
Balkan and Black Sea Petroleum Association

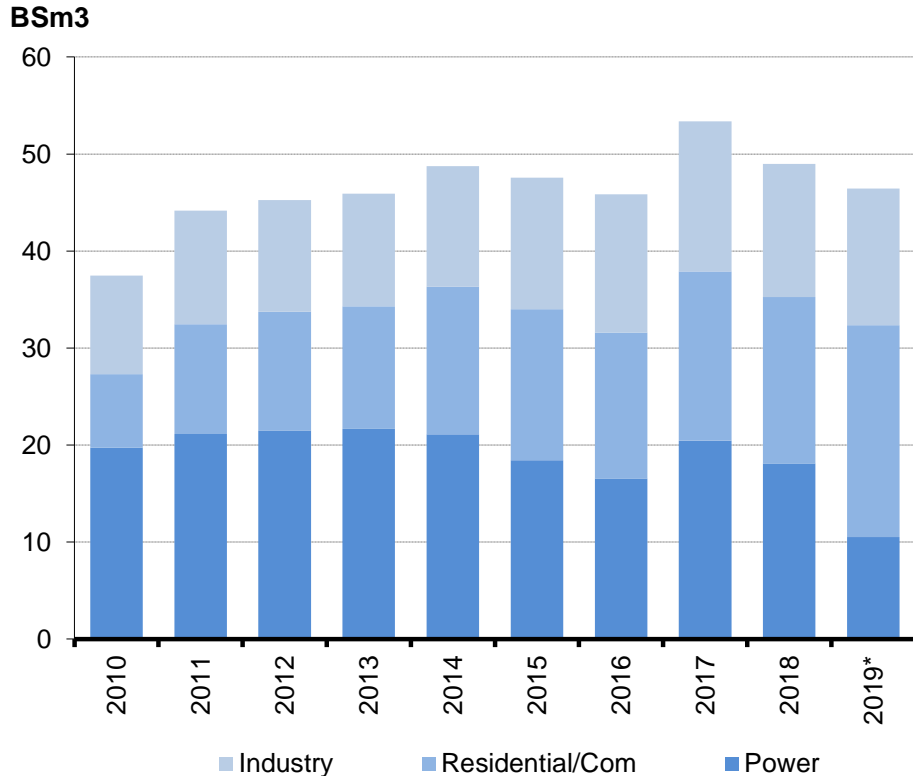
Regional Oil & Gas Conference

IBS Research & Consultancy

November 22, 2019

Turkish demand in doldrums because of halving of power consumption

Gas consumption in Turkey, 2010-2019



CAGR by sector
2019/2010

3.7%

12.5%

-6.8%

Demand is forecast to fall again in 2019, bringing consumption down to the average of 2011-2016.

There has been a rapid growth of residential and commercial consumption. This has been driven by expansion of the reach of the network – with contribution from below-temperature winters.

Industrial consumption grew strongly to 2017, but has slipped since, reflecting the strains in the economy.

But the main weakness has been in power consumption. In 2019, this may be only half the average of the previous nine years.

* Extrapolation of eight-months' data.

Source: BOTAŞ & EMRA

Hydro has drowned gas generation in 2019

Generation in the first nine months of 2019 totalled 227 TWh, 1.4% below the figures for a year earlier. The plateauing reflects the slack performance of the economy.

The share of natural gas has halved from 37.2% in 2017 to 17.2% in the first nine months of 2019.

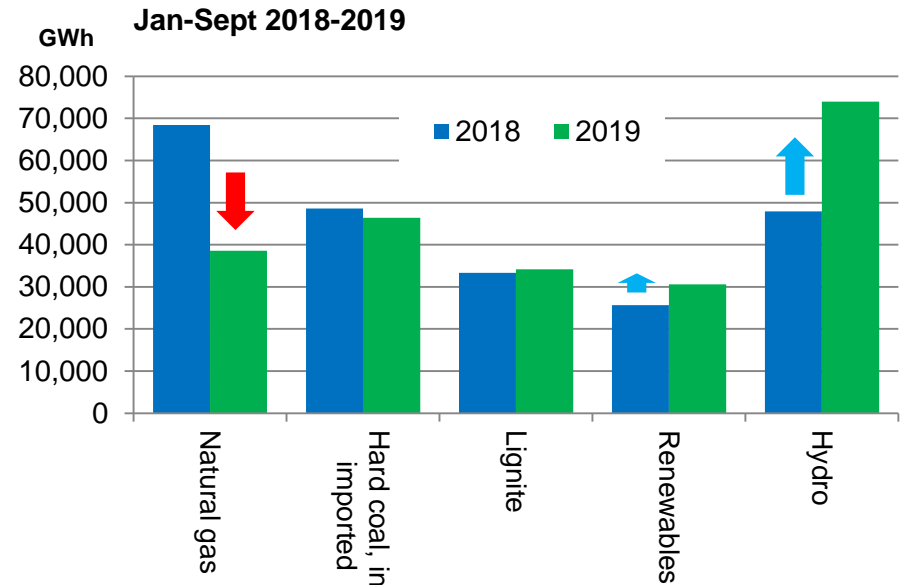
It rose slightly in the third quarter of 2019 to 20% - and this despite the ending of most BO contracts in Q2.

The dominant factor in 2019 has been the massive growth in hydro generation. This has squeezed out generation from natural gas – and to some extent from imported coal.

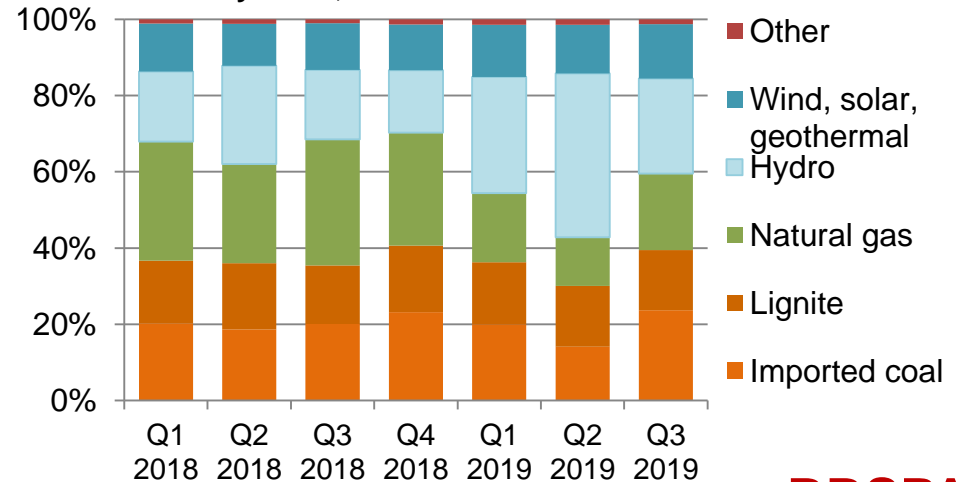
Government policy has long aimed at reducing use of gas in power.

There was a 3.7% increase in capacity between December 2017 and August 2019. The major increases were in hydro (1,172 MW), wind (721 MW) and lignite (834 WM). Capacity in natural gas fell by 237 MW (0.9%).

Power generation by type



Quarterly basis, 2018-2019



Today's presentation

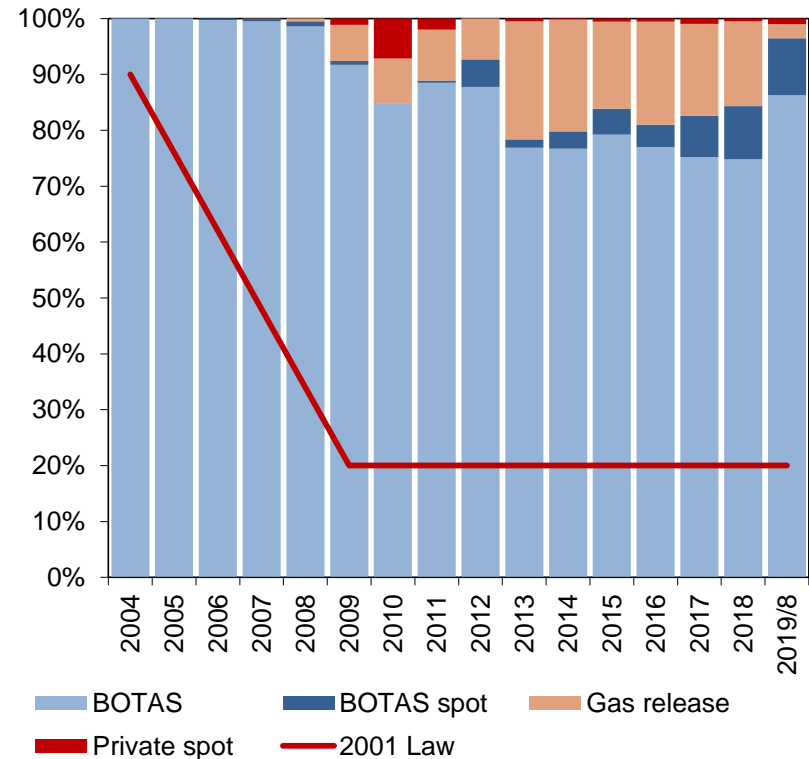
1. Market opening – the current impasse
2. BOTAŞ's role in future imports
3. Obstacles to LNG imports
4. Future of oil-product indexed contracts

1. Market opening

The 2001 Market Law foresaw liberalization from 2009

	Legal requirements on BOTAŞ	Current situation
Unbundling	“after 2009”	BOTAŞ says it has unbundled its accounts– but these accounts are not open to public
Privatisation	Of distribution and “after 2009” of trading.	LDCs sold in 2003-2004. No change in trading.
Reduction of market share	BOTAŞ to transfer 80% of its import contracts by 2009, the first 10% by November 2003.	As of 2019, it had transferred 10 BCM3 of its original 51.9 BCM3, a mere 19%.
New contracts	No <u>new</u> contracts until its imports less than 20% of total consumption, except for LNG (Law 5784 of 2008).	BOTAŞ signed the contract for Shah Deniz 2 - <6 BCM3/yr from 2018. BOTAŞ extended for 5+5 years the Sonatrach contract expiring 2014.

Division of natural gas imports to Turkey, 2004-2019



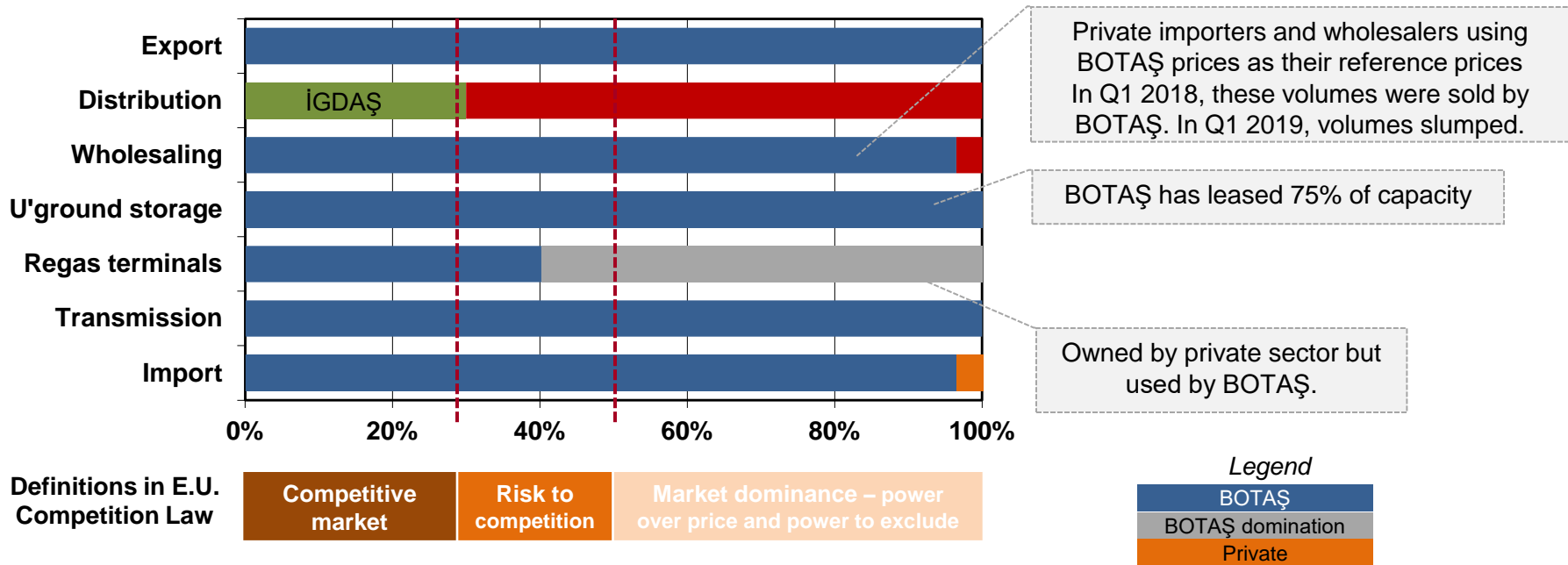
Source: BOTAŞ, EMRA, EBB

BOTAŞ is the key market player

18 years after the passage of the liberalisation law, the Turkish market is still largely monopolistic.

- In 2016, ownership of the underground storage facility was transferred from TPAO to BOTAŞ.
- Private sector imports are under threat as importers cannot compete with BOTAŞ's subsidized prices.

BOTAŞ share of Turkish market, 2019



Source: EMRA monthly reports for 2018, IBS estimate for 2019

Note: Chart shows division of capacity for underground storage and regasification terminals. Usage of all is almost entirely by BOTAŞ. Transmission figures exclude producers' systems in Thrace.

This is unlikely to change

President Recep Tayyip Erdoğan has long taken a direct interest in the operations of BOTAŞ.

He sees residential gas prices as important electorally – and low industrial gas prices as necessary for Turkish industry to be able to export. A dominant BOTAŞ thus allows Ankara to exercise a ‘calming influence’ on swings in domestic gas prices

Additionally, in Ankara, there are more advocates for a strong BOTAŞ than for liberalisation, with these arguing:

- A strong BOTAŞ helps security of supply – and BOTAŞ can act as the supplier of last resort.
- Turkey needs a national champion to stand up to and negotiate with the major world gas and oil companies who are its suppliers – e.g. the national oil companies of Russia, Algeria, Azerbaijan and Iran.

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LNG imports & increased Azeri shipments help BOTAŞ against Gazprom

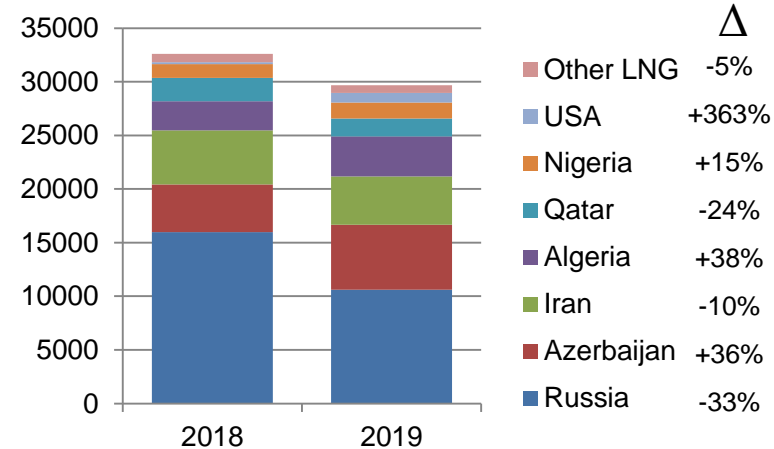
Major changes in supply balances

- Shipments from Gazprom in January to August were 33% below a year earlier. Their share of imports fell from 49 to 33%.
- By contrast, imports from Azerbaijan jumped 36% as (expensive) Shah Deniz II shipments ramped up.
- There was also a 19% increase in LNG imports, with particular increases in deliveries from Algeria and (to 0.9 BSm³) the USA.
- Imports via Bulgaria averaged 11 Mcm/day in the first nine months of 2019, one-third of the figure for 2018.

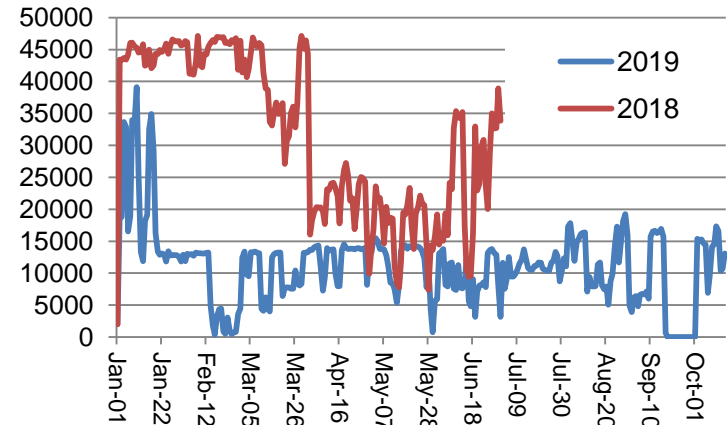
Increased role for BOTAŞ

- Private sector importers from Gazprom - responsible for 70% of contracts through the West line – unable to compete with BOTAŞ subsidised prices, have cut imports by 90%.
- Gazprom has won arbitration suits which seem to threaten bankruptcy for these importers. In autumn 2019, they requested a price review.
- Resolution of their problems appears to hinge on settlement of the protracted price dispute between BOTAŞ and Gazprom and BOTAŞ's demands for a 20% price reduction and reducing the minimum annual quantity to 50-70%.
- Only other non-BOTAŞ imports are by EgeGaz, 0.3 BSm³.

Gas imports by source, Jan-August 2019, MSm³



Gas flows via Malkoçlar, Jan-Oct 2018-2019, Mcm/day



Source: EMRA & Bulgartransgaz

Future of “private sector” companies in doubt

Four companies have contracts with Gazprom for a total of 8 BCM3/yr, expiring end 2021 or shortly after.

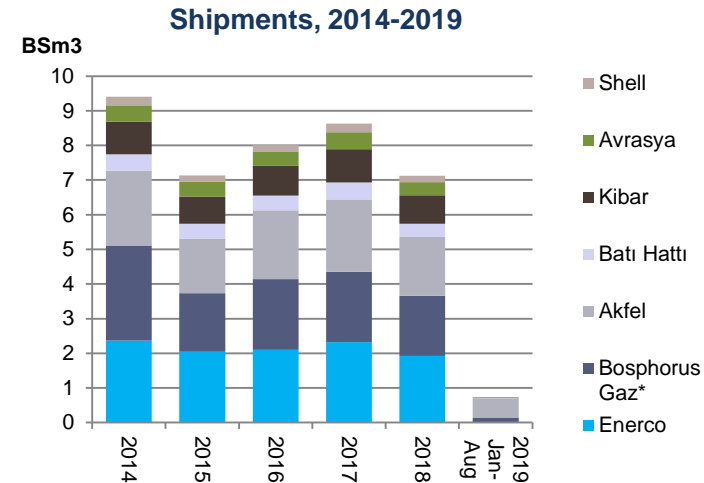
Four other companies have contracts with Gazprom for a total of 6 BCM3/yr, one expiring in 2035, the others in 2042.

- Three of these companies have been under state control since end-2016, taken over for links to Fethullah Gülen.

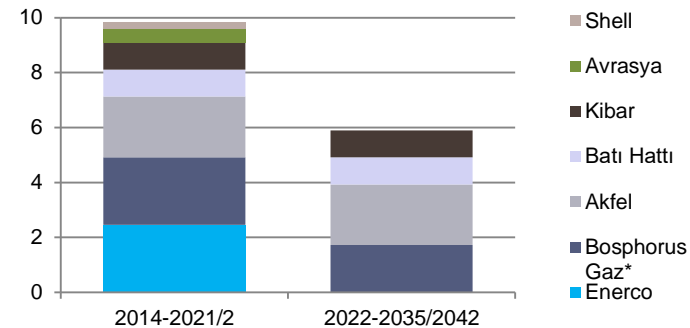
Pricing in the original contracts is the same as in Gazprom’s contracts with BOTAŞ but has been spasmodically adjusted to allow private sector importers to make a (limited) profit when BOTAŞ is subsidizing its competing sales. For 2017, Gazprom gave private importers a 10.75% discount. Arbitration courts have decided this did not continue into 2018 and afterwards, leaving private sector importers with a \$400 mn bill for under-invoiced gas. BOTAŞ subsidies also continue, meaning importers would lose heavily if they continued importing.

The future of the private companies will probably only emerge after agreement on the package currently under discussion between BOTAŞ and Gazprom on pricing and sales conditions.

Private sector pipeline gas imports



Contracts in place, 2014-2035/2042



Source: EMRA * Gazprom subsidiary to Sept 2018

Offtake contracts for TurkStream I held up by BOTAŞ demands on MAQ

Gas disputes are part of a larger tapestry:

- The problems faced by private importers from Gazprom Export reflect the incomplete discussions on Russia's Türk Stream pipeline. This pipeline is intended by Moscow to act as a bypass to Ukraine and to allow it to stop shipping gas to Turkey via Ukraine, Romania and Bulgaria. The first line is to be activated by the end of 2019 with a capacity of 15.75 BCm3/year,.
- This is 1.75 BCm3/year above the current Bulgarian line and no contract has yet been signed for this difference or to cover the 8 BCm3/year of contracts expiring in 2021. Those with contracts expiring in 2042 also need to agree to a change in delivery point.
- This uncertainty for over half the capacity of Türk Stream pipeline may contribute to Gazprom's desire to keep up the pressure on Turkey's private importers in order to advance its negotiations with the authorities for the future of TurkStream.
- Energy IQ describes this as an 'implicit' pressure imposed by Russia on Turkey and points to the multi-level relations between Turkey and Russia involving not only energy but Turkey's presence in Syria and international orientation. Decisions on this may involve the two countries' presidents but one sticking point continues to be BOTAŞ's demands for a reduction in the minimum annual quantity.

Gas imports to Thrace

Company	Contract MCm3/ yr	Imports, Jan-Aug MCm3	Contract end
Shell	250	10	31.12.2021
Avrasya*	500	0	
Bosphorus Gaz	750	135	
Enerco*	2,500	0	
BOTAŞ	4,000	2,703	
Subtotal	8,000	2,848	
Batı Hattı	1,000	17	26.11.2035
Akfel*	2,250	556	26.11.2042
Bosphorus Gaz	1,750	(incl above)	
Kıbar	1,000	14	
Subtotal	6,000	587	
TürkStream I	15,750		Start end-2019.

Source: EMRA & Bulgartransgaz

* Majority controlled by state via TMSF since 2016

2. BOTAŞ in future imports

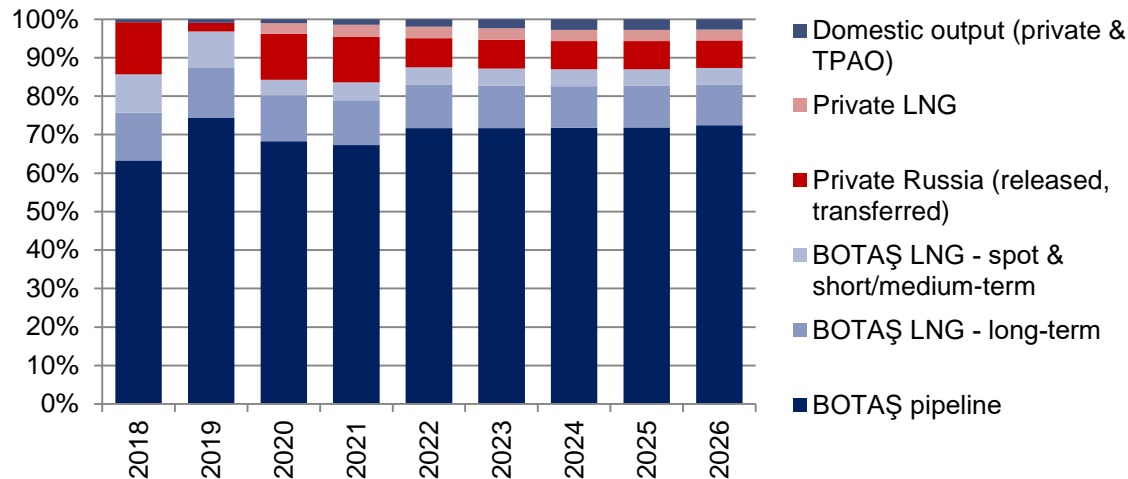
BOTAŞ could maintain import share of over 85%

BOTAŞ has contracted all new volumes from Shah Deniz and has also extended to 2024 its contract with Sonatrach. Absent a major change in policy, IBS forecasts:

- That current stresses between BOTAŞ and Gazprom will eventually be resolved – as they always have in the past 33 years. Ankara and Moscow have a multi-lateral relationship.
- That private sector importers, squeezed between BOTAŞ and Gazprom, will have some recovery in 2020 and 2021 and then settle at around 4 BCM³/yr..
- That the private sector will carry out 40% of non-term LNG imports from 2020 – which may be optimistic
- That BOTAŞ will continue to extend its existing contracts when they expire.

BOTAŞ's share of imports is forecast to be 84% in 2020-21, then rising to 87%, continuing its predominance in the market.

Importers' shares of Turkish supplies, 2018-2026



Source: IBS, November 2019

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3. Obstacles to LNG imports

Spot LNG imports boosted but further increases blocked by BOTAŞ

In the first eight months of 2019, imports of spot LNG totalled 3.3 BCM3.

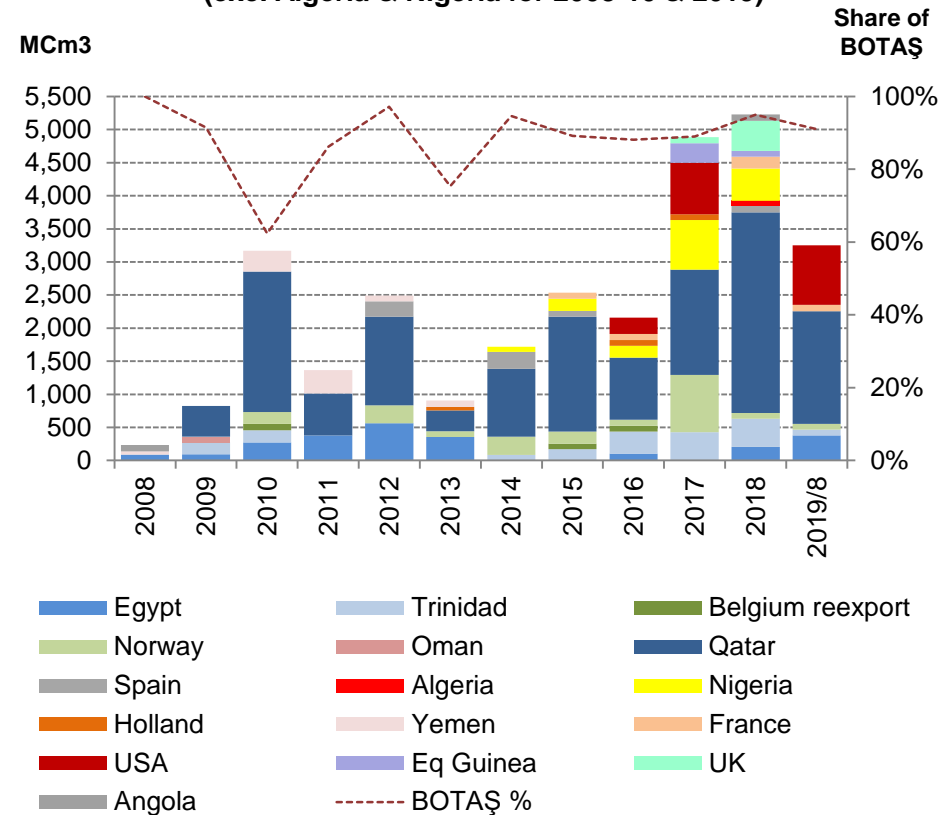
The major supplier has long been Qatar which accounted for 50% of imports in this period. In September 2017, BOTAŞ signed a 3-year contract with Qatargas for 1.5 Mn tonnes annually.

In June 2017, ENGIE was awarded a contract for 10 spot cargoes. There was also a resumption of imports from Egypt in 2018, with cargoes in December 2018 to February 2019..

U.S. cargoes started in 2016. They accounted for 10% of the total in 2018 and 28% of imports in the first eight months of 2019: these imports were bunched in January & February 2019.

BOTAŞ accounted for 94-95% of spot imports in 2017 and 2018 and 91% in Jan-August 2019. 45 other companies had spot import licenses as of June 2019, but EgeGaz has been the only private importer.

Spot LNG imports, 2008-2019
(exc. Algeria & Nigeria for 2008-10 & 2019)



Note: Data on spot LNG imports from Algeria and Nigeria is not published for 2019 – or for 2008 to 2010.

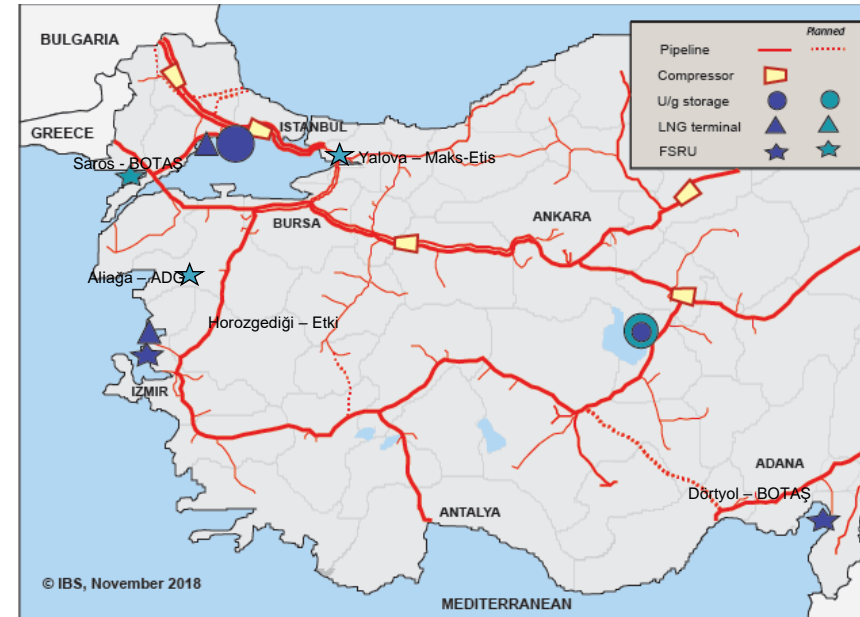
Source: Waterborne and trade sources, EMRA monthly reports

3. Obstacles to LNG imports

BOTAŞ may combine Saros & Dörtyol FSRU projects

	Marmara Ereğlisi	Aliağa	Horozdere	Dörtyol
Type	Land	Land	FSRU	FSRU
Owner	BOTAŞ	EgeGaz	Etki	BOTAŞ
Maximum	Q-Flex	Q-Flex	Q-Flex	Q-Max
Send-out rate, MSm3/day	37	40	21	15-20
Third-party access	Required by law			
Status	Blocked. BOTAŞ has record of not responding to requests.	No imports yet except by BOTAŞ & EgeGaz. Requests refused for technical reasons.	No imports yet except by BOTAŞ. Etki considering requests.	Blocked. Operating problems & BOTAŞ has record of not responding to requests.

Regasification terminals' locations



BOTAŞ is carrying out investment for a new FSRU location in the **Saros** Gulf, north Aegean. This may be intended to act as an alternative anchorage for the FSRU currently at Dörtyol.

Rising possibility for private sector spot LNG imports

- Private companies have recently been keen to take advantage of low spot prices. One common basis for the pricing BOTAŞ spot cargos is TTF plus a premium of around \$0.2/MMBtu. Prices on the TTF have fallen through 2019 from around \$7.5/MMBtu to \$5.5/MMBtu today.
- Terminal and regasification charges add around \$0.5/MMBtu, giving an in-network price of \$6.2/MMBtu or \$225/'000 Sm³.
- BOTAŞ's sales price to power has recently been ranging from \$260-280/'000Cm³, giving a good margin for a new supplier.
- Such gas would add to the near-over supply problem of BOTAŞ – which is an additional reason why it has discouraged importers. It remembers the disruptions it faced from high private spot imports in 2010.
- Would-be importers have been unable to engage with BOTAŞ over accessing its two terminals. EgeGaz has tended to answer that it is unable to provide capacity, probably because of concerns from BOTAŞ.
- This leaves Etki as the main target for would-be importers – and we may see developments in this area.

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Oil-indexed contracts under challenge in Europe

Determined to encourage competition, the EU Commission has long been challenging traditional supply contracts to Europe.

These were based on long-term throughput contracts with gas-pricing linked to alternative fuels, i.e. products. This structure allowed companies such as Gazprom to finance the large investments required. But they also limited the choices available to consumers.

The Commission argued that, with investments largely amortised, contracts should be simplified to allow re-export and pricing linked to prices in the hubs that had developed.

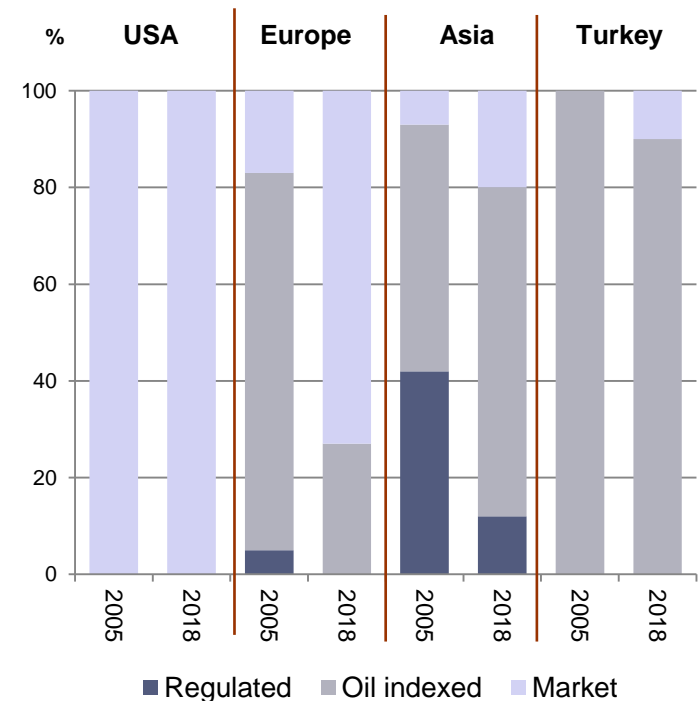
After 2008, Gazprom began to accept indexing 15% of its deliveries to Europe to spot prices and reduced contracts to three-years. Statoil increased the ratio to 30%. It then rose to 50% and then higher.

- Take-or-pay obligations have also been largely removed. In 2012, the arbitration court in Austria in RWE Transgaz (Czech) v Gazprom rejected take-or-pay obligations as binding, citing changing market conditions.

By 2018, the share of oil-indexed supply contracts in Europe had fallen to about one-quarter. By contrast, market prices applied to three-quarters of imports.

A slight improvement has also been seen in Asia. But there has yet been little change in Turkey.

Pricing structures, 2005 & 2018



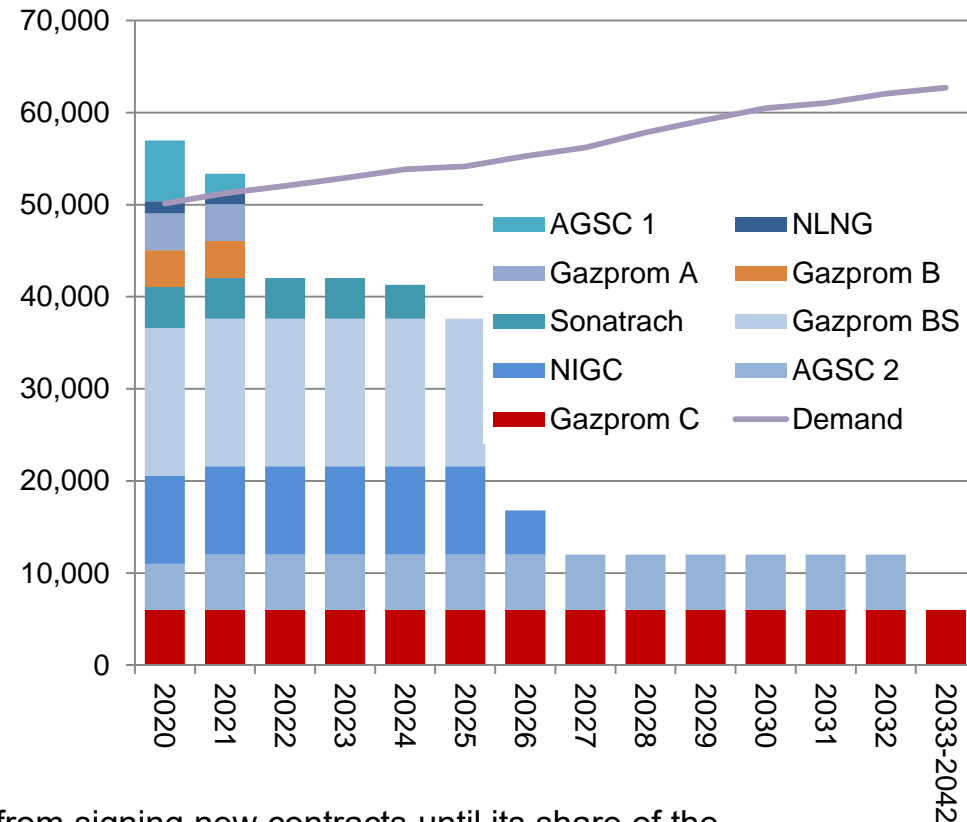
Source: EPDK, Ingaz 2019

Major uncertainties in supply lead IBS to develop various scenarios

Turkey's long-term gas contracts

Supplier	Importer	Annual contract quantity, BCm3/yr	Contract base	Contract end
AGSC 1	BOTAŞ	6,600	Oil products	4/2021
NLNG	BOTAŞ	1,338		10/2021
Gazprom A	BOTAŞ	4,000		12/2021
Gazprom B	Private	4,000		12/2021
Sonatrach	BOTAŞ	4,444	Arab crude basket	10/2024
Gazprom BS	BOTAŞ	16,000	Oil products	12/2025
NIGC	BOTAŞ	9,600		7/2026
AGSC 2	BOTAŞ	<6,000		6/2033
Gazprom C	Private	6,000		2042

Turkey's long-term gas contracts by expiry date, 2020-2042



Article 20 of Law 5784 of 2008 forbids BOTAŞ from signing new contracts until its share of the market is less than 20%. This provision does not apply to contracts for LNG. Its contract with AGSC for Shah Deniz 2 shows that it can avoid this limitation.

New BOTAŞ contracts – Commercial need to avoid mismatches

- BOTAŞ has long seemed happy to sign long-term gas sales and purchase agreements, even if it has become wiser and more choosy about terms such as destination clauses and take-or-pay obligations.
- Recently, BOTAŞ has seen:
 - That Europe is switching away from such contracts.
 - That there is a potential glut of LNG – and it has the capacity to receive this.
 - Existing suppliers, e.g. Blue Stream, AGSC 1 and NIGC, have now amortised their investments though new or expanded lines such as SCP+, TANAP & TürkStream usually need long-term throughput guarantees for finance.
- The economic/commercial argument against cancelling long-term contracts is that, at times of need, limiting long-term contracts risks would leaving BOTAŞ at the mercy of its suppliers. If BOTAŞ chooses not to extend any of its contracts, its trading book becomes unbalanced, with a mismatch of long-term obligations and long-term supply. BOTAŞ's network managers would be strongly against this. The apparent collapse of private-sector contracts has eliminated the cushion of comfortable supplies.
- On commercial considerations alone, IBS would expect BOTAŞ to seek to extend its current contracts – though to be demanding in the terms attached to the extension.
- This demand for revised terms has been evident in its current protracted price negotiations with Gazprom. At present, TurkStream 1 seems likely to start operation in 2020 with throughput of only 4 BCm³/year, well below its 15.75 BCm³/year capacity, a factor which must be disturbing Gazprom.

New BOTAŞ contracts – Strategic considerations indicate continuity

- It was politics – the concern about the degree of gas dependence on Russia after Turkey's shooting down of a Russian war plane in 2015 – which drove government support for investment in FSRUs, and politics influence how BOTAŞ approaches its relations.
- The U.S. has long – on the whole vainly – urged Turkey to reduce its dependence on imports from Russia and Iran. Today, the power of Washington in Ankara is less than it was, though BOTAŞ is still welcomed for ensuring LNG imports from the U.S. – 0.8 BCM3 in the first eight months of 2019.
- By contrast, the influence of Moscow has increased, not least because of the extent to which Turkey is dependent on Russian troops to cover the troops which it has sent into northern Syria.
- Politics changes from week to week, let alone over a period of years, but based on the supply-demand forecasts set out above, **BOTAŞ may well seek to extend the great majority of its current gas supply contracts, possibly all of them.** In all cases the most likely option is that current contract structures – and oil-product pricing will continue.
- Of critical importance is the future of the private sector gas import contracts. If taken over by BOTAŞ they will provide it with a greater flexibility than it currently has.

IBS clients in natural gas

Recent international clients in natural gas & oil



- ★ In cooperation with IHS
- ★ In cooperation with Poten

Recent Turkish & JV clients in natural gas & oil



Recent international financial institutional clients



Recent Turkish financial institutional clients



Thank you

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