35 billion expected to be implemented in the field.

Remarkable private-sector projects



EMRA has granted Aydem Yenilenebilir Enerji a pre-license for 500 MW of storage-integrated capacity, including 400 MW in solar (SPP) and 100 MW in wind (WPP) projects.



IC Enterra Yenilenebilir Enerji has completed all pre-license processes for its 485 MW storage-integrated wind (WPP) and solar (SPP) projects, aiming to produce 1.5 billion kWh of electricity annually.



Enerjisa Üretim and Kontrolmatik Teknoloji have formed a strategic partnership to develop a 250 MW wind power plant (WPP) and a 1,000 MW energy storage facility in Tekirdağ.

Leading private-sector players have been taking steps to promote storage-integrated wind and solar power plants

Acquisitions

- Acquisition of renewable energy companies to expand portfolios with energy storage-integrated wind and solar power plants.
- Acquisition of stake in energy storage firms to meet Türkiye's growing renewable energy demands and enhance grid stability.

Early-stage investments

- Corporate venture investments in cutting-edge battery storage technologies to support large-scale deployment of energy storage-integrated solar and wind power plants.
- Investments in innovative grid solutions to optimize energy distribution and balance supply–demand fluctuations in renewable energy systems

Future plans

- Announced plans to integrate battery storage systems into new wind and solar power plants to maximize energy efficiency and reliability
- Promises to boost local production of energy storage systems, such as lithium-ion batteries, for domestic use and export
- Partnerships to develop large-scale storage-integrated renewable energy facilities and reduce Türkiye's dependency on imported fossil fuels

Notes: SPP is solar-integrated power plants; WPP is wind power plants.
Sources: desktop research; Kearney analysis

Top power generation players
in Türkiye by capacity

**We have analyzed
more than 81% of
power generation
capacity of Türkiye
and identified the top
100 players**



Methodology

① Power generation capacity data was compiled as of 31 December 2024.

② Türkiye's Energy Market Regulatory Authority (EPDK/EMRA) data was used as a basis in compiling the data.

③ Only power plants with a license issued by EPDK were considered in the study as most of the solar power plants were installed under the unlicensed distributed generation regulation and solar capacities are lower than the market actuals.

④ Only power plants located within Turkish borders were included in the study.

⑤ Power plants that are in a construction stage were excluded from the study or were partially included (for those that partially commenced operation).

⑥ Allocation of power generation capacity to groups/companies was completed based on equity stake of each group/company.

⑦ Consolidation of power plants to groups/companies was completed based on information gathered from groups/companies, their websites, and general news sources.



Summary of study results

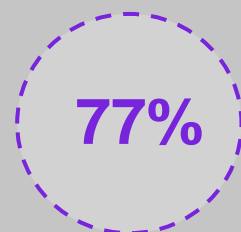
The state-owned generation company EÜAŞ still tops the list, despite long history of privatizations in the Turkish energy markets

- EÜAŞ holds 19% of total capacity of Türkiye.
 - High-capacity concentration of EÜAŞ enables the company to stabilize the electricity supply in market to ensure no outages and stable prices.
- ENKA is the largest private-sector player with 3.4% of total capacity share.
- Enerjisa Üretim, Cengiz Enerji, and Limak Enerji follow ENKA and EÜAŞ making up the top five.

The top 10 players hold nearly half of market capacity



Capacity share of top 10 players



Capacity share of top 100 players

Capacity top 10

Rank		Companies	Capacity (MWe)
2024	2023		
1	1	EÜAŞ	21,802
2	2	ENKA	3,978
3	3	Enerjisa Üretim	3,901
4	4	Cengiz Enerji	3,161
5	7	Limak Enerji	3,033
6	5	Eren Enerji	2,818
7	6	Çelikler Holding	2,769
8	8	Aydem Enerji	2,125
9	9	İÇDAŞ	1,684
10	10	Bilgin Enerji	1,639

Generation top 10

Rank	Companies	Generation (TWh)
2024		
1	EÜAŞ	52.6
2	Eren Enerji	19.2
3	Enerjisa Üretim	13.0
4	İÇDAŞ	12.9
5	Limak Enerji	12.6
6	Cengiz Enerji	10.6
7	EMBA Power	9.6
8	Çelikler Holding	8.9
9	Diler Holding	8.4
10	Aydem Enerji	6.1

Top 10 players across segments (1 of 2)

Natural gas (CCGTs)

Rank		Companies	Capacity(Mwe)
2024	2023		
1	1	EÜAŞ	4,735
2	2	ENKA	3,969
3	3	Enerjisa Üretim	1,587
4	8	Limak Enerji	1,220
5	5	Palmet Enerji	956
6	6	ACWA Power	927
7	7	Akenerji	904
8	4	Aksa Enerji	900
9	9	Bilgin Enerji	887
10	10	Gama Enerji A.Ş.	870

Domestic coal

Rank		Name	Capacity
2024	2023		
1	1	Çelikler Holding	2,530
2	2	EÜAŞ	2,424
3	3	Anadolu Birlik Holding	1,508
4	4	Aydem Enerji	945
5	5	İC İtaş Enerji	582
6	6	Limak Enerji	558
7	7	Kolin	510
8	8	Enerjisa Üretim	450
9	9	Ciner Holding	433
10	10	İÇDAŞ	405

Hydropower

Rank		Name	Capacity
2024	2023		
1	1	EÜAŞ	14,451
2	2	Cengiz Enerji	1,435
3	3	Enerjisa Üretim	1,350
4	4	Limak Enerji	1,123
5	5	Özaltın Enerji	908
6	6	Aydem Enerji	852
7	7	Sanko Enerji	558
8	8	Doğuş Enerji	535
9	9	Kolin	512
10	10	Energo-Pro	473

Import coal

Rank		Name	Capacity
2024	2023		
1	1	Eren Enerji	2,790
2	2	EMBA Power	1,350
3	3	Diler Holding	1,260
4	4	İÇDAŞ	1,200
5	5	STEAG GMBH	680
6	8	OYAK Şirketleri	680
7	7	Cengiz Enerji	660
8	6	Alarko Holding	660
9	9	İzdemir Enerji	370
10	10	Çolakoğlu Metalurji	190

Note: CCGTs are combined cycle gas turbines.
Source: Kearney analysis

Top 10 players across segments (2 of 2)

Geothermal

Rank		Name	Capacity
2024	2023		
1	1	Zorlu Enerji	305
2	2	Gürüş Holding	260
3	3	Kipaş Holding	229
4	4	Çelikler Holding	213
5	5	Greeneco Enerji	130
6	6	Türkerler Holding	78
7	7	Sanko Enerji	71
8	8	MB Holding	68
9	9	Soyak Enerji	60
10	10	Ozmen Holding	42

Solar

Rank		Name	Capacity
2024	2023		
1	1	Kalyon Enerji	1,150
2	2	Cengiz Enerji	276
3	24	Limak Enerji	118
4	3	Ecogreen Enerji Holding	100
5	4	Akfen	100
6	6	Aydem Enerji	82
7	-	IC İctaş Enerji	78
8	7	Erciyes Anadolu Holding	68
9	-	Kolin	67
10	8	Sanko Enerji	56

Biomass

Rank		Name	Capacity
2024	2023		
1	1	ITC Entegre Atık	169
2	4	İstanbul Büyükşehir Belediyesi	131
3	2	Yeşil Global Enerji	126
4	3	Oltan Köleoğlu Enerji	99
5	7	Mosbio Enerji	40
6	6	Mutlular Enerji	36
7	8	Novtek Enerji	32
8	9	TPCL Yenilenebilir Enerji	31
9	10	Kastamonu Entegre	30
10	11	Gülsan Holding	30

Wind

Rank		Name	Capacity
2024	2023		
1	1	Polat Enerji	723
2	2	Borusan ENBW Enerji	670
3	3	Gürüş Holding	619
4	4	Fiba Yenilenebilir Enerji	553
5	7	Enerjisa Üretim	505
6	5	Eksim Enerji	505
7	6	Demirer Holding	420
8	8	RT Enerji	393
9	9	Bilgin Enerji	370
10	11	Akfen	349

Source: Kearney analysis

Top 100 players in power generation

MW100 Türkiye

Full list



Long-list of the top 100 groups/companies of Turkish electricity generation industry based on capacity (1 of 4)

Rank 2024	Rank 2023	Companies	Natural gas	Domestic coal	Imported coal	Domestic or imported coal	Fuel oil	Others	Hydro-electric	Wind	Geo-thermal	Biomass	Solar	Total installed capacity
1	1	EÜAŞ	4,735	2,424	-	-	-	175	14,451	17	-	-	-	21,802
2	2	ENKA	3,969	-	-	-	-	-	9	-	-	-	-	3,978
3	3	Enerjisa Üretim	1,587	450	-	-	-	-	1,350	505	-	-	9	3,901
4	4	Cengiz Enerji	658	13	660	-	-	-	1,435	119	-	-	276	3,161
5	7	Limak Enerji	1,220	558	-	-	-	-	1,123	-	14	-	118	3,033
6	5	Eren Enerji	-	-	2,790	-	-	-	-	-	-	28	-	2,818
7	6	Çelikler Holding	-	2,530	-	-	-	-	27	-	213	-	-	2,769
8	8	Aydem Enerji	-	945	-	-	-	-	852	239	7	-	82	2,125
9	9	İÇDAŞ	-	405	1,200	-	-	-	4	64	-	-	12	1,684
10	10	Bilgin Enerji	887	-	-	-	-	-	382	370	-	-	-	1,639
11	16	Kalyon Enerji	-	-	-	-	-	-	216	200	-	-	1,150	1,566
12	11	Anadolu Birlik Holding	19	1,508	-	0	-	-	-	3	-	3	-	1,532
13	12	EMBA Power	-	-	1,350	-	-	-	-	-	-	-	9	1,359
14	14	Diler Holding	-	-	1,260	-	-	-	38	-	-	-	-	1,298
15	17	OYAK Şirketleri	245	-	680	-	239	36	5	-	-	21	-	1,226
16	15	Akenerji	904	-	-	-	-	-	292	28	-	-	-	1,224
17	13	Aksa Enerji	900	270	-	-	-	-	-	-	-	-	-	1,170
18	18	Gama Enerji A.Ş.	870	-	-	-	-	-	130	118	-	-	-	1,117
19	19	Kolin	-	510	-	-	-	-	512	-	-	-	67	1,089
20	22	İC İçtaş Enerji	-	582	-	-	-	-	388	-	-	-	78	1,048
21	20	Sanko Enerji	-	-	-	-	0	-	558	335	71	-	56	1,021
22	21	Güriş Holding	-	-	-	-	-	-	99	619	260	-	-	979
23	23	Palmet Enerji	956	-	-	-	-	-	-	-	-	-	-	956
24	24	Özaltın Enerji	-	-	-	-	-	-	908	-	-	-	38	946
25	25	Alarko Holding	163	-	660	-	-	-	87	-	-	-	21	930

Source: Kearney analysis

Long-list of the top 100 groups/companies of Turkish electricity generation industry based on capacity (2 of 4)

Rank 2024	Rank 2023	Companies	Natural gas	Domestic coal	Imported coal	Domestic or imported coal	Fuel oil	Others	Hydro-electric	Wind	Geo-thermal	Biomass	Solar	Total installed capacity
26	26	ACWA Power	927	-	-	-	-	-	-	-	-	-	-	927
27	27	TÜPRAŞ / ENTEK	498	-	-	-	-	-	264	116	-	-	34	913
28	28	Ciner Holding	379	433	-	-	-	-	-	-	-	-	-	812
29	461	HABAŞ	801	-	-	-	-	-	-	-	-	-	-	801
30	29	RWE-Turcas	798	-	-	-	-	-	-	-	-	-	-	798
31	31	Polat Enerji	-	-	-	-	-	-	-	723	-	-	26	749
32	30	Unit	519	-	-	-	-	-	218	-	-	-	-	737
33	32	Borusan ENBW Enerji	-	-	-	-	-	-	49	670	-	-	8	727
34	34	STEAG GMBH	-	-	680	-	-	-	-	-	-	-	-	680
35	33	Akfen	-	-	-	-	-	-	228	349	-	-	100	677
36	35	Zorlu Enerji	50	-	-	-	-	-	119	191	305	-	4	668
37	36	Fiba Yenilenebilir Enerji	-	-	-	-	-	-	-	553	-	-	25	578
38	42	Eksim Enerji	-	-	-	-	-	-	63	505	-	-	-	569
39	37	Çolakoğlu Metalurji	377	-	190	-	-	-	-	-	-	-	-	567
40	38	Türkerler Holding	-	-	-	-	-	-	121	341	78	-	-	539
41	39	Doğuş Enerji	-	-	-	-	-	-	535	-	-	-	-	535
42	41	Doğan Grubu	-	-	-	-	-	-	211	261	-	-	43	515
43	43	BİS Enerji	486	-	-	-	-	-	-	-	-	-	-	486
44	44	Energo-Pro	-	-	-	-	-	-	473	-	-	-	-	473
45	45	Fernas Enerji	-	-	-	-	-	-	185	255	-	-	20	459
46	40	Erciyes Anadolu Holding	-	-	-	-	-	-	204	150	-	-	68	423
47	46	Demirer Holding	-	-	-	-	-	-	-	420	-	-	-	420
48	48	RT Enerji	-	-	-	-	-	-	-	393	-	-	-	393
49	49	Kipaş Holding	42	-	8	55	-	9	47	-	229	1	-	391
50	50	İzdemir Enerji	-	-	370	-	-	-	-	-	-	-	-	370

Source: Kearney analysis

Long-list of the top 100 groups/companies of Turkish electricity generation industry based on capacity (3 of 4)

Rank 2024	Rank 2023	Companies	Natural gas	Domestic coal	Imported coal	Domestic or imported coal	Fuel oil	Others	Hydro-electric	Wind	Geo-thermal	Biomass	Solar	Total installed capacity
51	47	Gülsan Holding	-	-	-	-	-	-	340	-	-	30	-	370
52	51	Ansaldo Energy	346	-	-	-	-	-	-	-	-	-	-	346
53	60	Sancak Enerji	-	-	-	-	-	-	-	294	-	-	42	336
54	52	ODAŞ Enerji	-	330	-	-	-	-	-	-	-	-	-	330
55	53	Ayen Enerji	-	-	-	-	-	-	171	138	-	-	6	314
56	58	Ağaoğlu Enerji	-	-	-	-	-	-	20	272	-	14	-	306
57	54	Şişecam Topluluğu	290	-	-	-	-	-	-	-	-	-	-	290
58	55	SOCAR	229	-	-	-	0	-	-	57	-	-	3	289
59	59	Lodos Enerji	-	-	-	-	-	-	-	268	-	-	-	268
60	56	Ece Tur	-	-	-	-	-	-	18	171	-	-	50	240
61	75	Rönesans Holding	-	-	-	-	-	-	144	93	-	-	-	236
62	62	Yıldırım Holding	-	-	-	-	-	-	157	76	-	-	-	233
63	63	Yıldızlar Enerji	-	-	-	-	-	-	55	166	-	-	-	221
64	67	Yılsan Yatırım Holding	-	-	-	-	-	-	111	69	12	-	19	210
65	64	Universal Wind	-	-	-	-	-	-	-	200	-	-	-	200
66	65	Dost Enerji	-	-	-	-	-	-	-	185	-	-	-	185
67	66	Ünal Şirketler Grubu	-	-	-	-	-	-	185	-	-	-	-	185
68	69	Enda Enerji Holding	-	-	-	-	-	-	104	69	8	-	-	180
69	68	Tektuğ Elektrik	-	-	-	-	-	-	155	25	-	-	-	180
70	73	Anatolia Holding	-	-	-	-	-	-	-	150	-	-	19	169
71	70	ITC Entegre Atık	-	-	-	-	-	-	-	-	-	169	-	169
72	72	Erdem Holding	-	-	-	-	-	-	13	150	-	-	-	164
73	71	Kıvanç Enerji	-	-	-	-	-	-	29	99	-	-	35	163
74	74	Doruk Madencilik	-	145	-	-	-	-	-	-	-	-	-	145
75	76	Akiş Enerji	-	-	-	-	-	-	-	141	-	-	-	141

Source: Kearney analysis

Long-list of the top 100 groups/companies of Turkish electricity generation industry based on capacity (1 of 4)

Rank 2024	Rank 2023	Companies	Natural gas	Domestic coal	Imported coal	Domestic or imported coal	Fuel oil	Others	Hydro-electric	Wind	Geo-thermal	Biomass	Solar	Total installed capacity
76	77	Bewen Enerji	-	-	-	-	-	-	-	138	-	-	-	138
77	78	Genergy	136	-	-	-	-	-	-	-	-	-	-	136
78	112	Ataseven Group	-	-	-	-	-	-	-	133	-	-	-	133
79	79	Ekvator Enerji	-	-	-	-	-	-	118	-	-	-	14	132
80	96	İstanbul Büyükşehir Belediyesi ¹	-	-	-	-	-	-	-	-	-	131	-	131
81	87	Greeneco Enerji	-	-	-	-	-	-	-	-	130	-	-	130
82	80	Kardemir	-	-	-	108	-	-	21	-	-	-	-	129
83	85	Yeşil Global Enerji	-	-	-	-	-	-	-	-	-	126	-	126
84	81	Türkiye Şeker Fabrikaları	42	-	-	-	14	66	-	-	-	-	-	122
85	92	Ecogreen Enerji Holding	-	-	-	-	-	8	-	-	-	15	100	122
86	82	Statkraft	-	-	-	-	-	-	122	-	-	-	-	122
87	83	Özdoğan Enerji	-	-	-	-	-	-	122	-	-	-	-	122
88	84	Aksa Akrilik	-	-	120	-	-	-	-	-	-	-	-	120
89	88	Göлтаş Enerji	-	-	-	-	-	12	102	-	-	-	4	118
90	121	Murat Hes Enerji	-	-	-	-	-	-	109	-	-	-	-	109
91	86	Zafer Şirketler Grubu	-	-	-	-	-	-	20	86	-	-	-	105
92	#N/A	Metgün Enerji	-	-	-	-	-	-	28	67	-	8	-	102
93	89	Çalık Enerji	-	-	-	-	-	-	29	72	-	-	-	101
94	90	Oltan Köleoğlu Enerji	-	-	-	-	-	-	-	-	-	99	-	99
95	91	MÖN İnşaat Enerji	-	-	-	-	-	-	66	30	-	-	-	96
96	93	Makyol	-	-	-	-	-	-	92	-	-	-	-	92
97	94	Pakmem Elektrik	-	-	-	-	-	-	-	90	-	-	-	90
98	95	Melike Tekstil	10	-	-	-	-	-	79	-	-	-	-	88
99	99	Kale Enerji	-	-	-	-	-	-	58	28	-	-	-	86
100	97	Kastamonu Entegre	54	-	-	-	-	-	-	-	-	30	-	85

¹ İSTAÇ was 96th in the 2023 list. This year, İSTAÇ and İstanbul Elektrik AS consolidated under İstanbul Büyükşehir Belediyesi.
Source: Kearney analysis

Thank you

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