



# Gas Trade in Turkey and Future Opportunities

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*Secretary General*

*MEDREG Workshop on Natural Gas Distribution*

*10 May 2018, Ankara*

# About PETFORM



**Established in 2000, PETFORM has played a crucial role in the transfer of private sector views to the public authorities regarding to Turkish energy legislation amendments. Member companies mainly have activities in 2 sectors:**

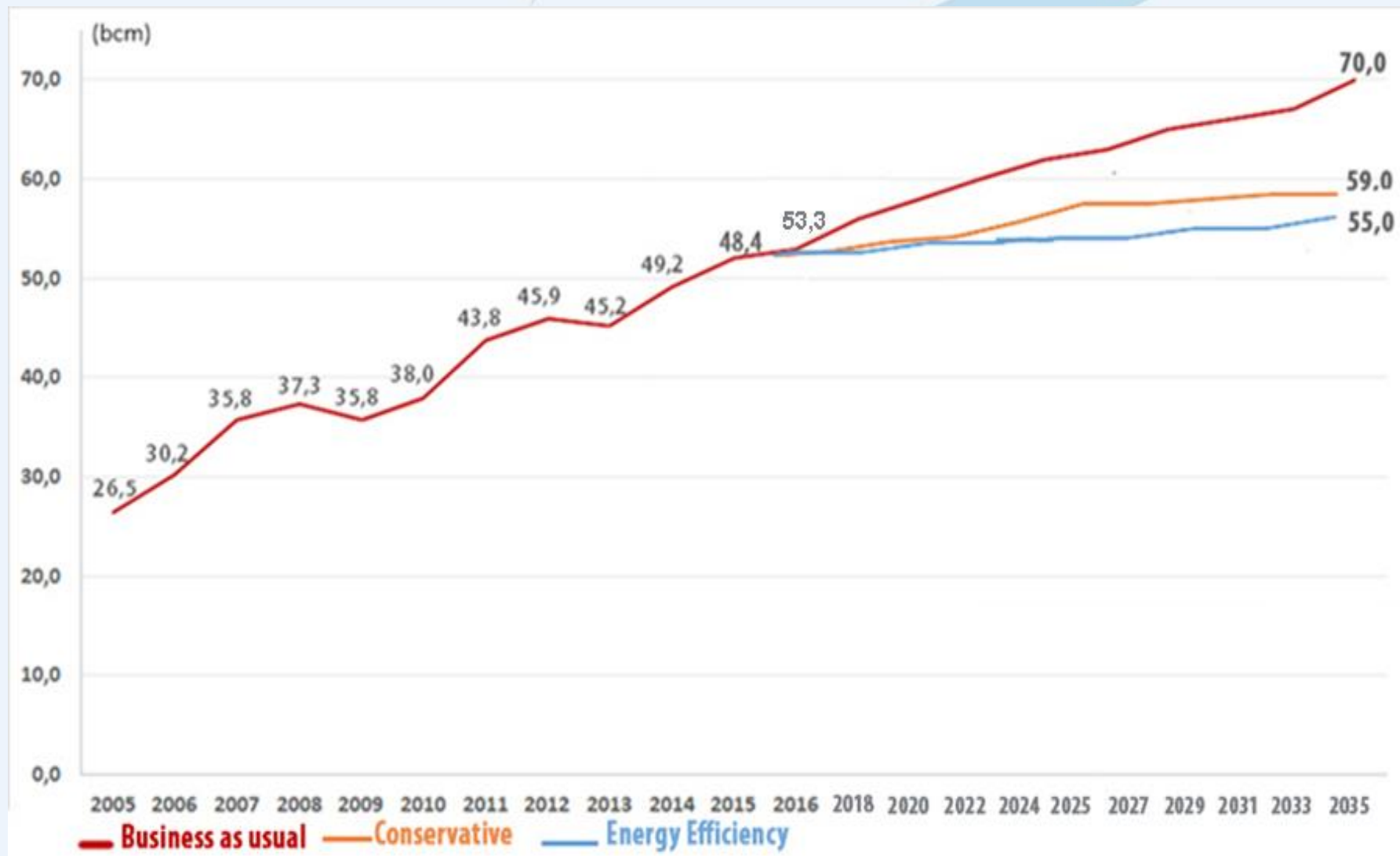
- **Exploration & Production Sector**
- **Natural Gas Market**

# Member Companies

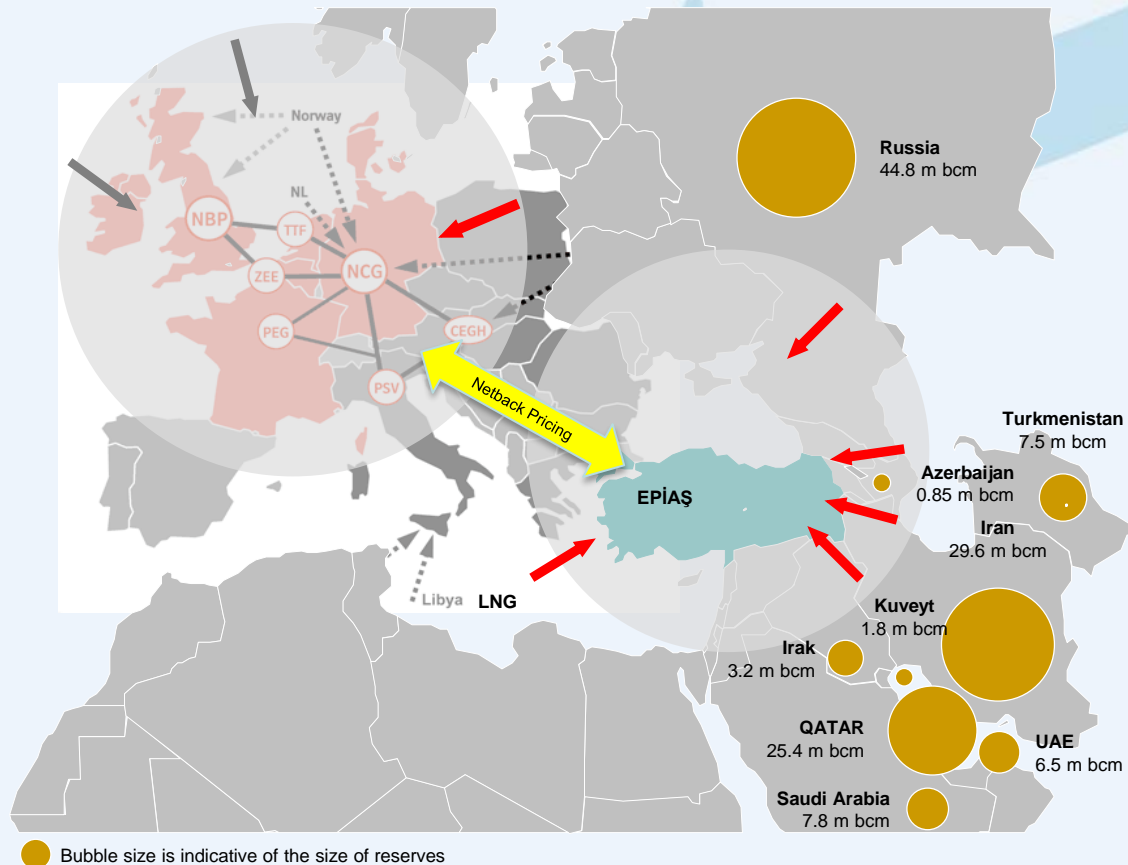


- AKENERJİ
- AKMERCAN ENERJİ
- AKFEL
- AKSA
- ALPIQ
- ALADDIN MIDDLE EAST
- ANGORAGAZ
- ATLI ENERJİ
- AVRASYA GAZ
- AYGAZ DG
- BATI HATTI GAZ
- BORDRILL
- BOSPHORUSGAZ
- BP
- CENGİZ ENERJİ
- CHEVRON
- ÇALIK ENERJİ
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- ENERJİSA
- ENERYA
- ENGIE
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- GENEL ENERGY
- GLOBAL MADEN
- GUNVOR
- GÜNEY YILDIZI PETROL
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- KİBAR ENERJİ
- MARSA ENERGY
- MET ENERJİ
- NATURGAZ
- NATURELGAZ
- OMV
- PALMET ENERJİ
- PERENCO
- RWE
- SHELL ENERJİ
- SHELL UPSTREAM
- SISECAM ENERJİ
- SOCAR
- TBS PETROL
- TEKFEN
- THRACE BASIN
- TOTAL
- TRANSATLANTIC PETROLEUM
- TURCAS
- VALEURA ENERGY
- VOLT ENERJİ
- ZORLU ENERJİ

# Natural Gas Demand Projection



# Integration of Turkey with European Gas Hubs



- 8 Major European Trading Hub
- Trading on OTC's via Brokers
- Trading on Energy Exchanges

If Turkey can make necessary structural reforms, Turkish natural gas market will be integrated with European trading hubs and generate reference price for natural gas trade in the region.

# Prerequisites for Liquid Wholesale Market



## Physical Infrastructure

- Very well developed and maintained physical infrastructure
- No restrictions and congestions to meet peak demand
- Cross border capacity development with minimum congestion
- New storage and LNG facilities for supporting supply security to seasonal and peak demands

## Regulatory Framework

- Policy drafting regulatory body should understand the real Dynamics of the Energy, TPA, Network Code, Independent TSO etc.
- Implementation of policies via EU directives.
- Monitoring of wholesale market integrity, competition (antitrust) and effective consumer interest protection is needed for competition
- Unbundling of transmission and counteraction of incumbents' vertical dominance

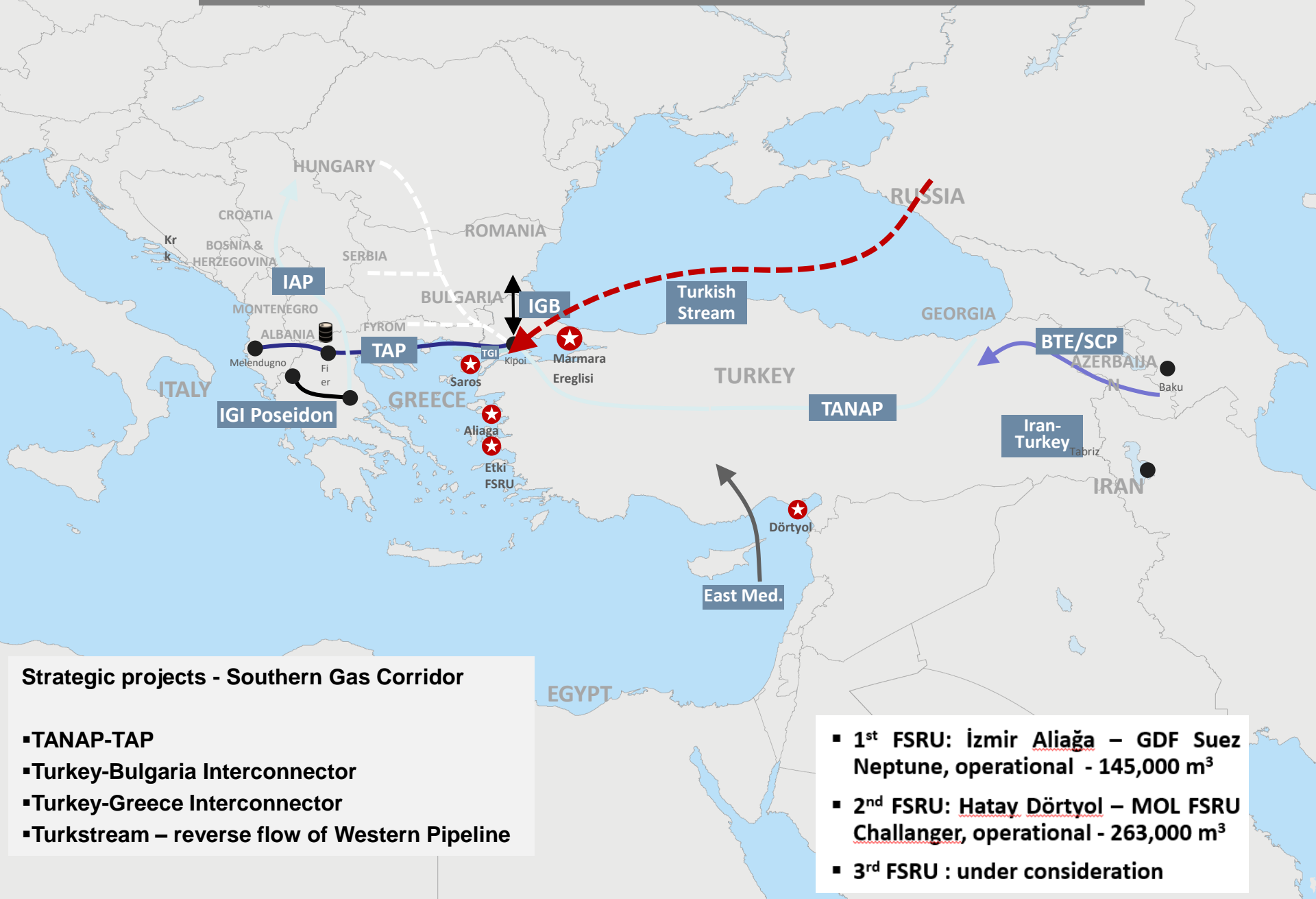
## Independence of Transmission System Operator

- Appropriate capacity-booking model (entry/exit model, use it or lose it principle)
- Effective balancing mechanism
- Effective nomination processes
- Publicized imbalance charging structures (not overly punitive)
- Very well integrated storage injection and withdrawal processes to the transmission system
- Transparent tariffs for system entry and exit

## Commercial and Market Conditions

- Formation and active promotion of common pricing reference
- Free day ahead and intraday price assessment mechanism
- Standard and commonly expected physical contracts
- No barrier for new entries
- No destination clauses
- Transparent price-discovery mechanisms / platforms ,functioning forward market
- Good synchronization between balancing, nearby and forward markets
- Stable financial and credit environment and mechanisms

# International Cooperation Opportunities

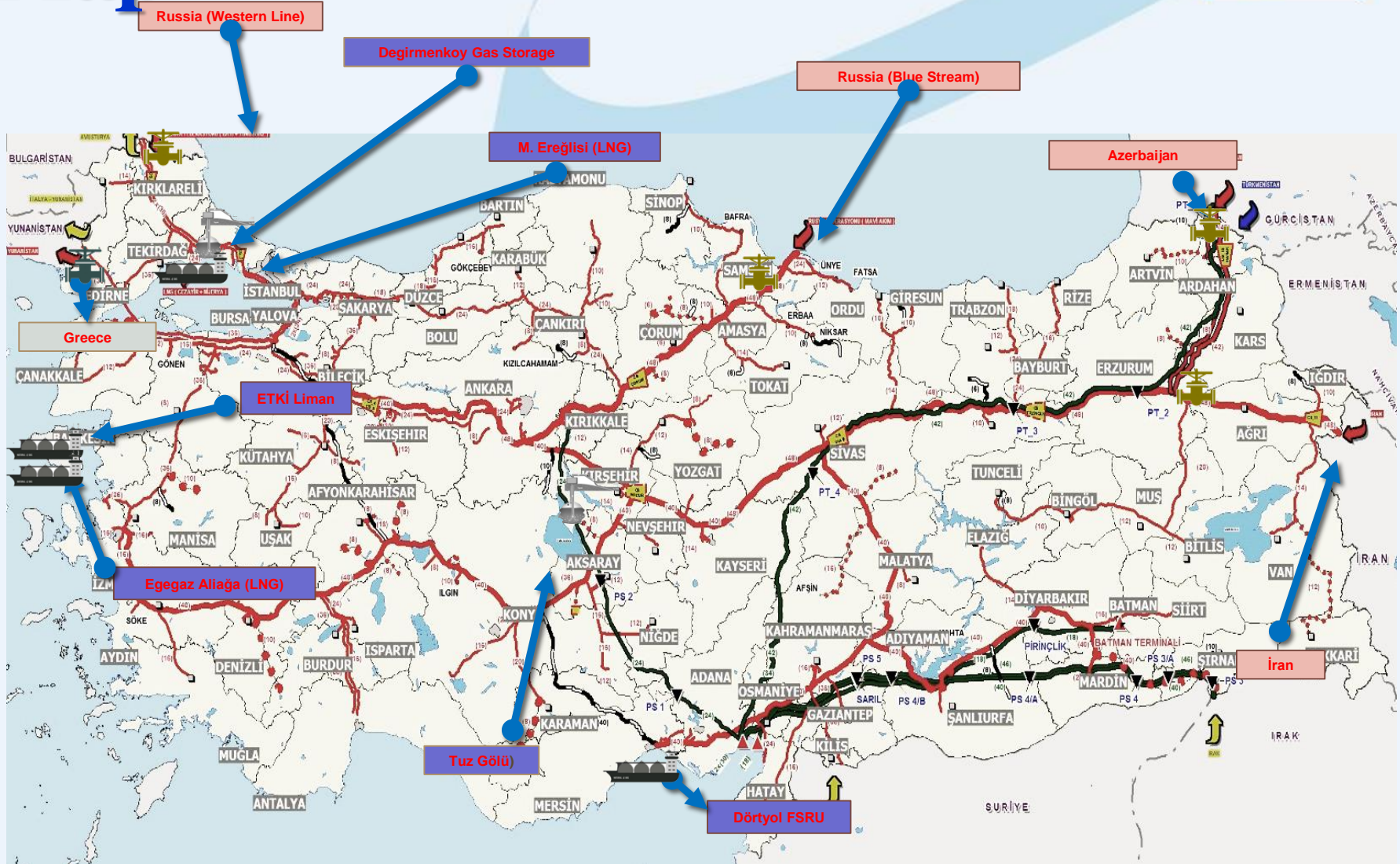


## Strategic projects - Southern Gas Corridor

- TANAP-TAP
- Turkey-Bulgaria Interconnector
- Turkey-Greece Interconnector
- Turkstream – reverse flow of Western Pipeline

- 1<sup>st</sup> FSRU: İzmir Aliaga – GDF Suez Neptune, operational - 145,000 m<sup>3</sup>
- 2<sup>nd</sup> FSRU: Hatay Dörtyol – MOL FSRU Challenger, operational - 263,000 m<sup>3</sup>
- 3<sup>rd</sup> FSRU : under consideration

# Domestic Gas Infrastructure Map

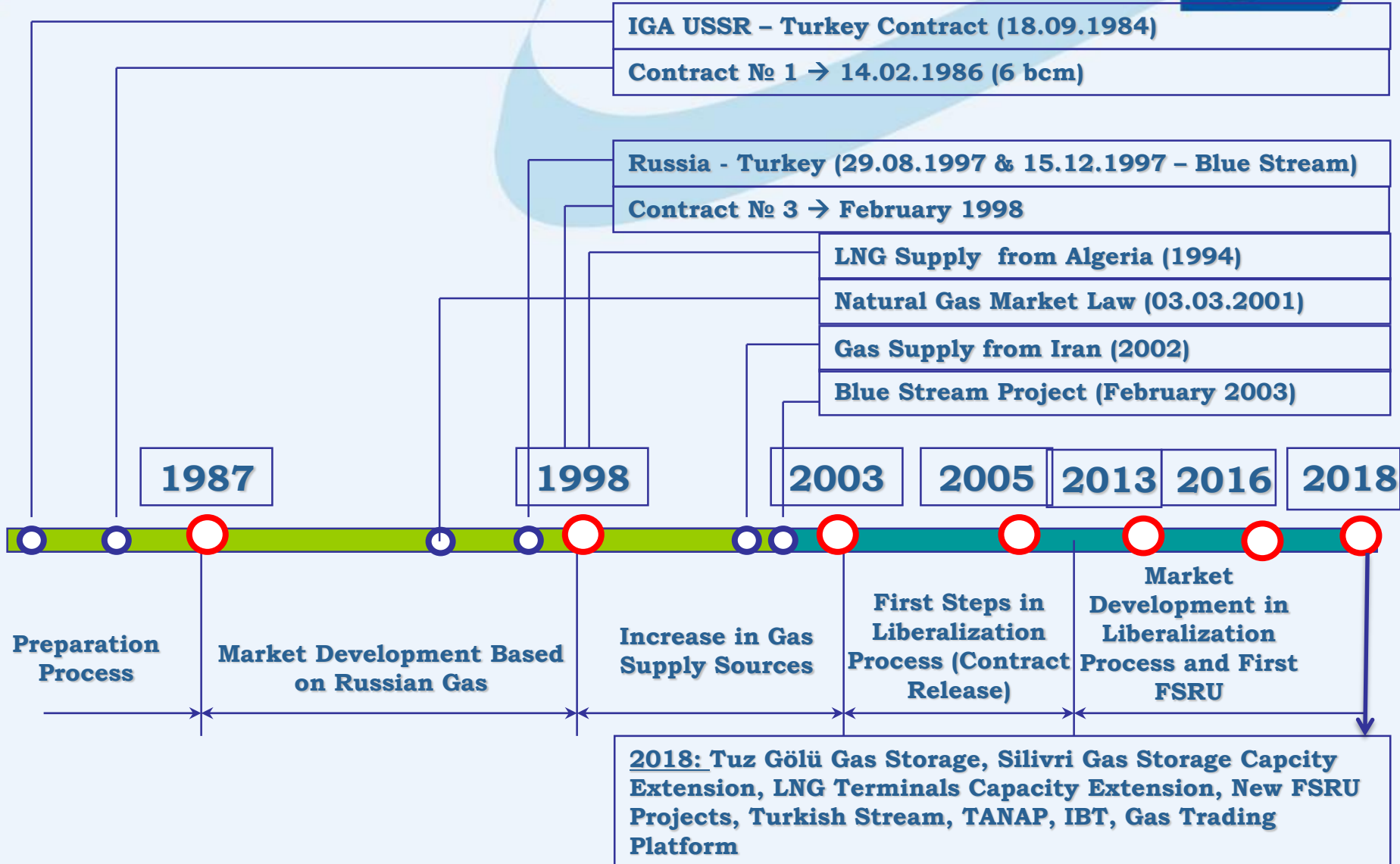


# Gas Entry Capacity



ENTRY POINTS	2017	2018	2019	2020	2021	2022	2023
MALKOÇLAR-BALKAN	51,4	51,4	51,4	14,7	14,7	14,7	14,7
DURUSU-BLUE STREAM	48	48	48	48	48	48	48
GÜRBULAK-İRAN	28,5	28,5	28,5	28,5	28,5	28,5	28,5
TÜRKGÖZÜ-SHAHDENİZ	19	19	19	19	19	19	19
ESKİŞEHİR-TANAP	0	5,7	11,3	14	16,4	16,4	16,4
TRAKYA-TANAP	0	0	0	0	8,2	8,2	8,2
KIYIKÖY-TURK STREAM	0	0	0	46,9	46,9	46,9	46,9
M. EREĞLİSİ LNG	22	37	37	37	37	37	37
ALİAĞA LNG	24,5	40	40	40	40	40	40
ALİAĞA FSRU	20	(20) 14,1	14,1	14,1	20	20	20
SAROS FSRU	0	20	20	20	20	20	20
DÖRTYOL FSRU	0	20	20	20	20	20	20
AKÇAKOCA-TP	0,36	0,36	0,36	0,36	0,36	0,36	0,36
GELİBOLU-MARSA	0,42	0,42	0,42	0,42	0,42	0,42	0,42
K. MARMARA	25	25	25	50	75	75	75
TUZGÖLÜ	13	20	20	30	80	80	80
<b>TOTAL</b>	<b>252,18</b>	<b>329,48</b>	<b>335,08</b>	<b>382,98</b>	<b>474,48</b>	<b>474,48</b>	<b>474,48</b>

# Development Process of Turkish Natural Gas Market



# Private Players' Entrance into the Market



## Contract Release (2007)

Enerco Enerji	2.50
BosphorusGaz	0.75
AvrasyaGaz	0.50
Shell Enerji	0.25
	+

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4 bcm

## Contract Renewal (2013)

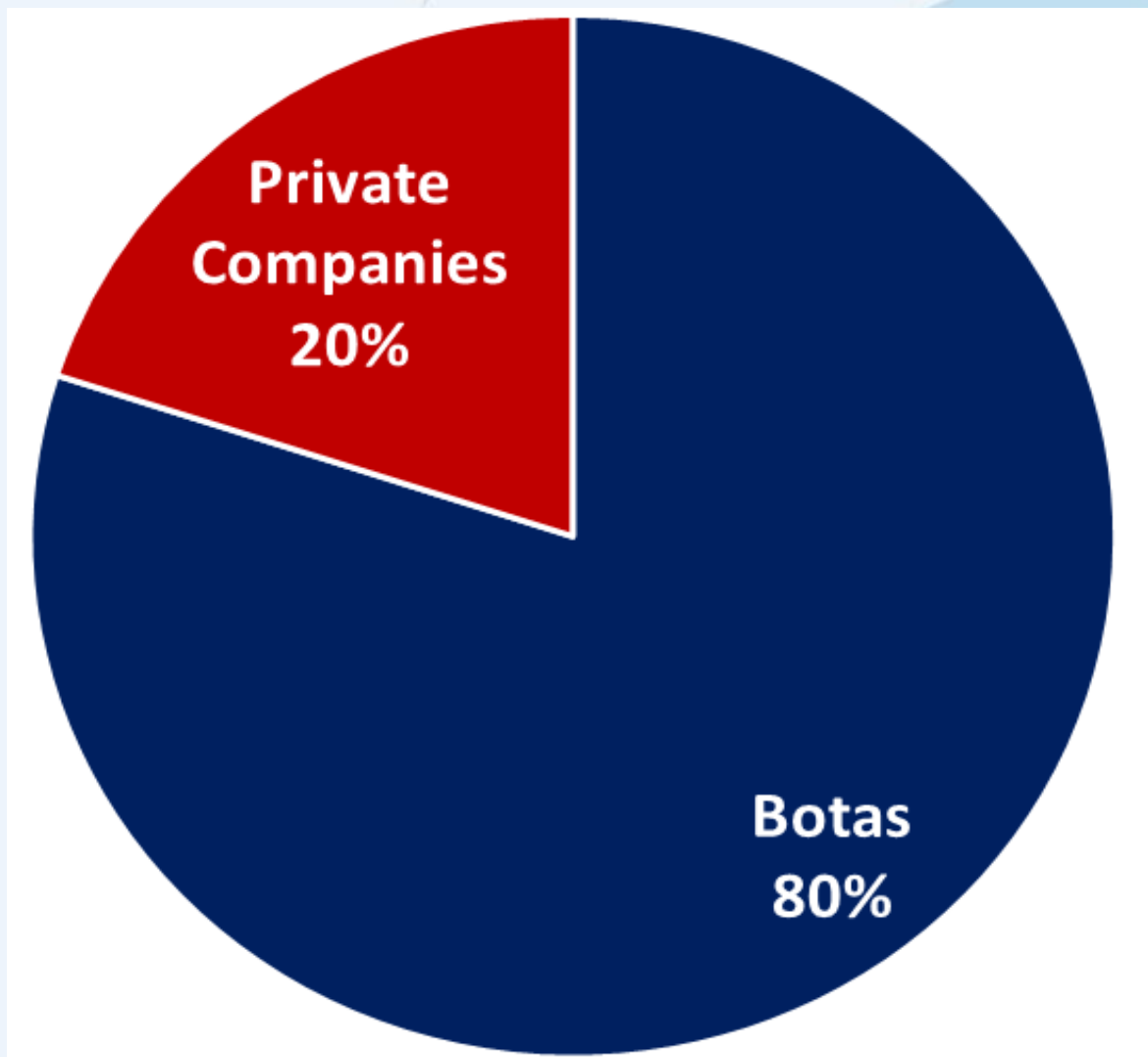
Akfel Gaz	2.25
BosphorusGaz	1.75
Kibar Enerji	1.00
Batı Hattı	1.00
	+

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6 bcm

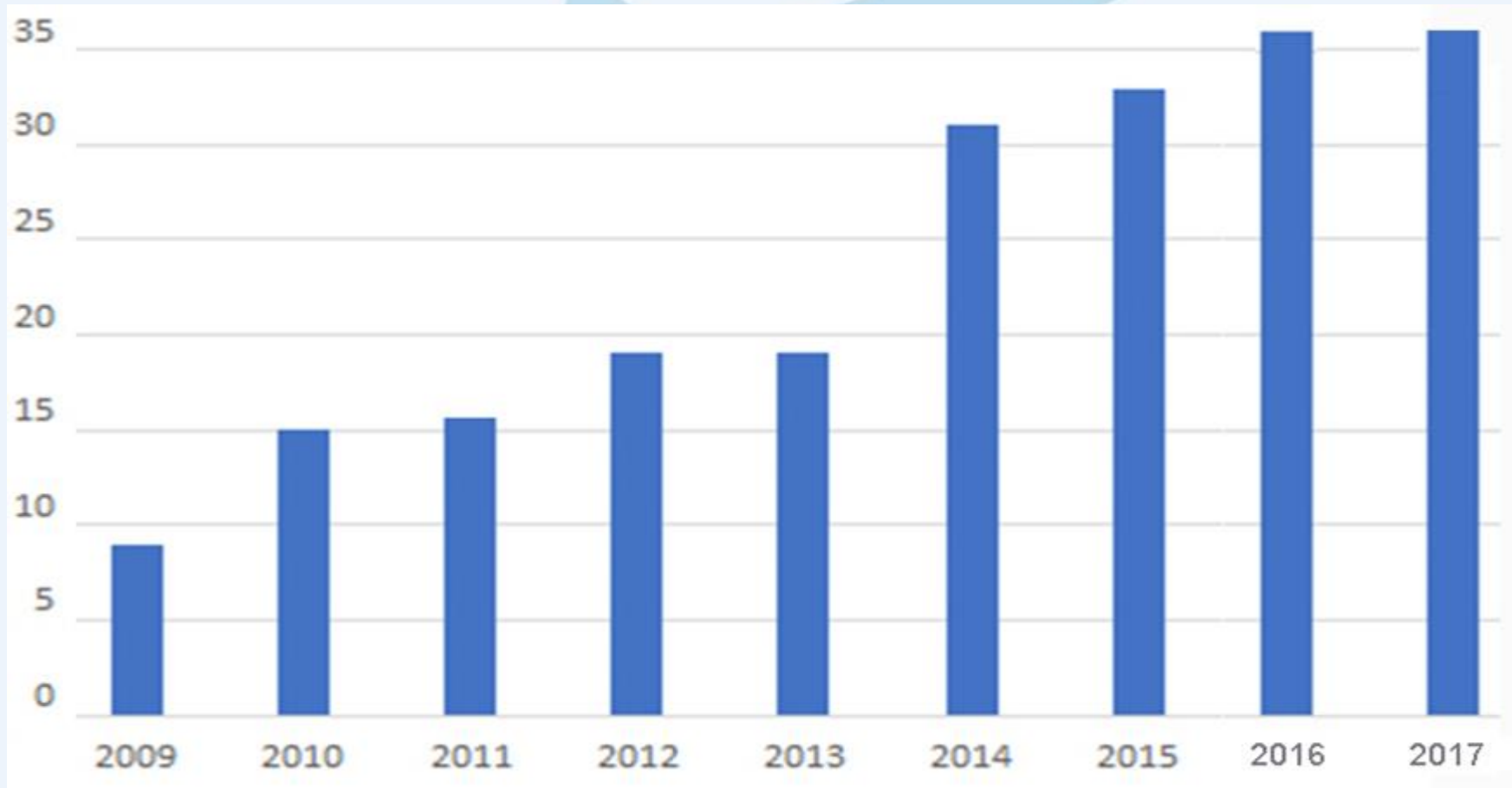
## TR – AZ Agreement (2013)

SOCAR	1.20
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# Market Shares



# Number of Private Wholesalers



# Gas Import Contracts



Supplier	Type	Volume (bcm/yr)	Period (years)	Start Date	End Date
Russia (Balkan route)	Pipeline	4	23	1998	2022
Russia (Balkan route)	Pipeline	1	23	2013	2036
Russia (Balkan route)	Pipeline	5	30	2013	2043
Russia (Balkan route)	Pipeline	4	23	1998	2022
Russia (Blue Stream)	Pipeline	16	25	2003	2028
Algeria	LNG	4,4	30	1994	2024
Nigeria	LNG	1,2	22	1999	2021
Iran	Pipeline	10	25	2001	2026
Azerbaijan	Pipeline	6,6	15	2007	2022
Total		52,2			



***THANK YOU...***

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