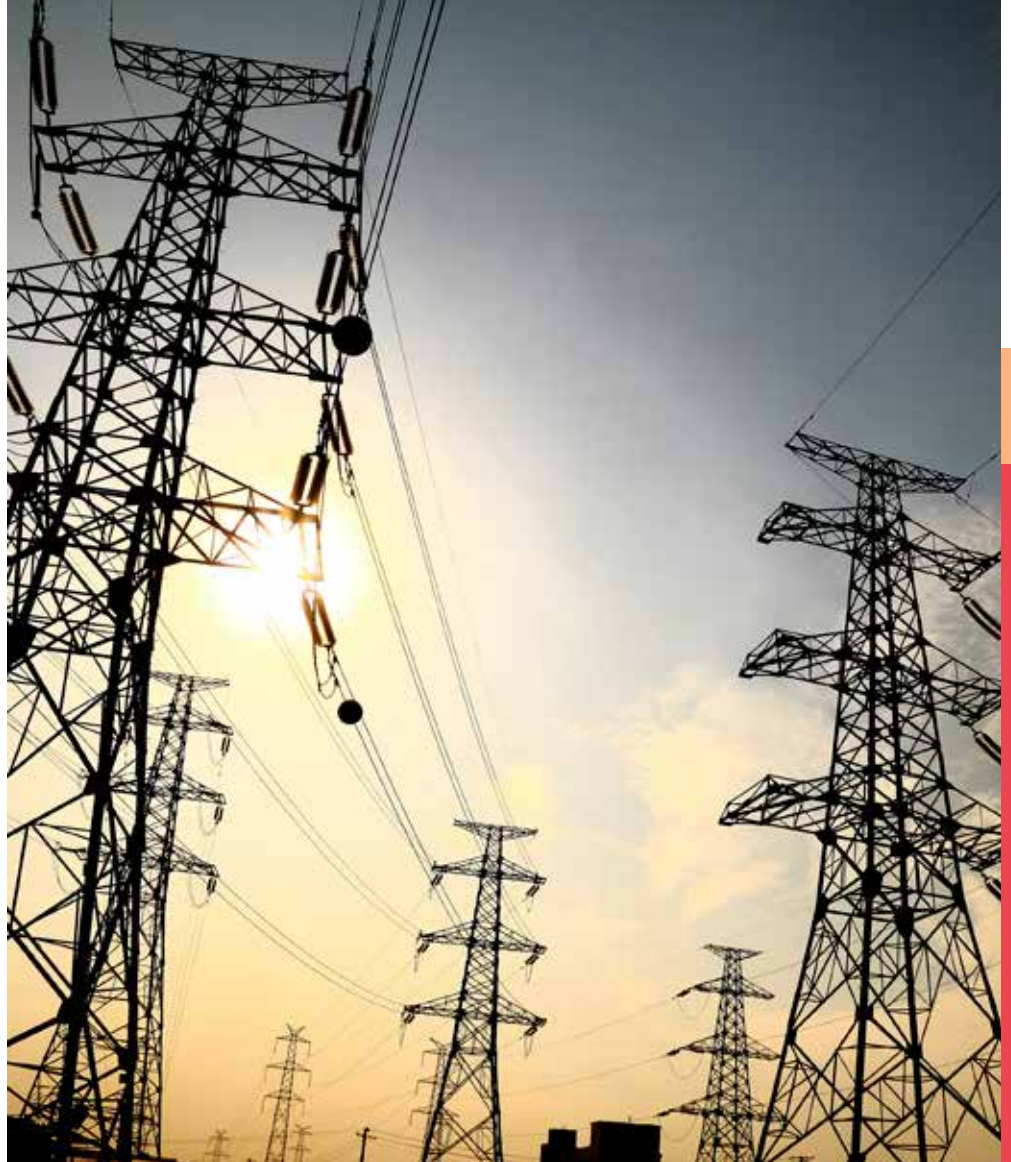


Energy Deals *2014 Annual Review*

Merger and acquisition
activity in Turkey's energy
market

January 2015



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Methodology and terminology

Energy Deals 2014 includes analyses of cross-border and domestic deal activity in the oil, gas and electricity markets in Turkey. The analyses are based on publicly available information and encompass announced deals as of 31 December 2014, including those pending financial and legal closure. Deal values are the consideration value announced or reported while the figures relate to actual stake purchases and are not multiplied to 100%. All presented totals include estimates for deals with no reported value. This document is also available at www.pwc.com.tr/energy.

Welcome

to the seventh edition of Energy Deals, our annual analysis of mergers and acquisitions in the Turkish energy market



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With a total of 40 deals valued at USD 5.6 billion, the Turkish energy market compared to 2013 was on par in terms of deal numbers, but quieter in terms of deals value, confirming the cautious picture we foresaw in our previous report.

Unsurprisingly, with the remaining assets on the privatisation shelf, the utilities segment took the lead in 2014, making up 98% of total deal value. The tenders for the three remaining state thermal power plants accounted for most of the total deal value in the overall energy market, which was marginally supported by the sale of much smaller state hydropower assets. The expectation of privatisation of the Afsin–Elbistan B unit, on the other hand, did not end in a deal in 2014.

Asset sizes and volumes remained limited in private utilities deals. However, the 10-year feed-in tariff to renewable energy generators proved quite attractive to large foreign pension funds. The nature of the deals in the thermal power generation market, on the other hand, started to change with the rising awareness among Turkish asset/license owners who are putting equity purchases forward as contract award conditions ended in share acquisitions by multinational equipment and EPC service providers. However, the exit of two multinationals from the CCGT segment highlighted the difficulties in merchant market conditions.

The only deal on the natural gas utilities front has been a minority share acquisition by a European infrastructure company in a Turkish company with

distribution licenses in 11 cities and natural gas and electricity trade licenses.

The oil and gas segment failed once again to experience a revival in 2014, in line with the outcome we had predicted. Although the deal numbers doubled year-on-year, it is still just a fraction of the total figure. Among the reasons the segment failed to revive were the failure of the New Petroleum Law to attract sizeable investments in the oil and gas E&P, and the fact M&A is no longer the only path to growth in the fuel distribution segment.

Not much changed in 2014 regarding the lack of interest by foreign players, and once again it was mostly local players who did the job in all segments.

Looking ahead... The upcoming general elections prevent us from predicting a spectacular return to the heydays in 2015. However, if it goes forward, there is still one big ticket privatisation, namely IGDAS, the natural gas distribution company in Istanbul. And, for what is now a regular item in our new year expectations, it would be nice to see the completion of the Afsin–Elbistan B privatisation. Other than these two potential transactions, we do not expect much from the privatisations of the remaining (and less attractive) coal power plants and the associated mines.

Deal totals: Utilities, again...

With 40 deals 2014 was on par with 2013 in terms of deal numbers. On the other hand, it was a much slower year than 2013 in terms of deal value; the total deal value in 2014 was USD 5.6 billion compared to USD 7.1 billion in 2013. The deals became smaller in size, averaging USD 140 million as opposed to USD 176 million in 2013.

34 deals took place in the utilities segment. The privatisation of thermal coal power plants and the associated

mines made up most of the total utilities deal value. Similar to 2013, smaller private deals targeting renewable energy companies in particular signalled the continuation of healthy activity in this segment. A few novelties were the private deals involving thermal power generation assets and also a share sale in a natural gas distribution portfolio. On the other hand, as opposed to expectations, no improvement has

been posted to date in the expected Afsin-Elbistan B deal.

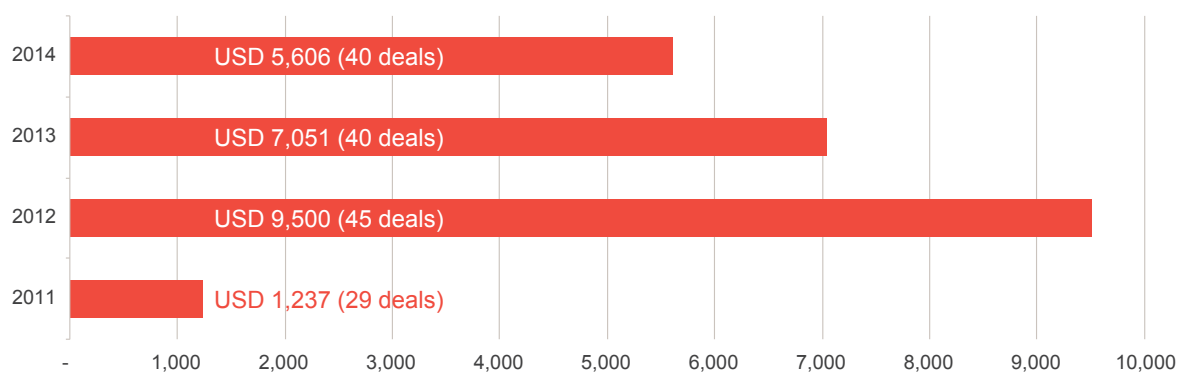
Although the deal number doubled and the total deals value increased in the oil and gas sector in 2014, these are still a fraction of total figures. In three of these deals the acquirer was the same and was supposedly aiming to create a fuel distribution portfolio. In another deal gradual share acquisitions finally resulted in full ownership of Turkey's second refinery by SOCAR.

Deal totals in 2014 were once again unsurprisingly dominated by the utilities market, which accounted for 34 of the 40 total deals.

Figure 1: Total Energy Deals in 2013 and 2014

	FY13			FY14			YoY change	
	Number	Value (USD m)	Average Value	Number	Value (USD m)	Average Value	% number	% value
Utilities	37	7,000	189	34	5,500	162	-8%	-21%
Oil and gas	3	51	17	6	106	18	100%	108%
Total	40	7,051	176	40	5,606	140	0%	-20%

Figure 2: Total deals between 2011 and 2014 by value (US\$ mn) and number of deals



With the clearing of the utilities privatisation shelf, public deals' share of value decreased from 92% in 2013 to 82% in 2014.

18%
value generation by private deals

versus

82%
by public deals

94%
local involvement

versus

6%
foreign interest

Although deal values increased when compared to 2013, the involvement of foreign players remained limited in 2014. Once again, there was no foreign interest in thermal power plant and mine privatisations, supposedly due to the current state of the assets and the low calorific value of the mines.

Utilities: the locomotive, once again...

Utilities retained their lead in the energy deals landscape in 2014 with 34 deals amounting to USD 5.5bn.

Privatisation tenders were completed for six thermal power plant assets, together with the operational rights for the feeding mines. Notably, all failed to attract foreign interest, mainly due to the fact that all the thermal assets have already completed half their asset life and run at very low efficiency rates. In addition, the calorific value of the mines is quite low.

Acquisitions of thermal assets by local companies displayed similar motives. With vertical integration in mind, IC ICTAS Holding, which holds electricity distribution and supply licenses in the Thrace region, offered USD 2.7bn, the highest overall deal value of the year, for the bundled package of the Yenikoy (2 x 210MW) and Kemerkooy (3 x 210MW) lignite power plants.

Likewise, Elsan Elektrik placed the highest bid, USD 1.1bn, for the Yatagan lignite power plant (3 x 210MW), to support its parent company Bereket Energy's electricity distribution and supply business in the same region.

A different vertical integration story was aborted due to lack of financing in the case of the Catalagzi coal power plant (2 x 150MW). Local mining company Demir Madencilik, which also supplies hard coal to the plant, placed the highest bid, USD 351m, for a potential vertical integration. However, due to failure to finance by the deadline, the Privatization Administration passed the tender award to the second highest bidder, Elsan Elektrik, which offered USD 350m.

The last tender of the year was for another bundled package, the Orhaneli (210MW) and Tuncbilek (1 x 65MW + 2 x 150MW) lignite power plants, which ended with Celikler Holding placing

the highest bid, USD 521m. The same company also won the Seyitomer lignite power plant (4 x 150MW) tender in 2012.

Despite the reported foreign interest in Afsin-Elbistan B assets, there was no deal progress in 2014.

Continuing with the state hydro power plants, the operational rights of 10 of them were transferred to the private sector, again all to local bidders. They received surprisingly high bids, USD 2.5m per MW on average, despite their small sizes. This once again underlined the fact that acquisition of these operating assets is still more favourable than licensing of greenfield investments.

The private deals in the same segment were more diverse in terms of asset technology. To start with, CCGT deals were back, most notably with the exit of two multinationals from the Turkish market. First GE Energy Financial Services announced its exit from Gama Enerji, the generation portfolio of which includes an 840-MW CCGT project and operating wind assets of 123MW. On the other hand, International Finance Corporation (IFC) announced its intention to buy a 30% stake in Gama Energy from Gama Holding.

The other exit was by the US company AES, which sold its stakes in Entek Elektrik back to Koc Holding.

The third large CCGT deal was Mitsubishi Heavy Industry's (MHI) majority stake acquisition in the 430-MW Kirklareli CCGT Project from Urundul Energy. This was significant in terms of raising awareness among Turkish asset/license owners to put equity purchase forward as an EPC and equipment contract award condition. Another deal which can qualify in this category was the sale of 30% of the geothermal project developer Demba Geothermal to Alstom Power.

The rest of the deals in power generation involved renewable energy assets. The acquisition of a 45% share in Polat Enerji by the Canadian Public Sector Pension Fund (PSP-Canada's largest) was significant. Accordingly, we assume that the 10-year feed-in tariff system must have proven reliable to such a large pension fund seeking a steady income. On the other hand, the regulatory enforcement in the wind market threatening the inactive players with license cancellation did not ignite many transactions or much consolidation in order to create resources to go ahead with projects.

The launch of the long-awaited licensing tenders in the solar power segment failed to end in a deal rush. We believe that this was due to the unreasonably high differential between the per-MW bids, which went beyond what could be compensated for by the feed-in-tariff and added to uncertainty about profitability. Having said that, the unlicensed solar power market (<1MW) is seemingly more vibrant and might have hosted some deals among the small players, which are not made publicly available.

The only deal in natural gas utilities has been a 30% share acquisition by the Swiss infrastructure company Partners Group Holding AG in Enerya, which holds distribution licenses in 11 cities in Turkey and also natural gas and electricity trade licenses. We suspect that this deal was triggered by diversification needs due to the decreasing margins in the acquirer's saturated operations in the European infrastructure markets.

Figure 3: Utility Deals in 2014

Date Announced	Target	Stakes in %	Acquirer	Acquirer Nationality	Deal Value (US\$ mn)
7-Jan-14	Akdeniz Elektrik Uretim	100.0%	Globtec Energy	Germany	n.d.
16-Jan-14	Adnan Polat Enerji	45.0%	PSP Investments	Canada	n.d.
30-Jan-14	Korfez Enerji	71.9%	Kapital Yatirim	Turkey	20.2
12-Feb-14	ODAS Elektrik Uretim ve Sanayi	17.9%	BB Enerji Yatirim Sanayi	Turkey	n.d.
3-Mar-14	Gama Enerji	50.0%	Gama Holding	Turkey	n.d.
4-Mar-14	Kirklareligaz Enerji	50.1%	Mitsubishi	Japan	n.d.
11-Mar-14	Firtina Elektrik Uretim	100.0%	Boydak Enerji	Turkey	n.d.
17-Mar-14	Deltom Jeotermal	30.0%	Alstom Power	France	n.d.
25-Mar-14	EMBA Elektrik	3.0%	AVIC International	China	n.d.
25-Mar-14	Zen Enerji	20.0%	Gedik Girişim Sermayesi	Turkey	0.0
3-Apr-14	Yelen-Gulpinar Enerji	70.0%	Denge Yatirim	Turkey	5.0
11-Apr-14	Alartes Enerji	51.0%	Sekoya Enerji Elektrik Uretim	Turkey	18.7
18-Apr-14	Yenikoy Elektrik & Kemer koy Elektrik	100.0%	IC Ictas Enerji	Turkey	2,671.0
25-Apr-14	Global Elektrik Enerji Uretimi	9.0%	Aktin Tekstil Sanayi	Turkey	5.6
29-Apr-14	Catalagzi Termik Santrali	100.0%	Elsan Elektrik	Turkey	350.0
5-May-14	Mor HPP & Agkolu HPP	100.0%	Enso Hydro GmbH	Austria	n.d.
21-May-14	Esendal & Işıklar (Visera) HPP	100.0%	Metek Hidro Enerji	Turkey	1.9
21-May-14	Dere & Ivriz HPP	100.0%	Ülke Yatirim	Turkey	2.3
21-May-14	Kayakoy HPP	100.0%	Veysi Madencilik	Turkey	10.3
23-May-14	Enerya	30.0%	Partners Group Holding AG	Switzerland	n.d.
3-Jun-14	Siirt Akkoy Enerji Uretim	100.0%	Rasa Elektrik Uretim (Aksa Enerji)	Turkey	30.9
5-Jun-14	Atagur Enerji Uretim Insaat	85.0%	Ronesans Enerji Uretim	Turkey	n.d.
12-Jun-14	Yatagan Termik Santrali	100.0%	Elsan Elektrik	Turkey	1,091.0
4-Aug-14	Meltem Enerji Elektrik Uretim	87.0%	Polat Holding	Turkey	3.4
8-Aug-14	Tezlidere Elektrik Üretimi	100.0%	Salih Yaman and Huseyin Sumer	Turkey	0.6
13-Aug-14	Gunesevi Enerji	100.0%	Sancak Enerji	Turkey	n.d.
13-Aug-14	5 HPPs in Mersin area	100.0%	Cem Veb Ofset	Turkey	8.9
14-Aug-14	Resvel Enerji	100.0%	Sancak Enerji	Turkey	n.d.
22-Sep-14	Senerji & Duzce Enerji	100.0%	Eti Krom	Turkey	n.d.
13-Oct-14	AES-Entek Elektrik Uretim	49.6%	Koc Holding & Aygaz	Turkey	125.0
13-Oct-14	Bordo Mavi Enerji Elektrik	48.0%	Trabzonspor Sportif Yatirim	Turkey	19.6
1-Dec-14	Pamuk HES Elektrik Üretim	100%	Güçlü Group	Turkey	n.d.
3-Dec-14	Hamitabat Elektrik Uretim	25.0%	InfraMed	Egypt	n.d.
17-Dec-14	Orhaneli and Tuncbilek	100.0%	Çelikler Taahhüt İnşaat ve Sanayi A.Ş	Turkey	521.0
Total					≈5,500.0*

n.d.: not disclosed

*: Includes estimated deal value for undisclosed deals

Oil and gas: still lacks the sparkle

With only six deals, once again, the deal scarcity in the Turkish oil&gas market in 2014 developed in line with our predictions at the beginning of the year. In fact, in our Energy Deals 2013 report, we had renewed our view that the emergence of alternative volume growth models would not require hitting the M&A path.

In the fuel distribution and storage segment, the fundamental changes to the market operations with the usufructus regulation have redefined the ways to grow, which now includes long-term lease of dealerships and accredited agency model based on renewable contracts. As a result, M&A as a growth option among the distributors has long been replaced by cherry-picking. In fact, the usufructus regulation, which abolished the long-term exclusive contracts between the

distributors and the dealers, now allows the distributors to acquire stations instead of the whole distribution company. In that way, the number of licensed distribution companies increased from 53 in 2013 to 80 in 2014, further squeezing the market share for those out of top five. Against all this background, this segment has seen four deals, one by Balpet buying 50% of the shares in their JV in Eragaz, a LPG distributor and three deals done by Aksel Enerji acquiring three small fuel distributors. Shortly before the end of the year, Dogan Group announced its interest in Aytemiz Petrol, a fuel distribution company with market share of above 2%, signalling the Group will be back in the oil&gas sector after the sale of Petrol Ofisi shares to OMV. Unlike the growth models, we see this market entry strategy to follow the M&A route.

In fuel storage segment, only one deal happened in 2014 in which Shell-Turcas (the 3rd largest fuel distributor by volume) acquired 45% of the fuel storage company Marmara Depoculuk Hizmetleri from OMV Petrol Ofisi (the largest fuel distributor by volume). The deal was a match of OMV Petrol Ofisi's terminal optimisation efforts and Shell-Turcas' storage need in the region.

Although some new E&P license applications (mostly by the state company TPAO and the existing licensees) were made, no deals took place in the upstream, letting us to conclude that the private investor friendly clauses in the New Petroleum Law still fail to create a deal environment.

Going downward to refining, SOCAR completed the gradual share acquisitions from Turcas and now fully owns STAR, which will become the second refinery complex in Turkey.

Figure 4: Oil and Gas Deals in 2014

Date Announced	Target	Stakes in %	Acquirer	Acquirer Nationality	Deal Value (US\$ mn)
14-Jan-14	Libadiye Petrol	99.5%	Aksel Enerji	Turkey	0.2
30-Mar-14	Marmara Depoculuk Hizmetleri	45.0%	Shell & Turcas Petrol	Turkey	46.0
16-May-14	Socar Turkey Yatirim (Star Rafineri)	18.5%	Rafineri Holding	Turkey	59.4
18-Sep-14	Marmara Petrolleri	62.5%	Aksel Enerji	Turkey	0.0
18-Sep-14	Borsa Petrol	55.0%	Aksel Enerji	Turkey	0.1
26-Dec-14	Eragaz Petrol Urunleri	50.0%	Balpet Akaryakit	Turkey	n.q.
Total					105.6

Looking ahead

Although it is helped by the lower oil prices, the Turkish economy is still quite vulnerable, with the currency experiencing new lows against the USD and the EUR. And, although it is not expected to create much distortion in market operations, the upcoming general election in the second quarter may also play a role in decisions to delay some transactions to the second half of the year.

Nevertheless, there are a couple of potential deals which may keep the market moving forward in 2015. To keep our order and start with utilities, if it goes ahead after all the speculation and delay, the year may host a big ticket privatisation, namely, that of IGDAS, the natural gas distribution company in Istanbul. Among the potential bidders already cited are Gazprom, Koc Holding, Marubeni, STFA and SOCAR.

And, regarding what is now a regular item in our new year expectations, it would be nice to see the completion of the Afsin–Elbistan B privatisation. A recent development is positive enough given all the delays over the years in this transfer to private operations. In

fact, regarding the Afsin-Elbistan A unit, a happy ending may be around the corner for ERG-Verbund. The Turkish-Austrian 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 news, EUAS, the state power generation company, may honour the contract soon, pending the approval of the Ministry of Energy and Natural Resources.

Other than these two apparent potential deals, we do not expect too much from the privatisations of the remaining and less attractive coal power plants and the adjacent mines. And we think it would be premature to comment on the gas-fired and large hydro power plant portfolio already announced for privatisation, as there is no indication about the tender calendar.

Nevertheless, recent developments may provide a lifeline to two otherwise investment-hungry segments. The phase out of the South Stream Natural

Gas Pipeline along with the potential for more Russian gas flowing to Turkey may solve the supply bottleneck to the CCGTs, i.e. there will be one less obstacle on the way to project realisations. This may also offer a favourable environment, resulting in the international EPC and equipment providers being more willing to take minority stakes in their customer projects.

On the renewables front, the move by the Canadian pension fund in the wind market may provide a precedent for other similar institutions to consider the long-term tariffs in the Turkish market. However, the solar deals may not yet be as sizeable.

After a couple of years of non-delivery, we are still cautious about the fuel distribution market, given that the new growth models result in M&A remaining out of fashion. However, we would not be surprised to still see some consolidations made to combat the repercussions of the frequent regulatory interventions in pricing, posing serious threats to profitability and survival.

Given the obvious indications, it seems 2015 will not be much different from 2014.

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