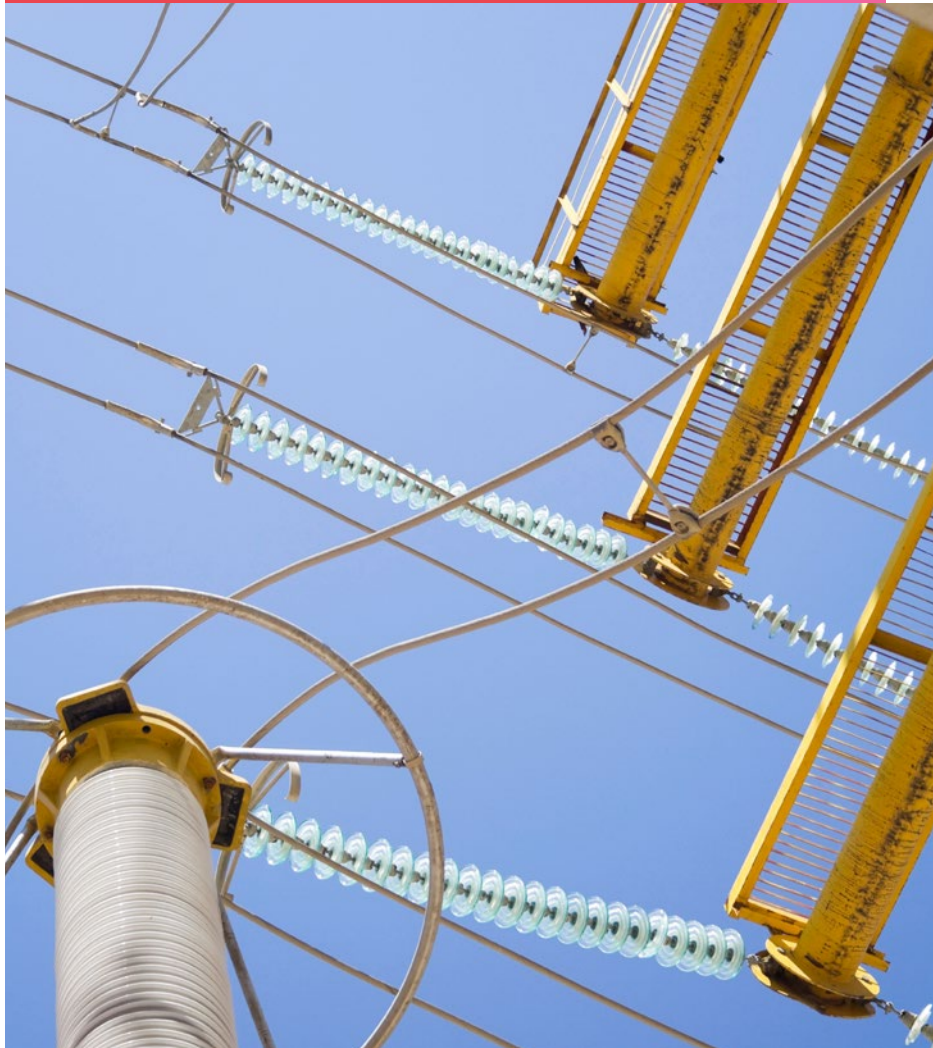


Privatisation Update

12 October 2015





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Electricity generation

In March 2010, Turkey's Privatization Administration announced a strategy to privatise some of the thermal and hydroelectric power plants owned by EÜAŞ – the state-owned Electricity Generation Company. The plants in the portfolio included 56 small hydroelectric power plants with an overall capacity of around 150 MW, 27 hydroelectric power plants with a total capacity of 3.7 GW and 18 thermal power plants with a total capacity of 11.8 GW.

Fast forward almost five years, while there is some progress, the privatization of the generation assets is far from complete. Fifty-five small hydroelectric power plants have been privatised, but the privatization of larger hydroelectric power plants has not started yet. Ten of the thermal power plants with a total installed capacity of 5.8 GW have been transferred to their new owners. The privatization revenues from the privatised thermal assets have reached USD 8.66 billion.

A closer look at these tenders will enable us to make better predictions about the privatization prospects of the remaining assets. A combination of several factors seems to have affected the investment decisions of the bidders in these tenders:

- **Efficiency of the power plants:**

The thermal assets in line for privatization have generally completed significant portion of their asset life and run at low efficiency rates. For example, gas-fired Hamitabat's low efficiency was the decisive factor that led to a low deal value, USD 105 million, for the 1,156-MW plant near İstanbul. Indeed Limak, the plant's new owner, has announced that it will invest EUR 520 million to increase the plant's efficiency from 38% to 62%. In the meantime, a 25% stake in the plant was sold to InfraMed Infrastructure fund. A comparison of the power plants' ages and capacity factors provided in Table-1 gives a rough idea about their efficiencies, but one must keep in mind that generation figures vary greatly from year to year due to market conditions.

Table-1: Thermal Power Plants in the Privatization Portfolio

<i>Power plant</i>	<i>Fuel</i>	<i>Location</i>	<i>Est.</i>	<i>Current owner</i>
Power plant	Fuel	Location	Est.	Current owner
Hamitabat	Gas	Kırklareli	1985	Inframed %25, Limak %75
Seyitömer	Coal	Kütahya	1973	Çelikler İnşaat
Kangal	Coal	Sivas	1989	Siyahkalem & Konya Şeker
Yatağan	Coal	Muğla	1982	Elsan Elektrik
Çatalağzı	Coal	Zonguldak	1989	Elsan Elektrik
Kemerköy	Coal	Muğla	1994	IC İçtaş Enerji
Yeniköy	Coal	Muğla	1986	Çelikler İnşaat
Orhaneli	Coal	Bursa	1992	
Tunçbilek	Coal	Kütahya	1956	
Soma A	Coal	Manisa	1954	EÜAŞ
Soma B	Coal	Manisa	1981	Konya Şeker
Çan	Coal	Çanakkale	2003	EÜAŞ
İstanbul Fueloil	Fuel oil	İstanbul	1967	EÜAŞ
Hopa	Fuel oil	Artvin	1973	EÜAŞ
Aliağa	Gas	İzmir	1975	EÜAŞ
Bursa	Gas	Bursa	1998	EÜAŞ
İstanbul Doğalgaz (A)	Gas	İstanbul	1988	EÜAŞ
İstanbul Doğalgaz (B)	Gas	İstanbul	2013	EÜAŞ
Afşin Elbistan A	Coal	Kahramanmaraş	1984	EÜAŞ

* Hamitabat's generation figure is from 2012, Seyitömer and Kangal's generation figures are from 2013. All the remaining are 2014 figures.

Source: EÜAŞ, PwC

<i>Acquirer/Bidding deadline</i>	<i>Deal value (USD mn)</i>	<i>Installed capacity (MW)</i>	<i>Generation* (GWh)</i>	<i>Capacity factor</i>
Limak	105	1156	6,384	0.63
Çelikler İnşaat	2248	600	1,967	0.37
Siyahkalem & Konya Şeker	985	475	1,276	0.31
Elsan Elektrik	1091	630	1,722	0.31
Elsan Elektrik	350	300	1,511	0.57
IC Ictas Enerji	2671	630	3,399	0.62
		420	2,528	0.69
Çelikler İnşaat	521	210	1,299	0.71
		365	2,222	0.69
		44		
Konya Şeker	685.5	990	5,535	0.64
		320	1,917	0.68
		330	229	0.08
09 October 2015		50 (inactive)		
20 November 2015		180	301	0.19
26 November 2015		1432	8,764	0.70
		1350.9	8,042	0.68
		816	4,530	0.63
To be transferred to ERG-Verbund		1355	2,337	0.20
		1440	3,037	0.24

- **Size and calorific value of the accompanying coal field:**

The inclusion of the operational rights for the feeding fields in the tenders helps the privatization prospects of the coal-fired assets. The tender for the lignite-fired Seyitömer is a particularly good example of this. The 600-MW plant, with its particularly large field of over 200 million tonnes that meets the plant's coal needs for over 30 years with a high calorific value, received a USD 2.25 billion bid (corresponding to USD 3,750/kW) from Çelikler İnşaat, a construction company.

475-MW Kangal, on the other hand, was sold to the Konya Şeker-Çoban Yıldızı Elektrik-Siyah Kalem consortium at a value of USD 985 million (corresponding to USD 2,053/kW). The plant's accompanying lignite field has a reserve of 91.7 million tonnes and a lower calorific value, meeting the plant's coal needs for around 13 years.

- **Measures to increase the plants' desirability:**

420-MW Yeniköy and 630-MW Kemerköy plants were bundled and the operational rights for the Kemerköy port were also included in the privatization package.

For hard coal-fired, 300-MW Çatalağzı, the requirement to use only local coal was eliminated in order to enable a larger reinvestment by the buyer.

- **Vertical integration and portfolio diversification strategy of the bidder:**

Some power plants may be particularly interesting for the potential bidders as they fit their vertical integration or portfolio diversification strategies. For example, once rehabilitated, Hamitabat will prove valuable to the vertical integration efforts of Limak, a part of the consortium holding the operating licenses for the Boğaziçi Electricity Distribution and Supply Companies, which operate in the same region as Hamitabat.

Prominent construction company IC İçtaş Holding, which holds electricity distribution and supply licenses in the Thrace region, offered USD 2.7 billion for the Yeniköy and Kemerköy lignite power plants and the operational rights of the Kemerköy port.

Similarly, Elsan Elektrik placed the highest bid, USD 1.1 billion, for the 630-MW Yatağan lignite power plant in Muğla, where it is part of the consortium that runs the power distribution and supply businesses.

In the case of Çatalağzı, Demir Madencilik, which also supplies hard coal to the plant, made the highest offer, but due to financing difficulties, the tender was awarded to the second highest bidder, Elsan Elektrik. The plant attracted USD 350 million.

Hydroelectric power plants

55 small hydroelectric power plants with an average established capacity of 3 MW have been privatised in multiple privatization rounds since 2010. Most of these power plants have a capacity of less than 1 MW. The tenders for ten of these power plants took place in 2014, and they received surprisingly high bids, USD 2.5 million per MW on average, despite their small sizes. The acquisition of these operating assets is more favorable than licensing of greenfield

investments, as greenfield investors have to face high water utilization fees and poor public opinion. Larger hydroelectric power assets in line for privatization are likely to attract interest from local players due to the same reasons. Hydroelectric power assets under EÜAŞ are listed in Table-2.



Table-2: Hydroelectric Power Plants under EÜAŞ (Figures from 2014)

Power Plant	Location	Installed Capacity (MW)	Generation (GWh)*	Up for privatisation?	Bidding deadline
Adıgüzel	Denizli	62	118	√	
Akköprü	Muğla	115	200		
Almus	Tokat	27	36	√	
Alpaslan-I	Muş	160	215		
Altinkaya	Samsun	703	577		
Aslantaş	Osmaniye	138	324		
Atatürk	Şanlıurfa	2,405	4,835		
Batman	Diyarbakır	198	104		
Berke	Osmaniye	510	804		
Borçka	Artvin	301	625		
Botan	Siirt	1.584			
Çamlıca-I	Kayseri	84		√	
Çamlığöze	Sivas	32	28	√	
Çatalan	Adana	169	261		
Çine	Aydın	46	28		
Demirköprü	Manisa	69	97		
Derbent	Samsun	56	120	√	
Dereiçi	Kars	0.4			
Deriner	Artvin	670	1,137		
Dicle	Diyarbakır	110	101		
Kürtün	Gümüşhane	85	84	√	20-Nov-15
Doğankent	Giresun	74.5		√	
Torul	Gümüşhane	103.2	109	√	
Erik	Karaman	6.48			
Ermenek	Karaman	302	481		
Fethiye	Muğla	16.5		√	5-Oct-15
Gezende	Mersin	159	227		
Gökçekaya	Eskişehir	278	259		
Hasan Uğurlu	Samsun	500	335		
Hirfanlı	Kırşehir	128	210		
Kadincık-I	Mersin	70	231	√	10-Nov-15
Kadincık-İı	Mersin	56	172	√	
Kapulukaya	Kırıkkale	54	119		
Karacaören-I	Burdur	32	71	√	27-Oct-15
Karacaören-İı	Burdur	46	116	√	
Karakaya	Diyarbakır	1,8	4,41		

Power Plant	Location	Installed Capacity (MW)	Generation (GWh)*	Up for privatisation?	Bidding deadline
Karkamış	Gaziantep	189	360		
Keban	Elazığ	1,33	3,296		
Kemer	Aydın	48	76	√	
Kepez_1	Antalya	26.4			
Kepez-1ı	Antalya	6		√	
Kesikköprü	Ankara	76	125	√	
Kılavuzlu	Kahramanmaraş	54	134	√	
Kılıçkaya	Sivas	120	95		
Köklüce	Tokat	90	3	√	
Koyulhisar	Sivas	0.2			
Kralkızı	Diyarbakır	95	47		
Manavgat	Antalya	48	117	√	14-Oct-15
Manyas	Balıkesir	20	13		
Menzelet	Kahramanmaraş	124	267	√	
Muratlı	Artvin	115	307		
Obruk	Çorum	211	255		
Özlüce	Elazığ	170	128		
Sarıyar H. P.	Ankara	160	203		
Seyhan-I	Adana	60	135	√	
Seyhan-1ı	Adana	7.5		√	
Sır	Kahramanmaraş	284	314		
Suat Uğurlu	Samsun	69	97		
Suçatı	Kahramanmaraş	7			
Şanlıurfa	Şanlıurfa	51		√	
Tortum	Erzurum	26.2		√	
Yenice	Ankara	38	70	√	
Yüreğir	Adana	6		√	
Total		12,999			

*EÜAŞ provides 2014 generation data for only some of its hydroelectric power plants.

Source: EÜAŞ

Electricity and gas distribution

Osmangazi Electricity Distribution and Retail Companies

Osmangazi Electricity Distribution and Retail Companies are once again up for sale after China Machinery withdrew its USD 384-million bid to acquire a 75% stake. Media reports suggest that Italian Enel and Chinese Shanghai Electric are now interested in the companies. The companies, which cover Eskişehir, Afyon, Bilecik, Kütahya and Uşak provinces, were originally privatised in 2010 for USD 485 million. In 2013, the Energy Market Regulatory Authority (“EPDK”) replaced the executive teams of the companies on the grounds that they failed to comply with regulatory requirements and to pay Turkish Electricity Trading and Contracting Company (“TETAS”) for electricity supply. Polat Yapı attempted to buy the two companies for USD 600 million in late 2013, but financing difficulties prevented the successful completion of the deal.

İGDAŞ

Provisions regarding the privatization of the İstanbul Natural Gas Distribution Company (“İGDAŞ”), the largest in the country with 5.68 million consumers as of the end of 2014, was included in a recent law proposal. Although later excluded from the draft, the provisions determined the transportation fee, which is charged from eligible consumers, as USD 0.01480/m³, and the unit service and amortisation fee, which is charged from ineligible consumers, was set at USD 0.062378/m³ for ten years following the privatization of the

company. The provisions stipulated all payables and receivables with respect to state-owned gas supplier BOTAŞ to be erased upon privatization. Although their adoption is far from certain, these conditions hint the government’s willing to create a favorable environment for the İGDAŞ privatization. No date has been announced for the tender so far. İstanbul Municipality announced that a tender announcement would be made in November 2014, but such an announcement did not take place.

Looking ahead

There are several big ticket assets among the thermal power plants yet to be privatized. For coal-fired Afşin Elbistan A and B units and the neighboring lignite fields, the Turkish government showed that it is prepared to sidestep the tender process in favor of intergovernmental agreements. Turkish-Austrian consortium ERG-Verbund is reportedly interested in finally taking over the Afşin Elbistan A unit. The consortium was granted the operational rights for the power plant complex and the feeding lignite mines for 20 years in 1994. However, a prolonged court process has precluded the completion of the deal since then. According to recent press reports, EÜAŞ may honour the contract soon, pending the approval of the Ministry of Energy and Natural Resources. For Afşin Elbistan B and the neighboring lignite fields, no deal materialized after Abu Dhabi national power company TAQA's deferral of its investment decision in 2013. There are credible indications, however, of foreign companies considering the assets.

The Privatization Administration announced in June that the 1,432-MW Bursa and 180-MW Aliğa, both gas-fired power plants, as well as the fuel-oil-fired Hopa with an installed capacity of 50 MW are next in line for privatization. Questions regarding fuel supply remain for gas-fired power plants, but these power plants will be more attractive than Hamitabat in the eyes of investors due to their higher efficiency. Similar to the case of the hydroelectric power plants, difficulties in getting licenses for greenfield gas-fired projects will also help the privatization prospects of these assets. There are two other gas-fired power plants in the portfolio: 1,351-MW İstanbul A power plant and 816-MW İstanbul B power plant, also known as Ambarlı power plants. EÜAŞ has plans to convert three fuel-oil-fired units of the İstanbul power plants to a gas and diesel-fired combined cycle power plant while expanding their capacity to 1,350 MW. Previously two units with a combined capacity of 300 MW were converted to the 816-MW gas-fired B plant.

Financing will be the key to the successful completion of big ticket privatizations in particular. Local bidders are likely to obtain financing from local banks as has been the case in recent privatization tenders. We expect an average electricity demand growth rate of 4 to 5% over the next ten years, a rate likely to prove sufficient to secure financing.

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