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`The interpretations, estimates and/or opinions reflect the judgment of the authors, not the Company`

ANGORAGAZ

TÜRKERLER

TÜRKERLE

Corporate Presentation

Türkerler Energy

- Energy generation, distribution and trading with special focus on renewable energy
- In 2007, Türkerler won 2 GW out of 9 GW, representing 20% of the total granted licenses and 183 MW capacity were also won by the Company in 2017 (911 MW existing licenses)
- In August 2017, 1.000 MW capacity YEKA Tender was won as Kalyon-Türkerler-Siemens consortium with a bid of 3.48 USD cent/kWh.
- In addition to 48 MW of operational GEPP, 3 HEPPs totaling of 124 MW and 3 WEPPs with a total capacity of 72 MW are operational as well
- Gas storage project in an underground salt mine in Adana, Seyhanlı, which has an area of 1.883 hectares and a potential capacity of 3 billion m^3.
- Vangölü Electricity Distribution with 652.000 customers and 1.8 GWh of energy sales
- Angoragaz with a 330 mil. m^3 gas trading volume in 2017

Overview of Türkerler Group

Energy

- Generation
- Distribution
- Trading

Highlights

- 48 MW GEPP, 124 MW HEPP operational
- 72 MW operational WEPP with 1.000 MW RERA
- 652.000 power distibution customers

Local Alliances
Kalyon Construction, Akınal Nonwovens

Public-Private Partnership

- Healthcare

Highlights

- Won the tender for Turkey's first and largest PPP
- Ankara, İzmir, Kocaeli healthcare campus projects

Local & International Alliances
Astaldi SpA, Gama Holding, GE

Construction

- Contract Work
- Real Estate Development
- Water Treatment & Infrastructure

Highlights

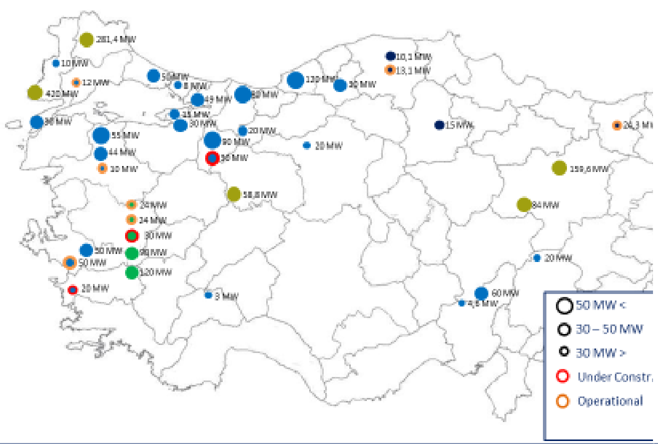
- A leading brand in the construction business
- Pipeline of A+ real estate development projects
- Significant growth potential for infrastructure

Local & International Alliances
Makyol, Yüksel, OTV International, Divan, Doğuş

Others
Several companies operating in the textile, oil and IT sectors

Generation

- One of the largest and most diverse power generation proje
  - 911 MW (exc. YEKA) of WEPP, 284 MW of HEPP, 300 MW of Geotermal projects



YEKA Project

- YEKA Tender was won as Türkerler-Kalyon-Siemens consortium with a bid of 3,48 USD cent/kWh.
- Will consist five projects with a total capacity of 1.000 MW and they will be located in four cities (Kırklareli, Edirne, Sivas and Eskişehir) throughout Turkey.
- Installed capacities of projects vary from 60 MW to 420 MW.
- Türkerler-Kalyon partnership will be the sponsor of YEKA and will undertake the 1 bil. USD investment.
- Siemens-Gamesa Wind Power will be the turbine manufacturer of the projects with a state-determined 65% local content.
- Feed-in-tariff mechanism was determined to be applied for 15 years.

One of the Leading Investment Companies in Turkey Focused on Various Sectors

5,2 bn USD
Investment Value

2,5 bn USD
Net Asset Value

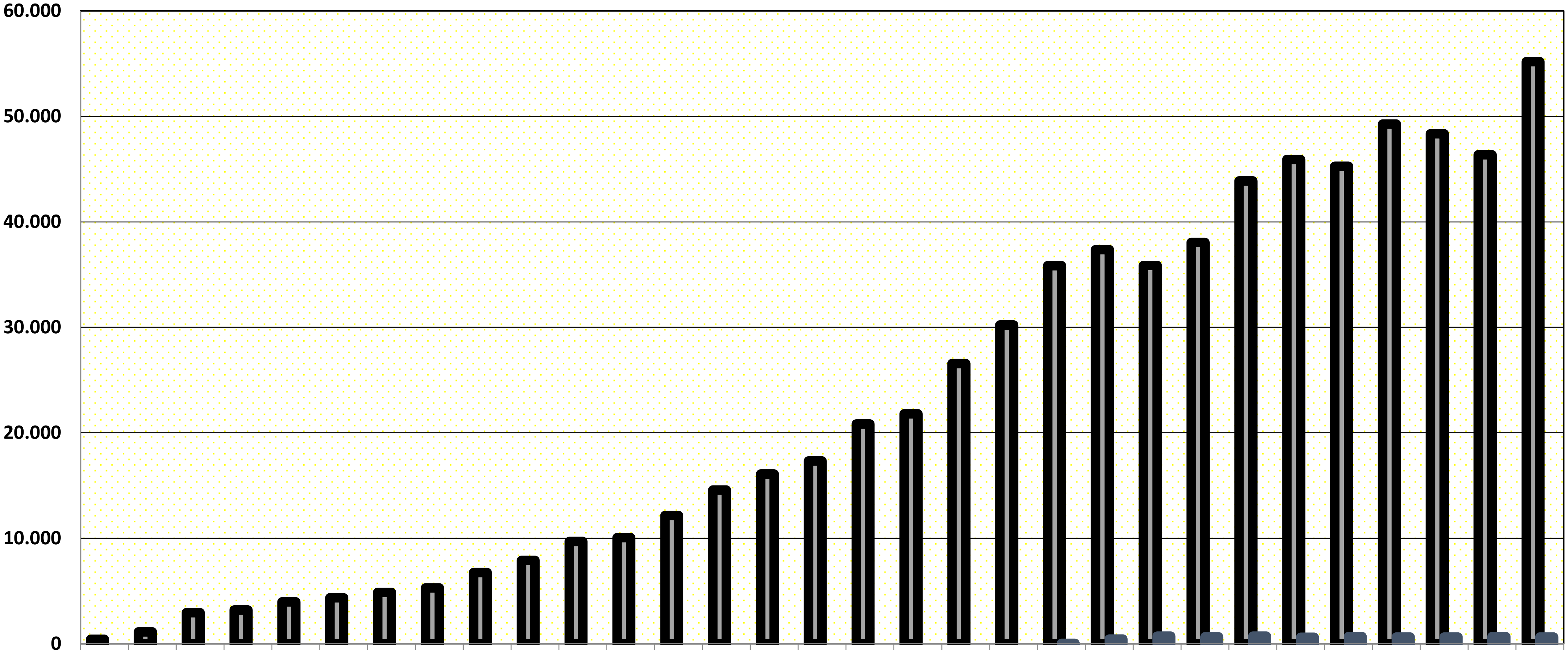
1,4 bn USD
Revenue

%36
2015-2016 Revenue Growth

% 12
2015-2016 Asset Growth

22.000
Employees

Gas Import & Re-Export

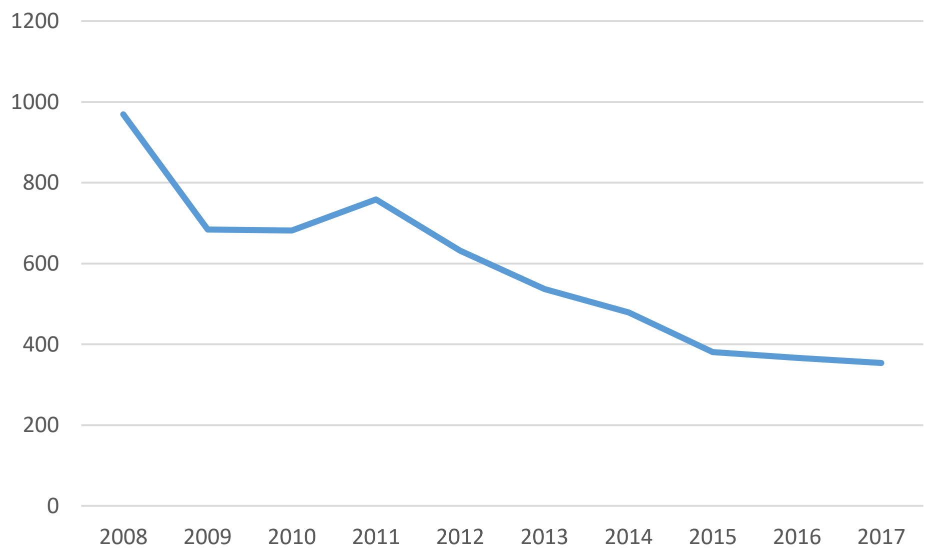


	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Import	426	1.117	2.935	3.191	3.963	4.355	4.868	5.284	6.742	7.904	9.707	10.06	12.14	14.57	16.09	17.32
Export																

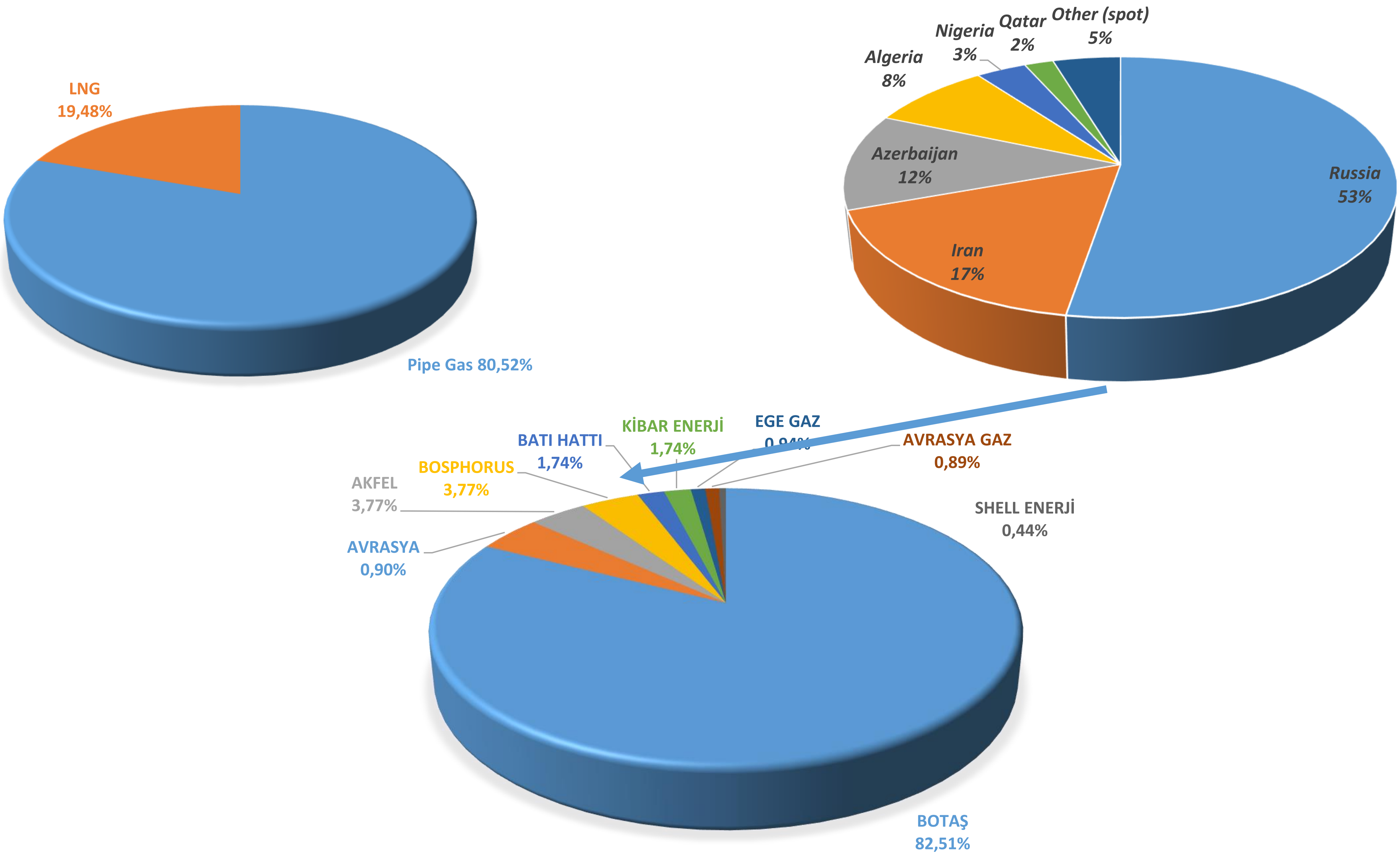
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Import	20.82	21.79	26.57	30.22	35.83	37.35	35.85	38.03	43.87	45.92	45.26	49.26	48.35	46.35	55.19
Export					31	443	721	660	726	611	679	633	624	675	631

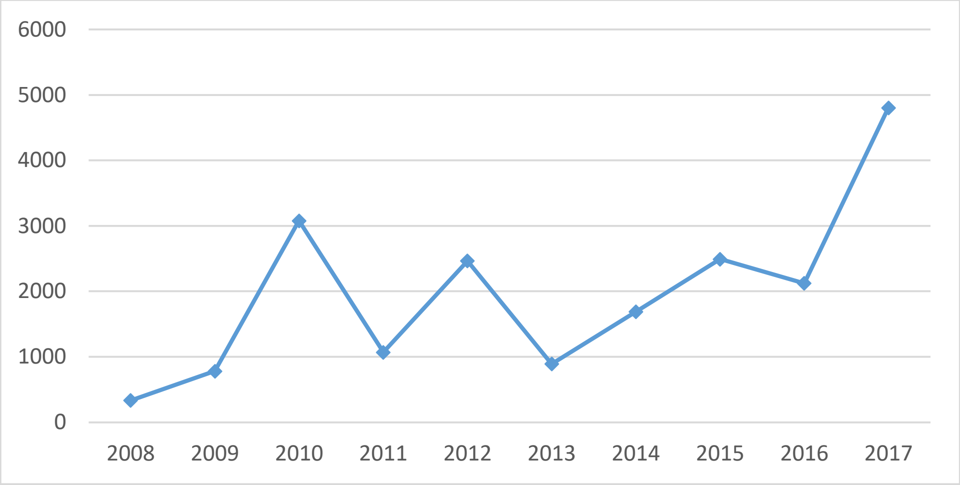
Indigenous Natural Gas Production

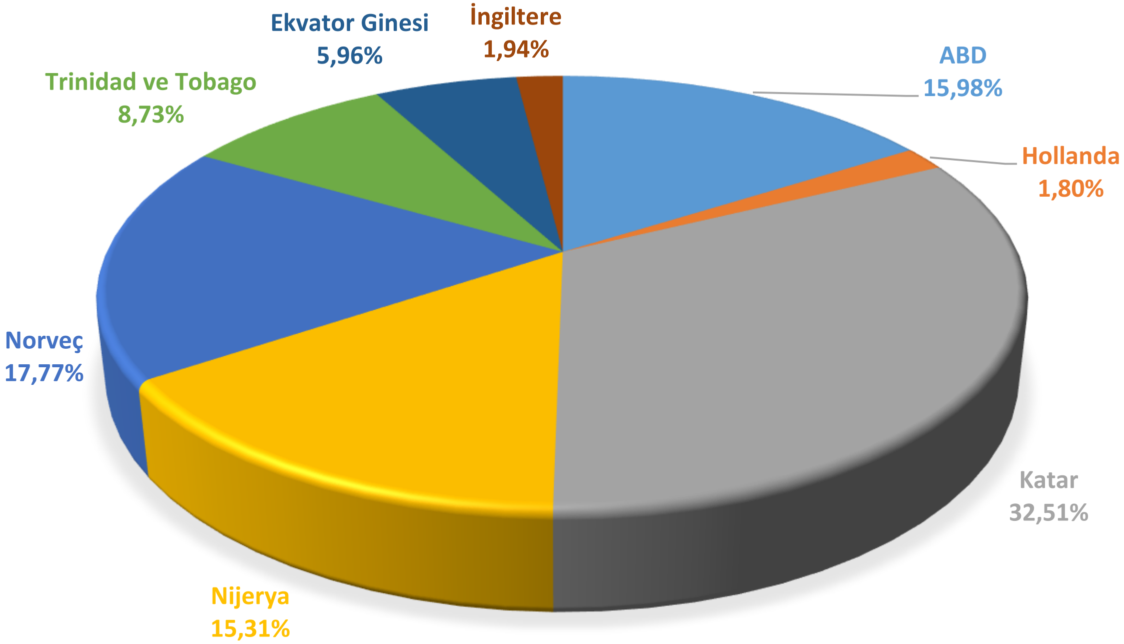
Years	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Quantity	969	684	682	759	632	537	479	381	367	354



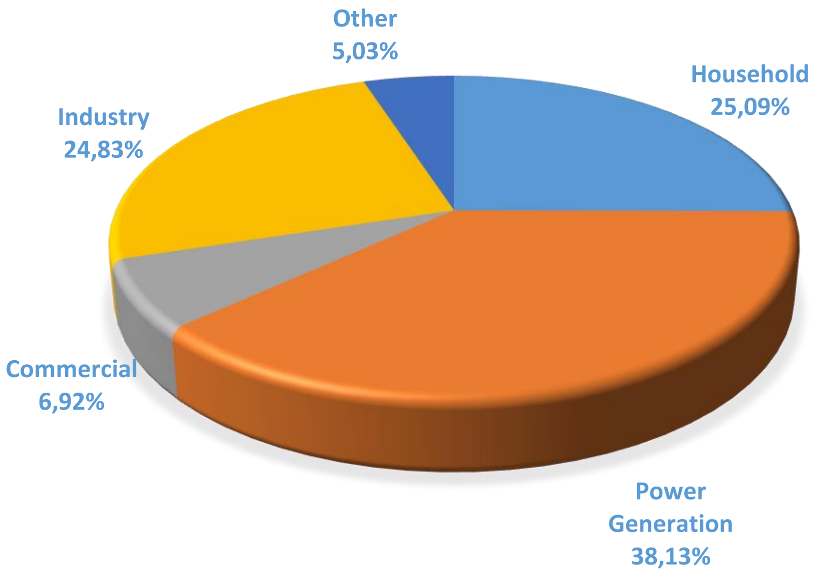
Ref: EMRA Sector Report 2017

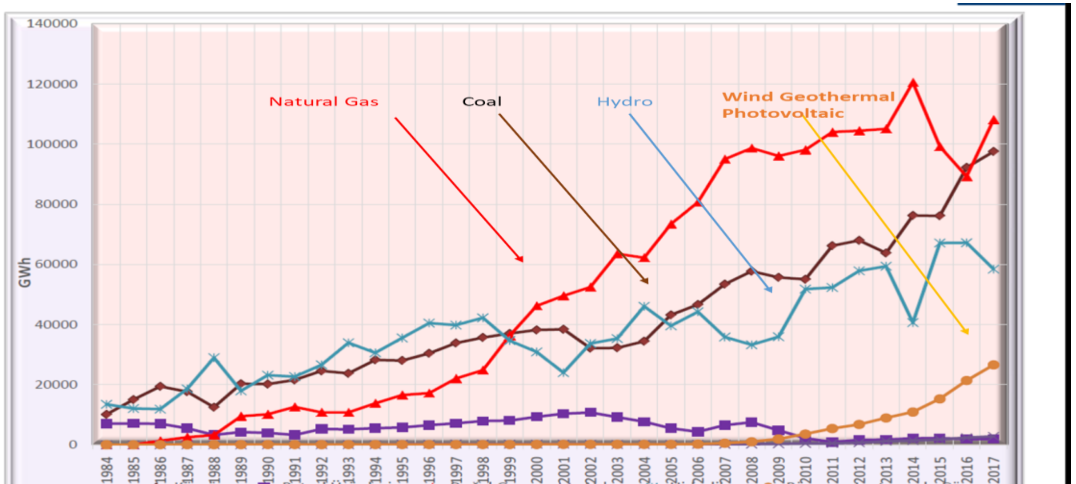

LNG
19,48%
Pipe Gas 80,52%
Nigeria
3%
Qatar
2%
Other (spot)
5%
Algeria
8%
Azerbaijan
12%
Russia
53%
Iran
17%
BATI HATTI
1,74%
KİBAR ENERJİ
1,74%
EGE GAZ
0,94%
AVRASYA GAZ
0,89%
BOSPHORUS
3,77%
AKFEL
3,77%
SHELL ENERJİ
0,44%
AVRASYA
0,90%
BOTAŞ
82,51%


6000
5000
4000
3000
2000
1000
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017


Ekvator Ginesi 5,96%
İngiltere 1,94%
ABD 15,98%
Trinidad ve Tobago 8,73%
Hollanda 1,80%
Norveç 17,77%
Katar 32,51%
Nijerya 15,31%

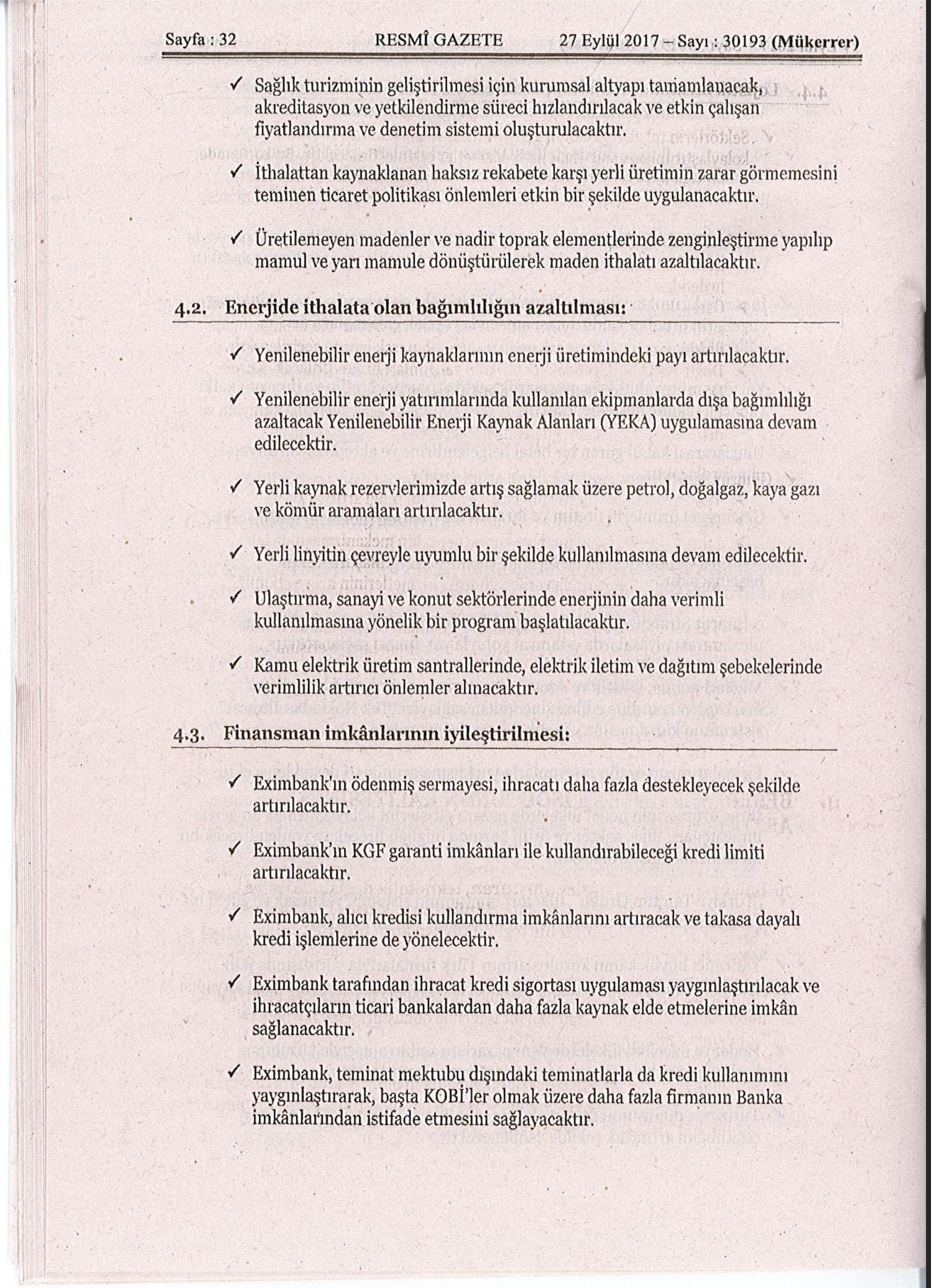
Gas Consumption by Sectors, 2017





In 2017, a 15.87% increase in the national natural gas consumption has occurred. This is largely due to the increase in the amount of natural gas used in power generation and the increase in household gas consumption. According to the previous years, when the consumption amounts of the sectors are examined; the amount of natural gas used for power generation showed a significant decline between 2014-2016, but it increased again in 2017. The amount of natural gas used for electricity production increased by 22.71% compared to the previous year in 2017. The amount of natural gas consumed in residential areas between 2014 and 2017 is on the rise. In 2017, the amount of natural gas consumed in the houses increased by 15,49% compared to the previous year. Industrial Sector consumption increased by 6.13% in 2017 compared to the previous year.

Ref: EMRA Natural Gas Report 2018 and Mechanical Engineers Turkey Energy Outlook 2018



- ✓ Sağlık turizminin geliştirilmesi için kurumsal altyapı tamamlanacak, akreditasyon ve yetkilendirme süreci hızlandırılacak ve etkin çalışan fiyatlandırma ve denetim sistemi oluşturulacaktır.
- ✓ İthalattan kaynaklanan haksız rekabete karşı yerli üretimin zarar görmemesini teminen ticaret politikası önlemleri etkin bir şekilde uygulanacaktır.
- ✓ Üretilemeyen madenler ve nadir toprak elementlerinde zenginleştirme yapılıp mamul ve yarı mamule dönüştürülerek maden ithalatı azaltılacaktır.

4.2. Enerjide ithalata olan bağımlılığın azaltılması:

- ✓ Yenilenebilir enerji kaynaklarının enerji üretimindeki payı artırılacaktır.
- ✓ Yenilenebilir enerji yatırımlarında kullanılan ekipmanlarda dışa bağımlılığı azaltacak Yenilenebilir Enerji Kaynak Alanları (YEKA) uygulamasına devam edilecektir.
- ✓ Yerli kaynak rezervlerimizde artış sağlamak üzere petrol, doğalgaz, kaya gazı ve kömür aramaları artırılacaktır.
- ✓ Yerli linyitin çevreyle uyumlu bir şekilde kullanılmasına devam edilecektir.
- ✓ Ulaştırma, sanayi ve konut sektörlerinde enerjinin daha verimli kullanılmasına yönelik bir program başlatılacaktır.
- ✓ Kamu elektrik üretim santrallerinde, elektrik iletim ve dağıtım şebekelerinde verimlilik artırıcı önlemler alınacaktır.

4.3. Finansman imkânlarının iyileştirilmesi:

- ✓ Eximbank'ın ödenmiş sermayesi, ihracatı daha fazla destekleyecek şekilde artırılacaktır.
- ✓ Eximbank'ın KGF garanti imkânları ile kullandırabileceği kredi limiti artırılacaktır.
- ✓ Eximbank, alıcı kredisi kullandırma imkânlarını artıracak ve takasa dayalı kredi işlemlerine de yönelecektir.
- ✓ Eximbank tarafından ihracat kredi sigortası uygulaması yaygınlaştırılacak ve ihracatçıların ticari bankalardan daha fazla kaynak elde etmelerine imkân sağlanacaktır.
- ✓ Eximbank, teminat mektubu dışındaki teminatlarla da kredi kullanımını yaygınlaştırarak, başta KOBİ'ler olmak üzere daha fazla firmanın Banka imkânlarından istifade etmesini sağlayacaktır.

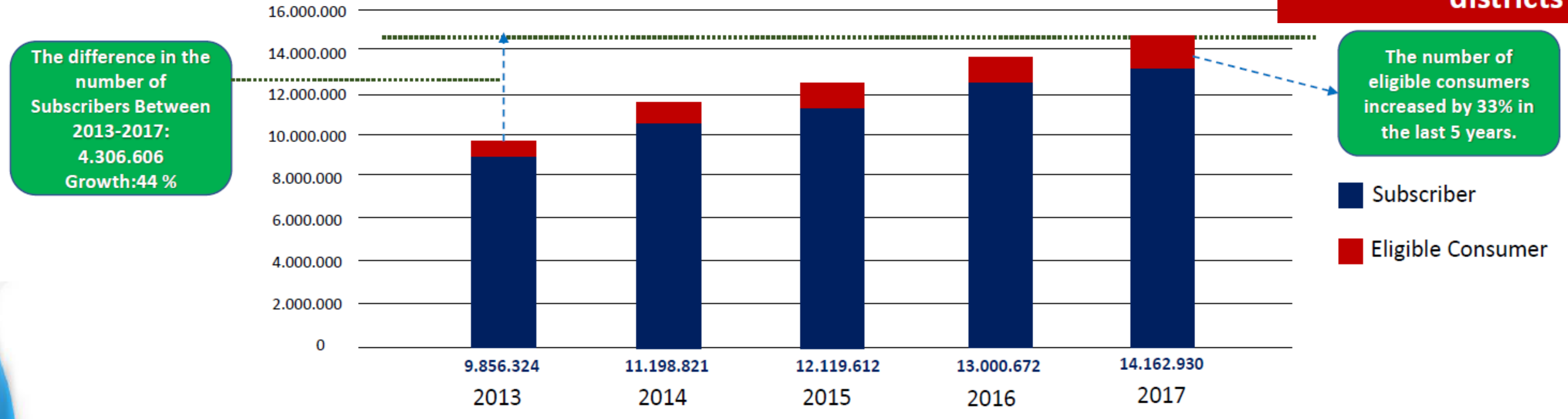
Medium-Term Program 2018-2020

- Renewable Energy Share increase in Power Production
- Renewable Energy Investment Area
- Domestic NG Shale Gas Oil and Coal exploration Works
- Domestic Lignite with enviromental friendly Projects
- Energy efficency Programme in Transportation, Industry and households
- Energy Efficiency in State Power Plants and Electricty transmission and distribution lines

As of the end of 2017, the number of natural gas total subscribers in total reached to 14.162.930. The number of subscribers increased to 13.610.325 and of eligible consumer rose to 552.605. In 2017, 1.162.691 new subscribers were included to Turkey's natural gas distribution system.

When the expansion investments are completed, 81 provinces and 554 districts and towns in Turkey will use natural gas.

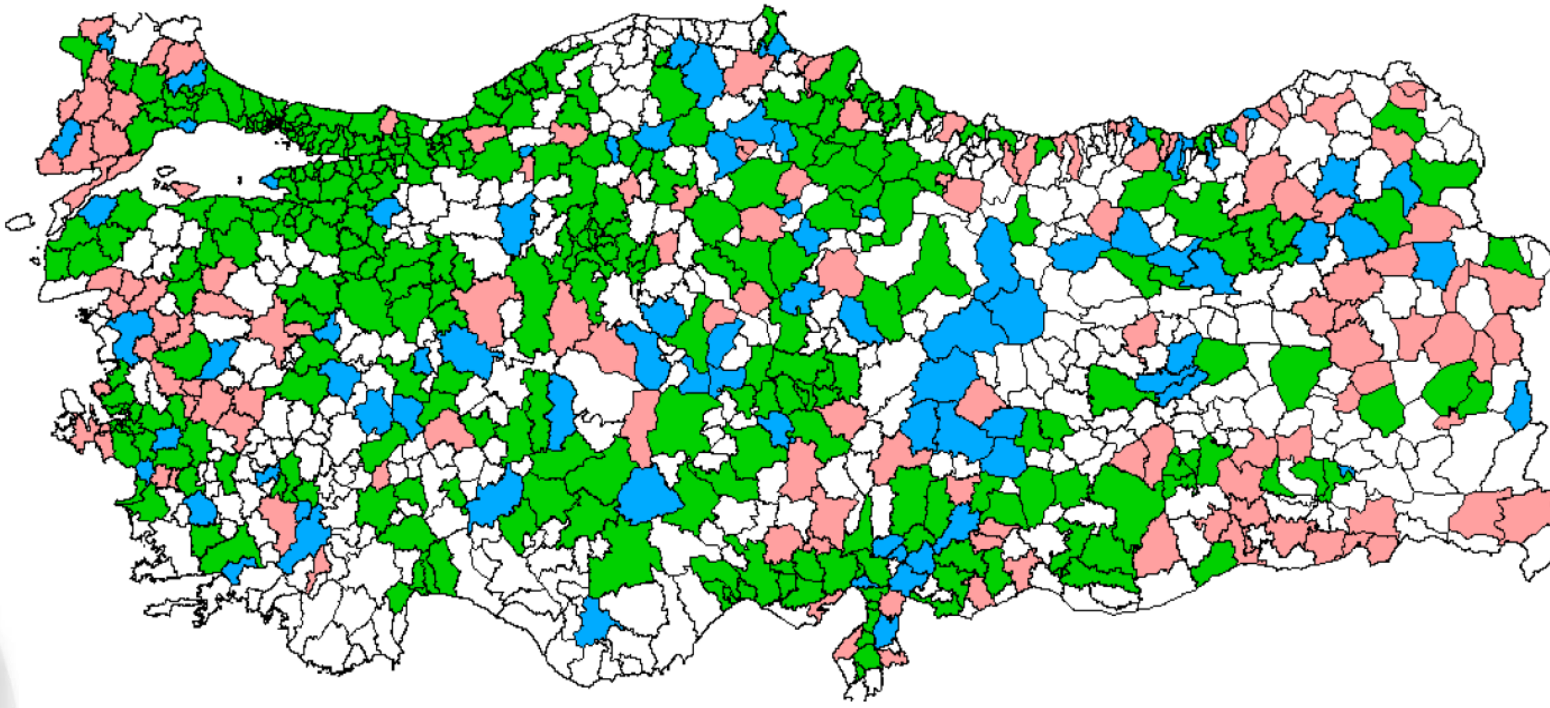
Number of Subscribers Between 2013-2017



In 2017, the average carbon emission of a residence using natural gas was 2.2 ton. If coal and other fuels had been preferred, the average carbon emission per residence would have been about 4.3 ton. Due to the natural gas, the carbon emission was 50% less per residence.

	2017	TOTAL
STEEL PIPELINE	1.040 KM	11.800 KM
POLYETHYLENE (PE) PIPELINE	6.500 KM	80.130 KM
SERVICE PIPELINE	4.238 KM	38.655 KM
TOTAL	11.778 KM	130.585 KM

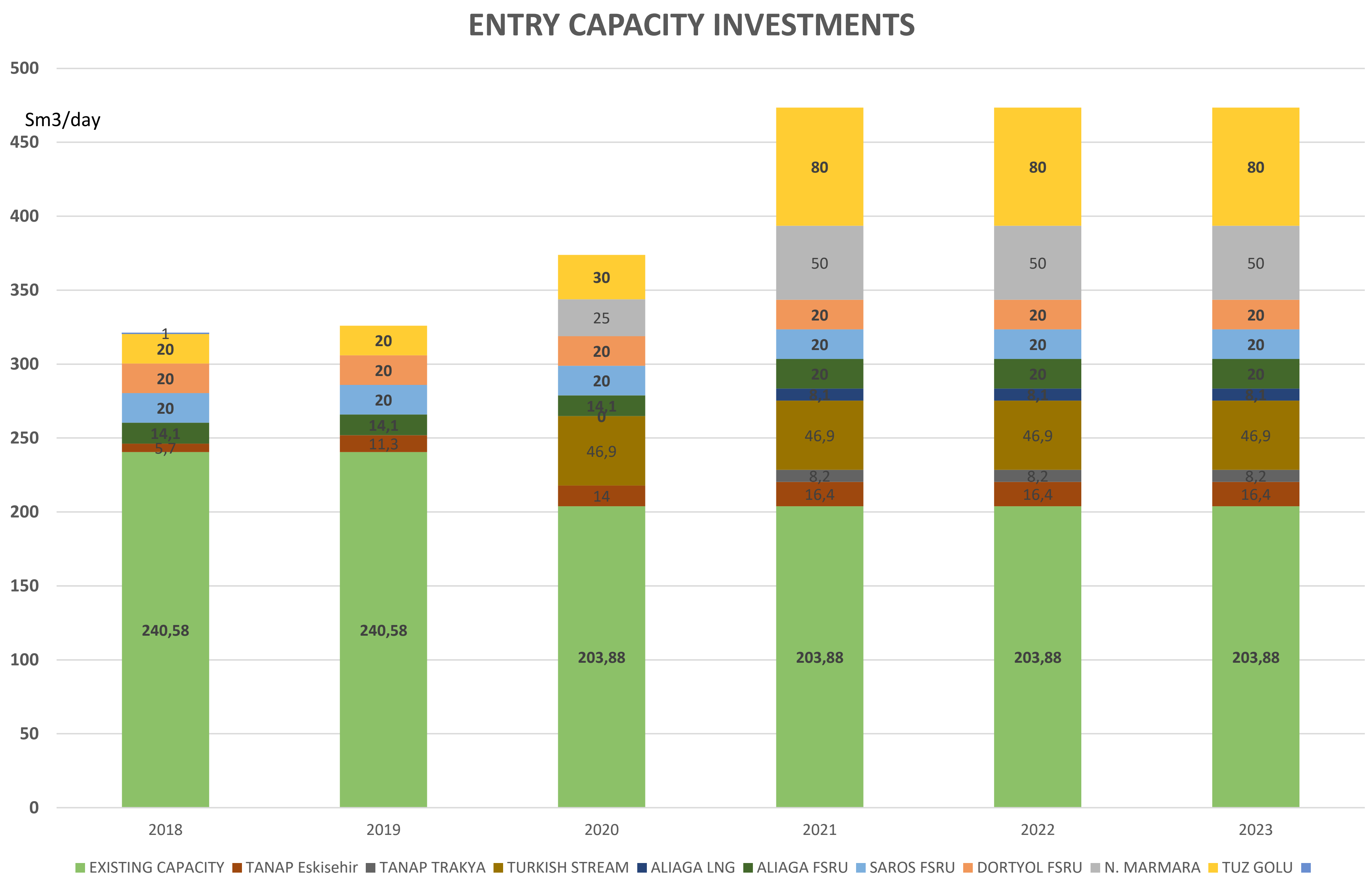
ural Gas Supply Map



As of the end of 2017, within the natural gas distribution sector, 72 natur investments of 21.5 billion TL in total. Thanks to the investments, Turkey's nat 130.585 km and the length of the network has increased by 12% compared to 20

Ref:

GAZBİR
Türkiye Doğal Gaz Dağıtıcıları Birliği


ENTRY CAPACITY INVESTMENTS
Sm3/day
500
450
400
350
300
250
200
150
100
50
0
2018
2019
2020
2021
2022
2023
240,58
5,7
14,1
20
20
20
1
240,58
11,3
14,1
20
20
20
203,88
14
46,9
0
14,1
20
20
25
30
203,88
16,4
8,2
46,9
20
20
20
50
80
EXISTING CAPACITY
TANAP Eskisehir
TANAP TRAKYA
TURKISH STREAM
ALIAGA LNG
ALIAGA FSRU
SAROS FSRU
DORTYOL FSRU
N. MARMARA
TUZ GOLU

Gas Import Agreements

BOTAŞ

Contract	Date of Signature	Date of Operation	Duration (Years)	Volume (Plateau bcma)	Date of Expiration
Algeria (LNG)	Apr 1988	Aug 1994	20	4,0	2024 (extended)
Nigeria (LNG)	Nov 1995	Nov 1999	22	1,2	2021
Iran	Aug 1996	Dec 2001	25	10,0	2026
Russia (B.Stream)	Dec 1997	Feb 2003	25	16,0	2028
Russia (West)	Feb 1998	Mar.98	23	4,0	2021
Azerbaijan 1.	Mar.01	Jul 2007	15	6,6	2022
Azerbaijan 2	Oct.2011	Jun 2018	15	6,0	2033

PRIVATE IMPORTERS

	Quantity	Start	Date of Expiration
Shell Enerji	250	Dec 2007	2021
Avrasya Gaz	500	January .2009	2021
Bosphorus Gaz	750	January .2010	2021
Enerco Enerji	2500	April 2009	2021
Akfel Gaz	2250	41244	2043
Bosphorus Gaz	1750	41244	2043
Kibar Enerji	1000	41244	2043
Batı Hattı	1000	41244	2043

Source: Energy Market Regulatory Authority

New Projects through TURKEY

TURKISH STREAM

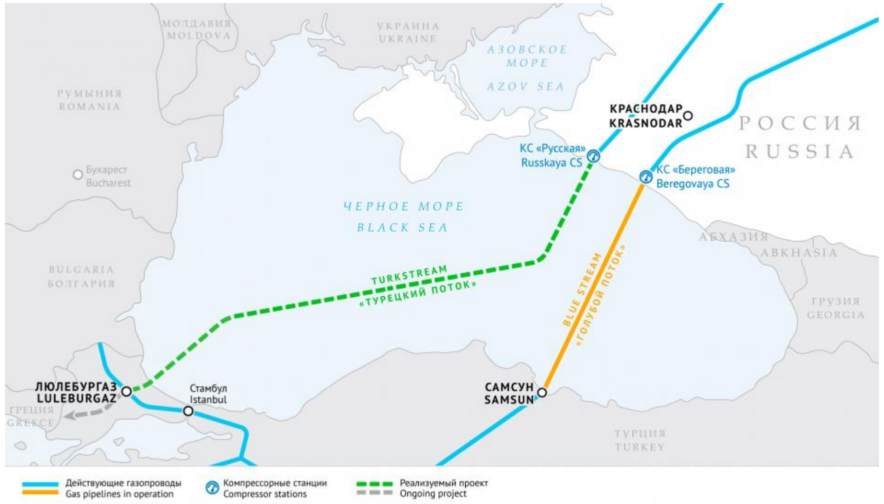
On April 30, 2018, Alexey Miller stated that the laying of the first string of the TurkStream is completed. He also noted that, as of late April 2018, a total of 1161 km have been laid along the two strings, which is about 62% of the offshore section length.

Next year first part of TS will be ready and styart gas delivery to TURKEY. It will replace 14 bcm existing gas Contracts and 1.75 bcm will be additional gas.

Pioneering Spirit passed throgh Turkish Straits to build and complete second pipeline. Gazprom and the Government of the Republic of Turkey signed a Protocol on the onshore section of the transit part of the TurkStream gas pipeline. The string will deliver Russian gas to European consumers. The onshore section will be built by TurkAkimGaz Tasima A.S., a joint venture that will be established on equal terms. After the Turkey which route will follow through Bulgaria or through Greece.

GP will take its decision after the consultation with EU.

The aim of GP is to complete the pipeline at the end of 2019



Trans-Anatolian Natural Gas Pipeline (TANAP)

Legth :
Turkey: 1850 km
Europe : 878 km
Azerbaijan:443 km
Georgia: 248 km

Shareholding Structure:

BOTAŞ : % 30
SOCAR : % 58
BP : % 12

Capacity: 31 milyar m^3

Turkey: 6 bcm

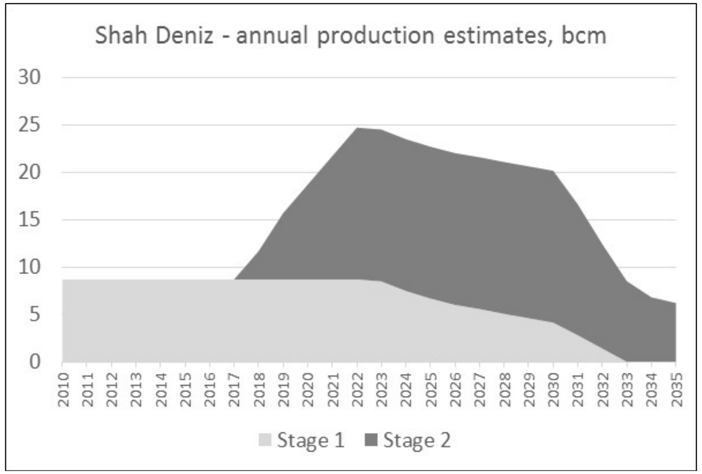
Europe: 10 bcm

Gas Delivery
Türkiye
30/06/2018
Europe
2020

Ref: Botas Yılmaz Demir Ankara District Manager Steam Conference 2017

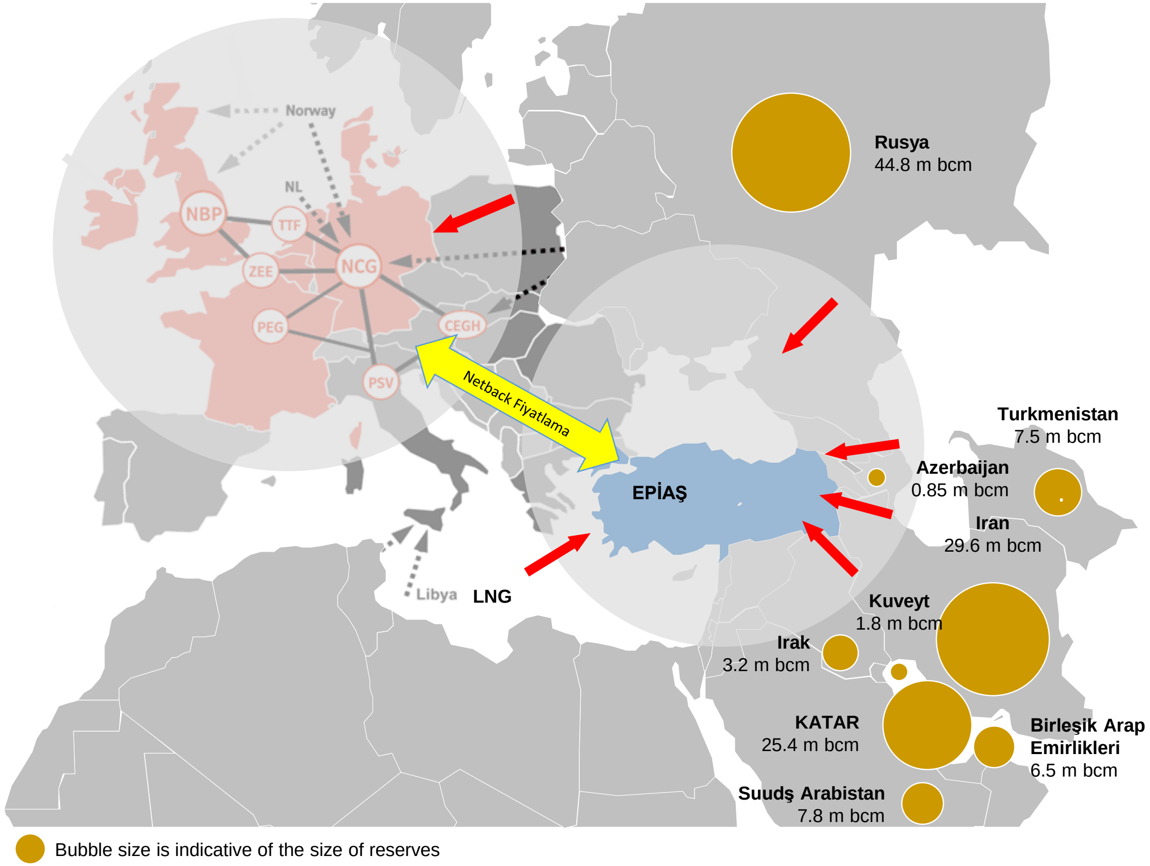
Azerbaijan

- A publicly available forecast from BP21 suggests that by 2025, Shah Deniz I output will have fallen to 6.7 bcm/y. Shah Deniz II is expected to be at plateau production of about 16.3 bcm/y at that time, giving a total of 23 bcm/y from the field.[1]
- Extra volumes of gas from Azerbaijan, beyond the Shah Deniz 2 field, may be available in second half of the 2020s when the second stage of the Absheron and Umid/Babek fields come online.[2]
- The capacity of BTE is not expected to be increased in the foreseeable future because after 2022, when the long-term contract with the Shah Deniz (SD) consortium is due to expire, gas production from the SD Phase 1 development most likely will be declining and there will not be sufficient volume to extend the contract. It is most likely that Phase 2 will replace Phase 1 volumes once the contract expires. Any possible additional volumes from Azerbaijan most likely will be delivered through TANAP.
- Considering the long distance pipeline, deep sea production cost Azery gas unlikely to be competetive for Europe Market. It will be competetive for Turkish and Balkan Market. Bulgaria and Azerbaijan Gas deal not finilsed yet. It may go thrugh BG Pipeline or through Turkey Malkoclar back flow. With Russian swap deal.
- TAP: BP (20%), SOCAR (20%), Snam (20%), Fluxys (19%), Enagás (16%) and Axpo
- 878 km pipeline: 550 km Greece, 215 km Albania, 105 km Offshore 8 km Italy
- 10 bcm /year with 2 CS and will be expanded 20 bcm/year with 2 more CS.
- 71% of Construction was completed and will be operation in 2020

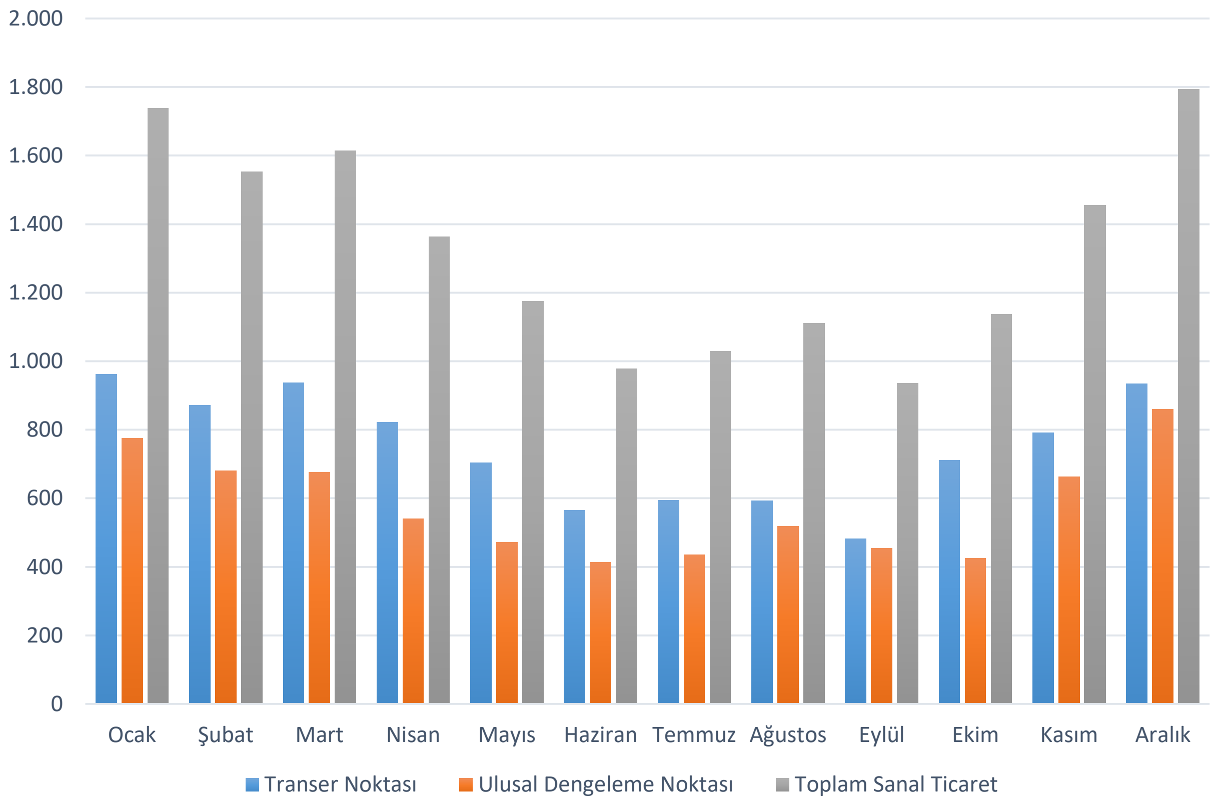


- Ref: (1) Azerbaijan’s gas supply squeeze and the consequences for the Southern Corridor. Simon Pirani, 2016 Senior Research fellow OIES.
- Ref (2): Gas Supply Changes in Turkey, Gulmira Rzayeva, January 2018 OIES Research Associate, Senior Research Fellow, Center for Strategic Studies (SAM)

Integration of Turkey with European Hubs



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



- At the National Balancing Point (UDN) and the transfer points, the corresponding virtual trade amount carried out in 2017 was about 15.88 billion Sm3. 43.53% of this amount was in UDN and 56.47% in transfer points. Approximately 93.5% of virtual trade was carried out by private sector contractors and the remaining 6.5% by BOTAŞ.
- Above figure shows monthly distribution of the amount of virtual trade in UDN and transfer points in 2017.
- Ref: EMRA report

Virtual Trade

Four Stages of Gas Trading Hub Development in Turkey

Physical Infrastructure

- Very well developed and maintained physical infrastructure

- No rectrictions 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 incumbets' vertical dominance

Independence of Transmission System Operator

-Appropriate capacity-booking model (entry/exit model, use it or loose it principle)

- Effective balancing mechanism

- Effective nomination processes

- Publicizied 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
- Standart 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 envrironment and mechanisms

THANK YOU

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TÜRKERLER

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Angoragaz General Manager

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