Gas Markets in Transition
TURKEY

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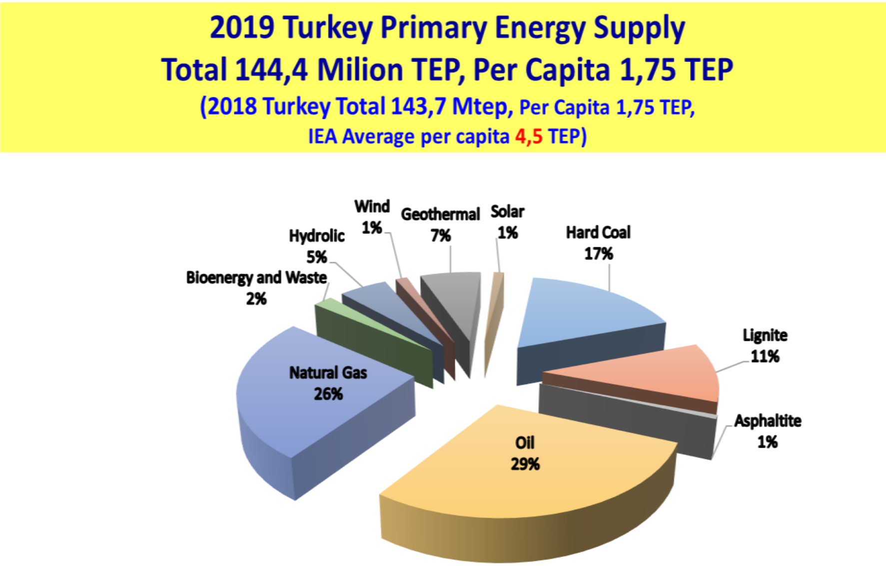
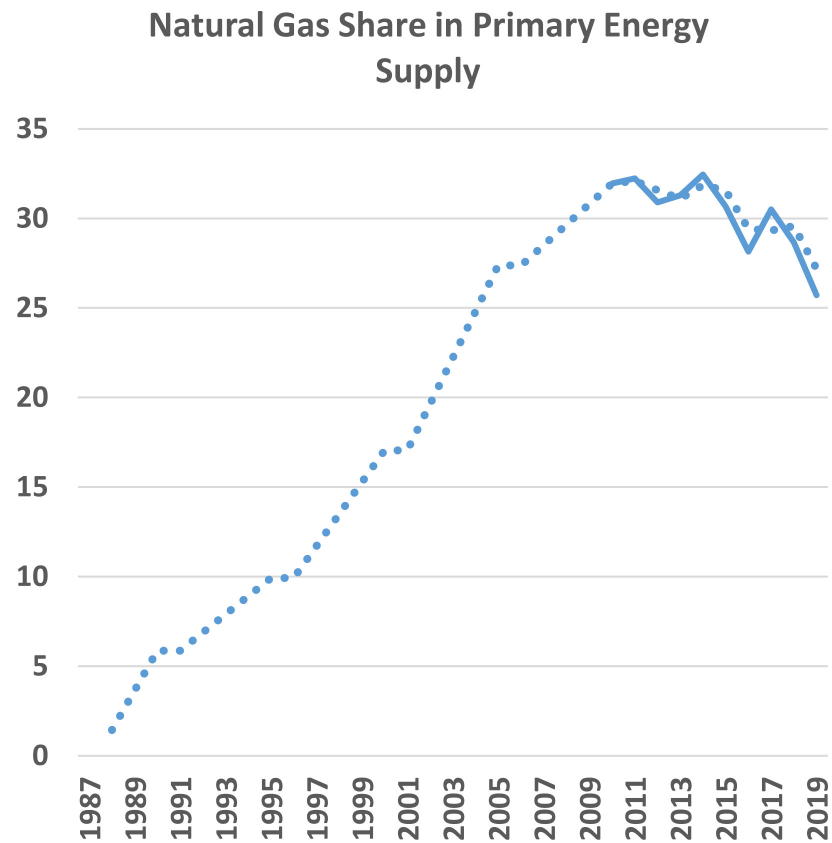


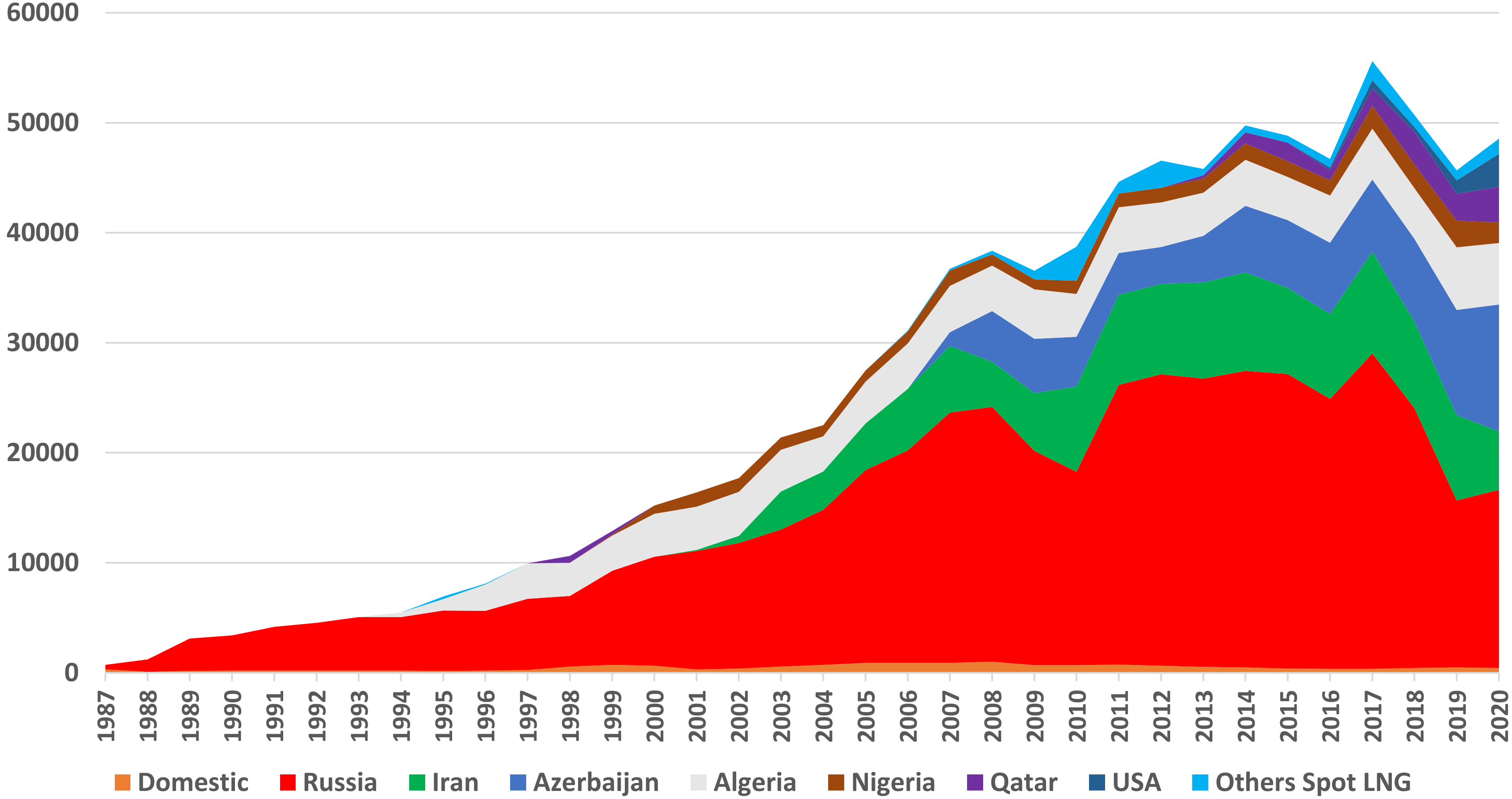
IMPORT % 69
FOSSIL FUELS % 83.5

Natural Gas share reached maksimum 34% now it is 25-26 % in Primary Energy Supply



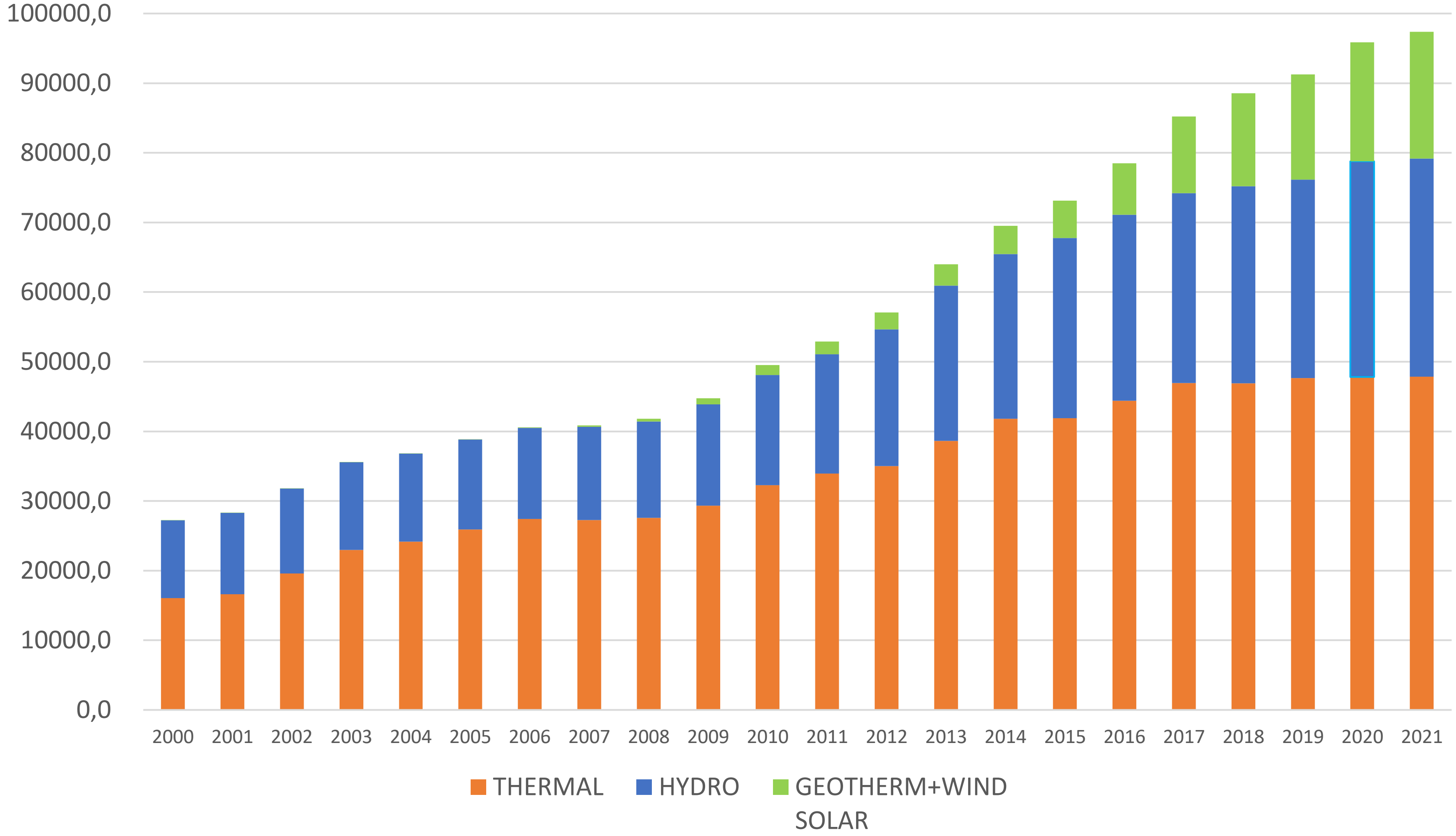
Kaynak: WEC Türkiye Enerji Konseyi

Natural Gas Supply in TURKEY is around 50-60 BCM from major 7 sources plus spot LNG Cargos from 8 countries one of the best in gas supply diversification. 2020 supply reached 48.6 bcm. Maximum was in 2017 as 55.6 bcm.



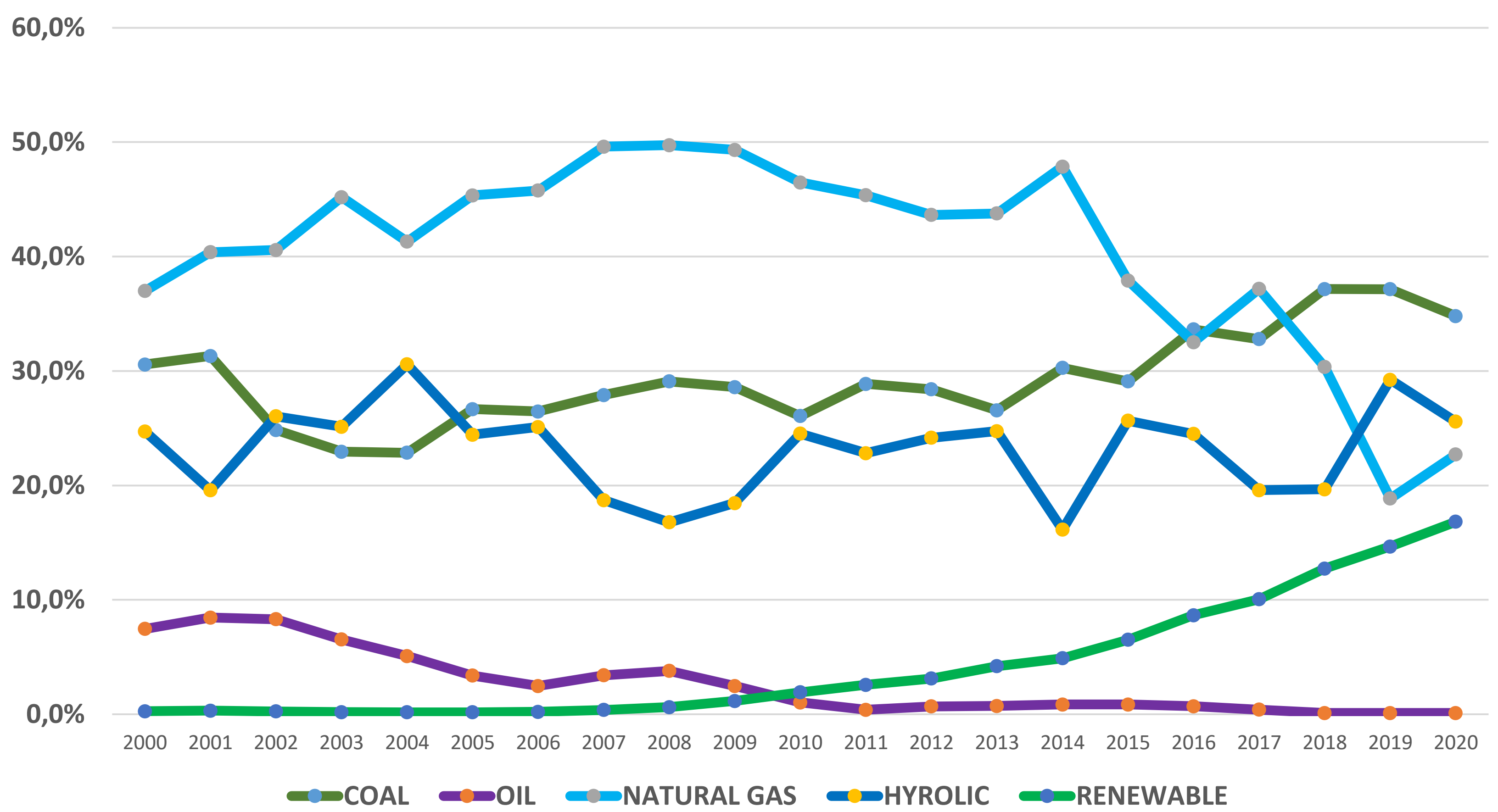
Ref: EMRA, Botas and ADG

After ratification of the law of Electrical Energy Production from Renewable Energy Sources on 18.05.2005 and amendment of that law on 29.12.2010, YEKDEM applications were received in 2011 first time and Renewable Energy share of installed power capacity



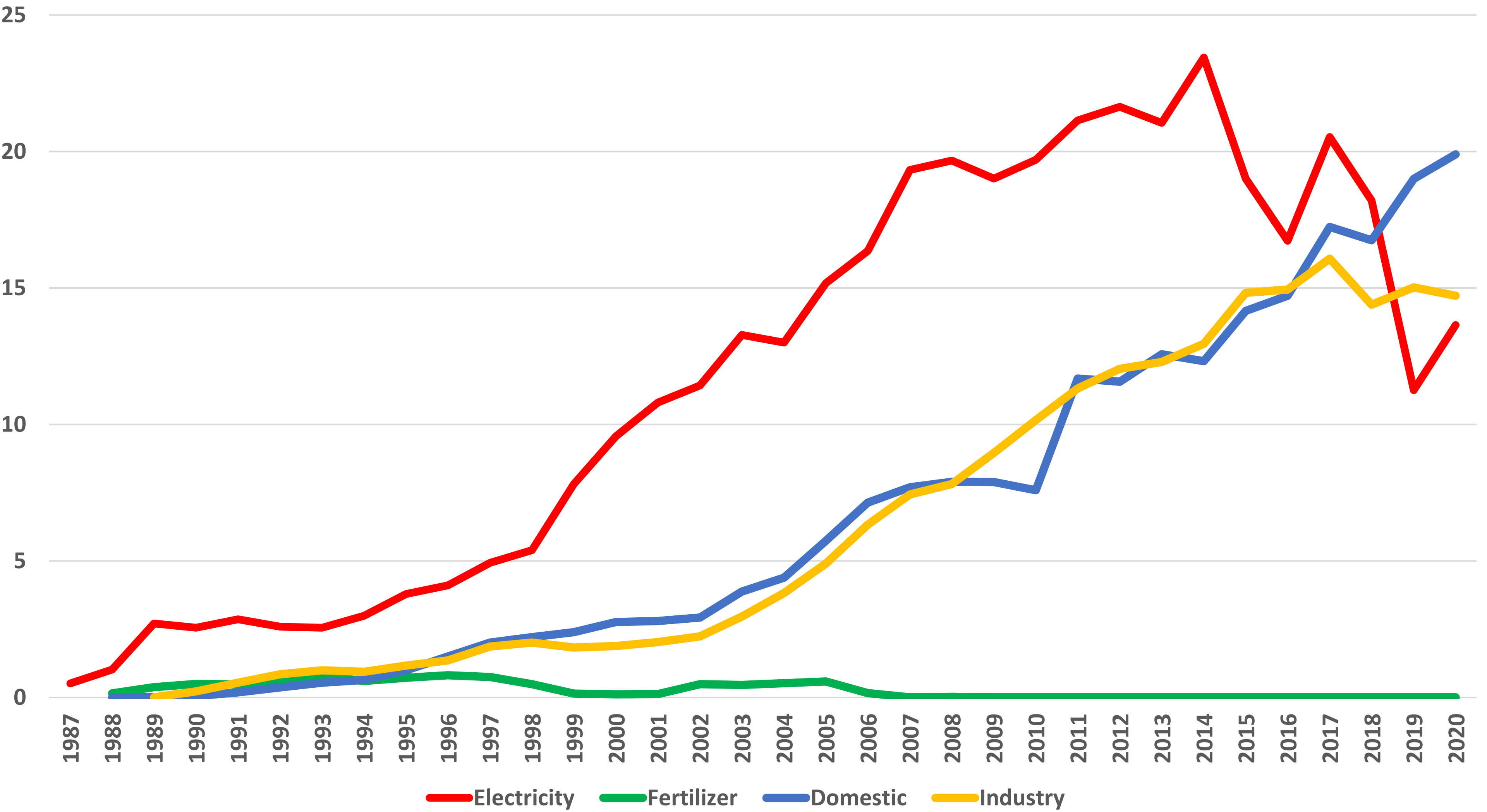
Ref: TEIAS MMO and ADG

Renewable Energy Resource Area tenders in Solar and wind Mini Reras Renewable Energy shares in production increases Natural gas share in production decreased. 305.431 GWh electrcity was produced in 2020 and 42.41 % of it came from Renewable Sources. 60 % of Public shares in Electricity Production decreased to 20% in 20 years so Private shares increased 40% in 2000 up to 81%.



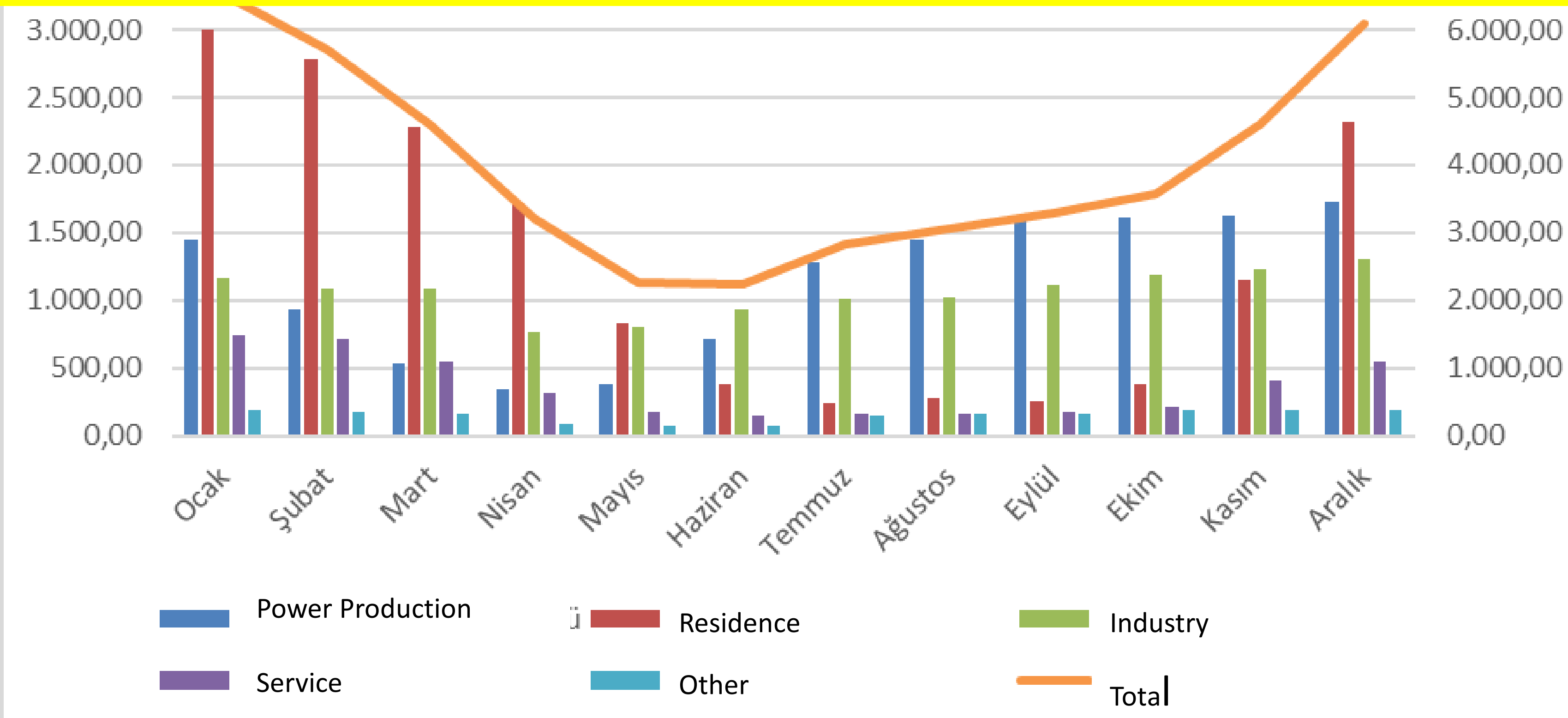
Ref: TEIAS

The share of natural gas in residential sector is increased and the share of natural gas consumption in power production is decreased by years.

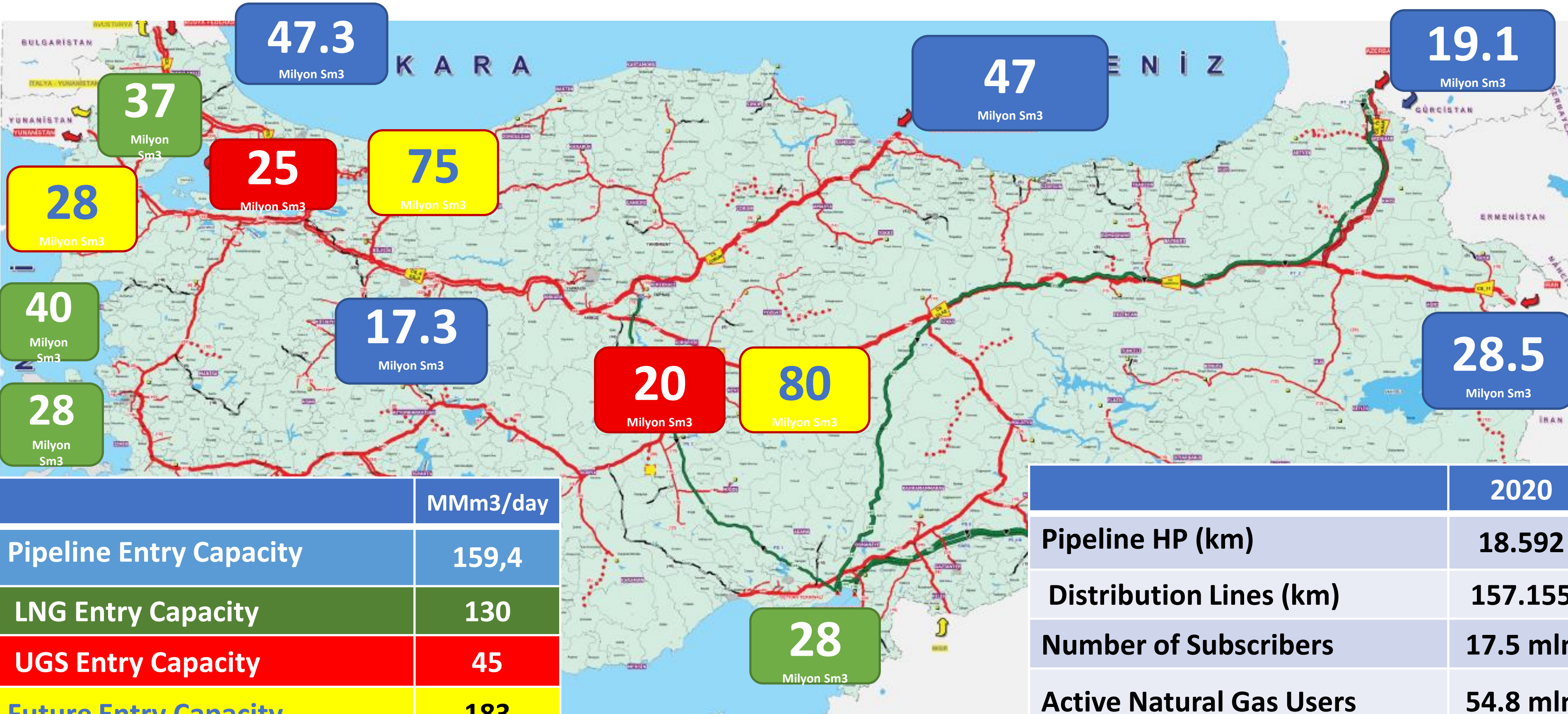


Sref: EMRA, ADG

As natural gas consumption increased in the residential sector, differences in seasonal consumption began to appear, and as a result, more natural gas was needed in winter, so underground natural gas storage began to be developed. The Shale Gas Revolution in the USA and the developments in LNG liquefaction technologies in the world natural gas markets have led to the establishment of new LNG liquefaction facilities. As a result, the excess LNG formed in the LNG market had a positive impact on world prices, and new FSRU projects were quickly put into use to take advantage of this.



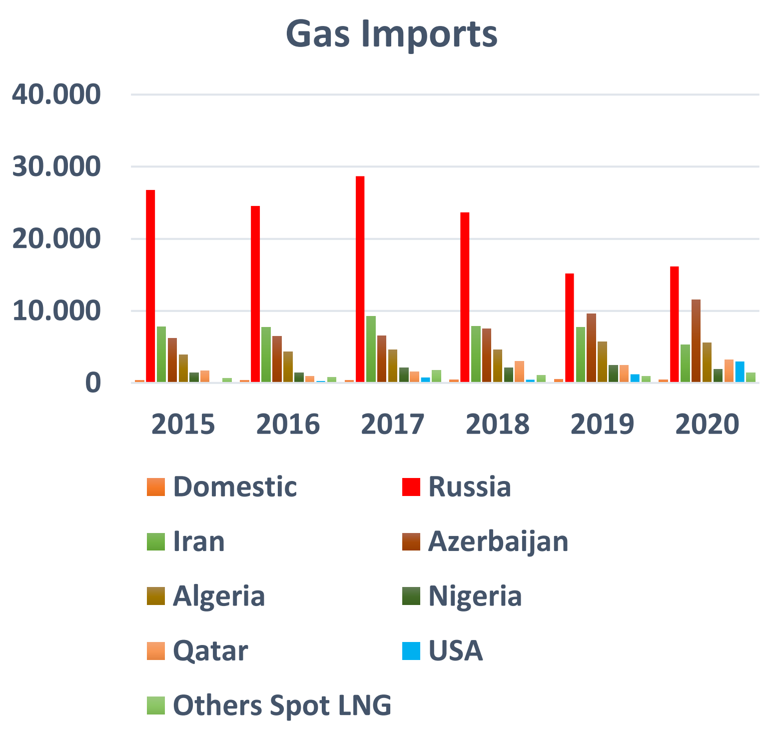
Current Entry Capacity from 11 main points is 330 mln m3/day will reach 468 mln m3/day. Storage capacity is 4.6 bcm and will reach 10 bcm. There are two LNG LNG terminal and two FSR and one is under construction (Saros) and one FSRU Ship (Ertugrul Gazi) 170.000 m3 liquid capacity.

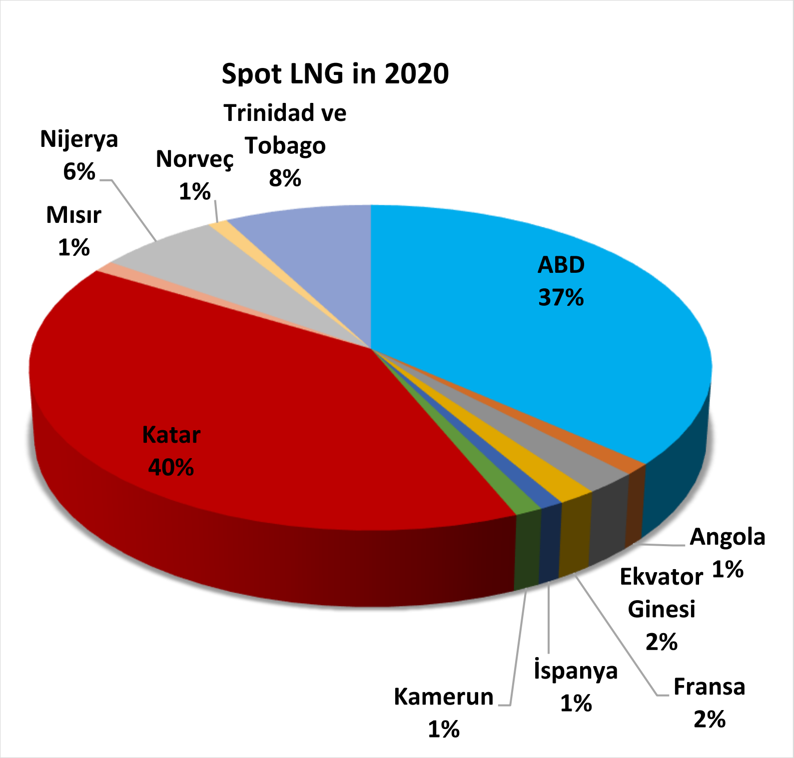


	MMm3/day
Pipeline Entry Capacity	159,4
LNG Entry Capacity	130
UGS Entry Capacity	45
Future Entry Capacity	183

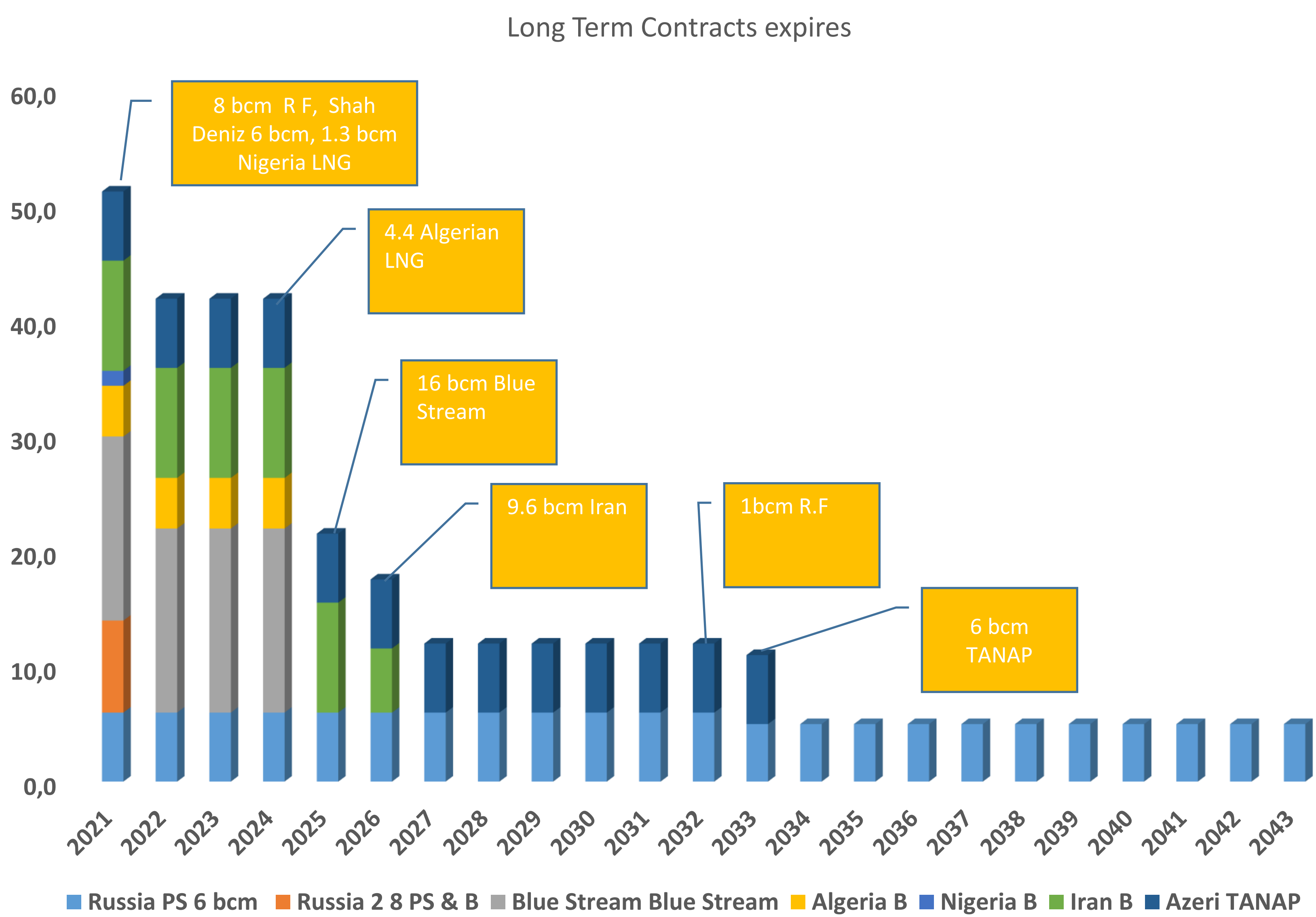
	2020
Pipeline HP (km)	18.592
Distribution Lines (km)	157.155
Number of Subscribers	17.5 mln
Active Natural Gas Users	54.8 mln

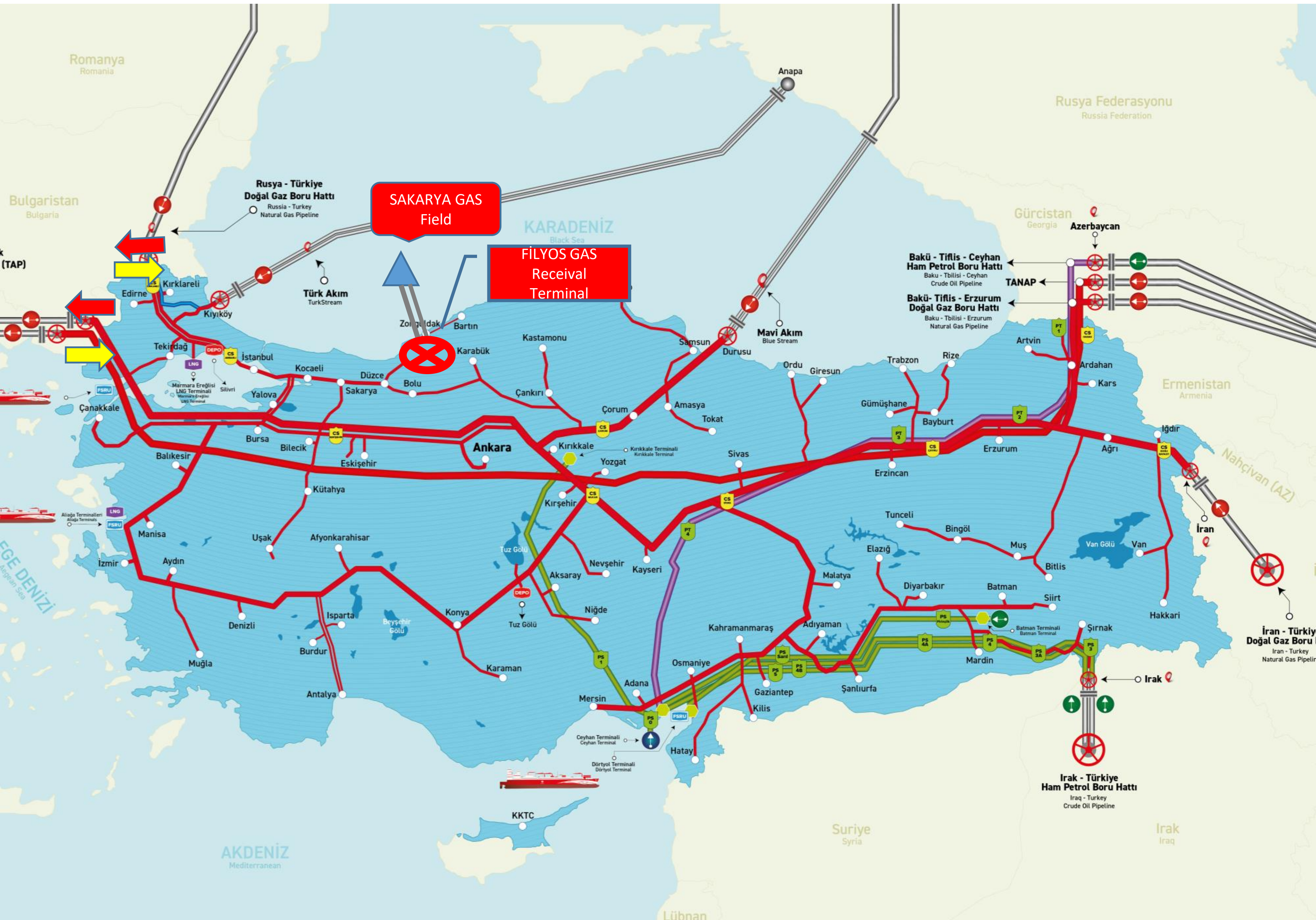
As Turkey's long-term gas purchase contracts expire and the sellers in long-term purchase contracts are not flexible enough about price and quantity, Turkey has turned to the International LNG markets and increased the amount of LNG in imports. Accordingly, Turkey has become an important player in the international LNG markets, ranking 9th in world LNG imports. It rose to the 4th rank in Europe as well. Turkey is the third largest importer of American LNG in Europe after Spain and U.K



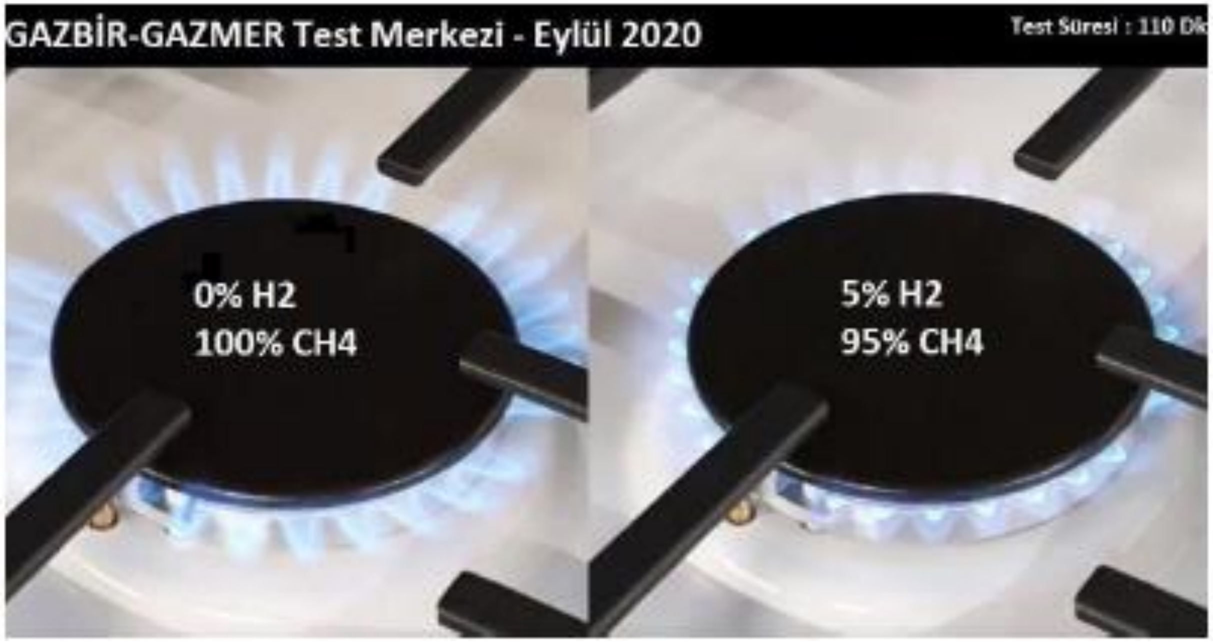


Ref: EMRA Reports


Long Term Contracts expires
60,0
50,0
40,0
30,0
20,0
10,0
0,0
8 bcm R F, Shah Deniz 6 bcm, 1.3 bcm Nigeria LNG
4.4 Algerian LNG
16 bcm Blue Stream
9.6 bcm Iran
1bcm R.F
6 bcm TANAP
2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043
Russia PS 6 bcm
Russia 2 8 PS & B
Blue Stream Blue Stream
Algeria B
Nigeria B
Iran B
Azeri TANAP



REF: BOTAŞ Map and ADG Sakarya Field



REF: GAZBİR – GAZMER Test Center, Konya
TURKEY

As a Summary Natural Gas Transition in TURKEY.

Market reform. Institutional changes. Gas Exchange

Gas usage shift from Power Generation to Residential Sector.

More LNG and FSRU in the system

Flexible Gas Purchase.

Blending with Hydrogen

Thank you for listening.

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