



Liberalization Process of Turkish Natural Gas Market

EMART Turkey 2013
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Member of the Board &
Gas Group Leader

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:

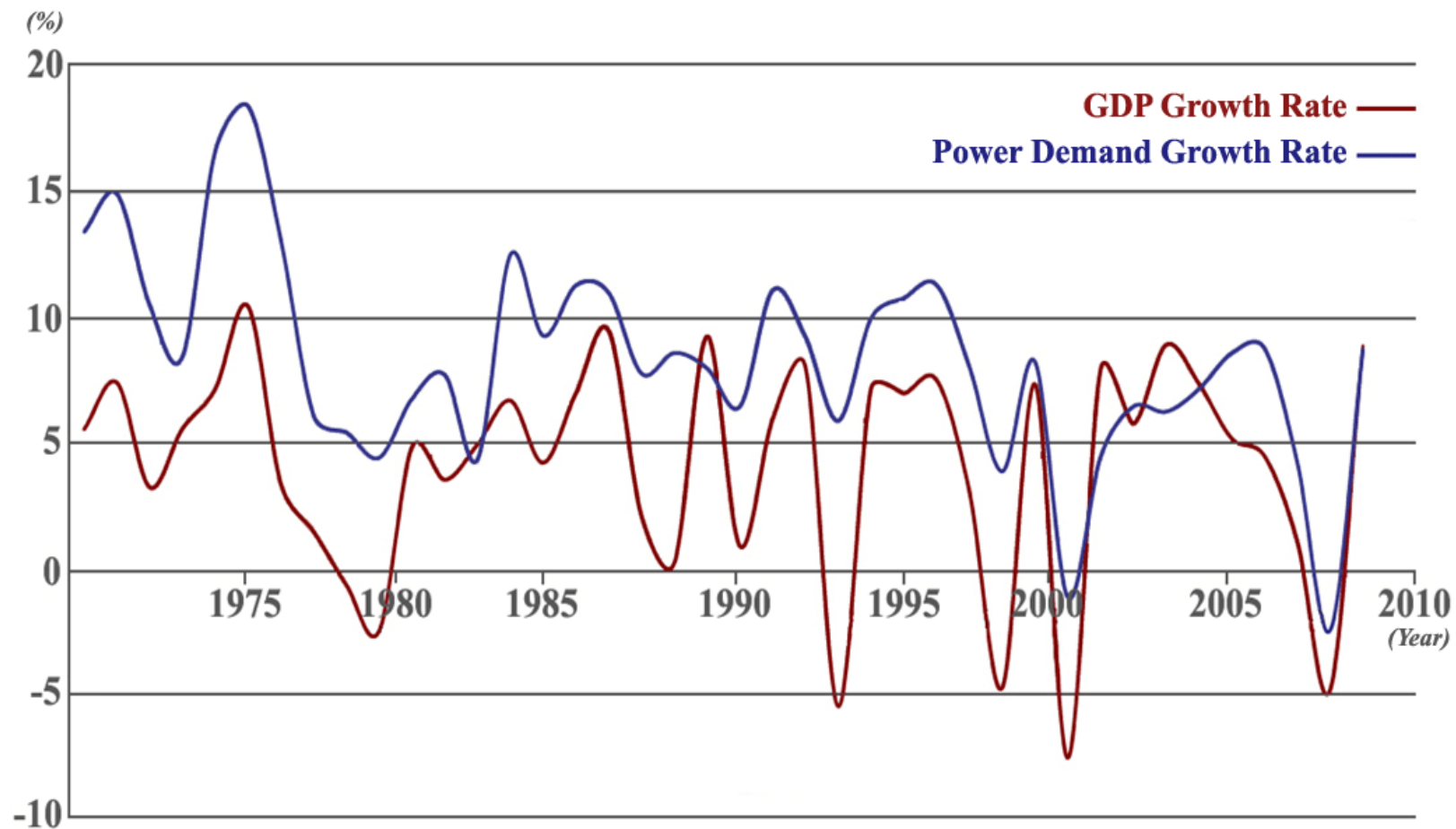
- Exploration & Production Sector
- Natural Gas Market

Member Companies



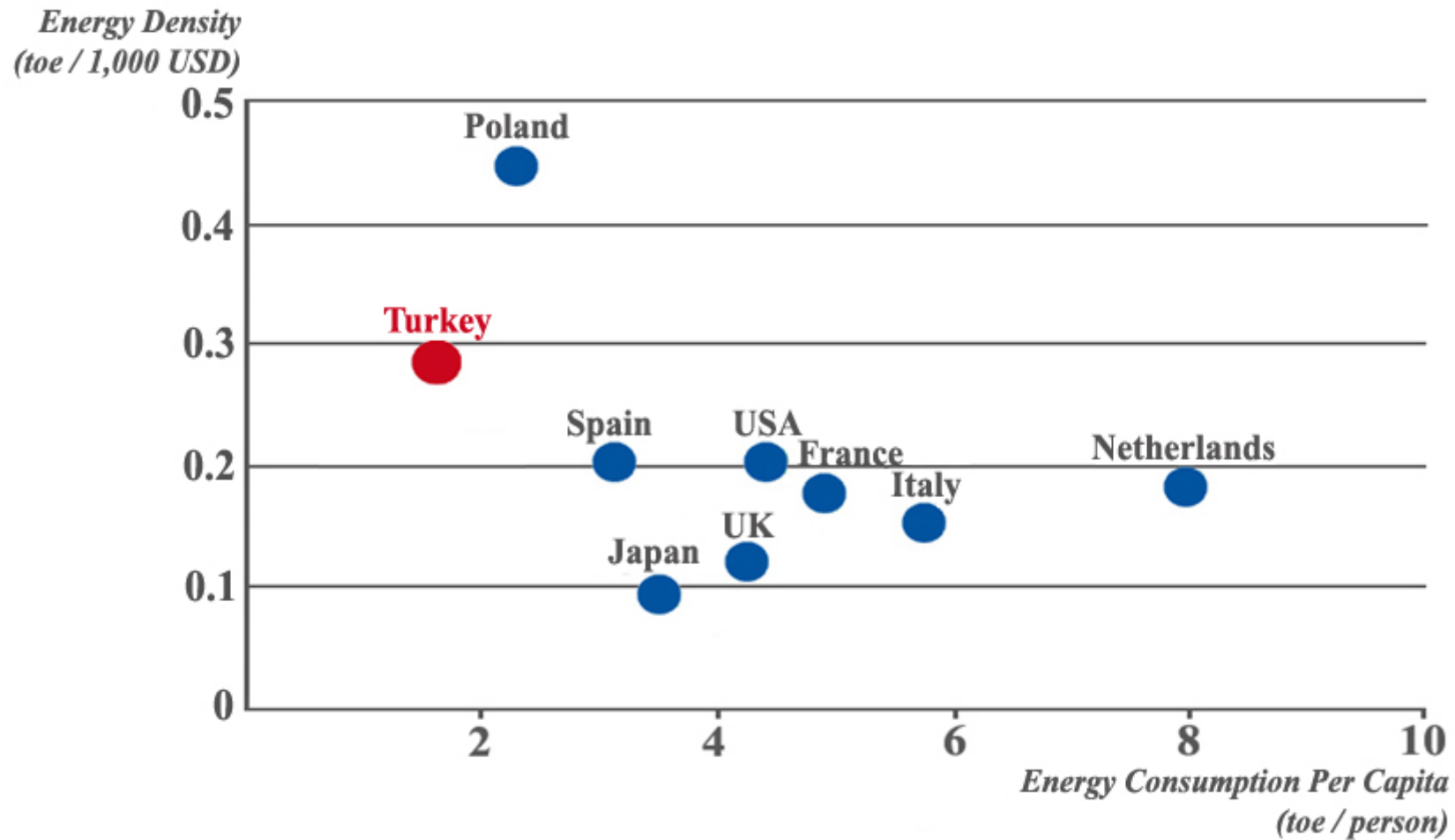
- AKENERJİ
- AKFEL
- AKSA
- ALADDIN MIDDLE EAST
- ANATOLIA ENERGY
- ANGORAGAZ
- ATTİLA DOĞAN İNŞAAT
- AVRASYA GAZ
- AYGAZ
- BATI HATTI GAZ
- BM HOLDİNG
- BOSPHORUSGAZ
- BP
- ÇALIK ENERJİ
- DEMİRÖREN EGL
- DOĞAL ENERJİ
- DOĞAN ENERJİ
- EDISON
- EGEGAZ
- ENEL
- ENERCO ENERJİ
- ENERJİSA
- ENI
- ERDGAZ
- EWE ENERJİ
- EXXONMOBİL
- GDF SUEZ
- GENEL ENERGY
- GÜNEY YILDIZI PETROL
- HATTUŞA ENERJİ
- IBS RESEARCH
- KİBAR ENERJİ
- MARSА ENERGY
- MEDGAZ
- NATURGAZ
- OMV
- PALMET ENERJİ
- PERENCO
- POLMAK
- POZİTİF DOĞALGAZ
- SHELL ENERJİ
- SOCAR
- STATOIL
- TEKFEN İNŞAAT
- THRACE BASIN
- TIWAY
- TOTAL
- TRANSATLANTIC PETROLEUM
- TURCAS
- VALEURA ENERGY
- VALVITALIA
- ZMB GAZ DEPO
- ZORLU ENERJİ

GDP vs. Power Demand Growth (1970 – 2010)



Source: Energy Market Regulatory Authority

Energy Density vs. Energy Consumption Per Capita



Source: Turkey Energy Efficiency Report (2010)

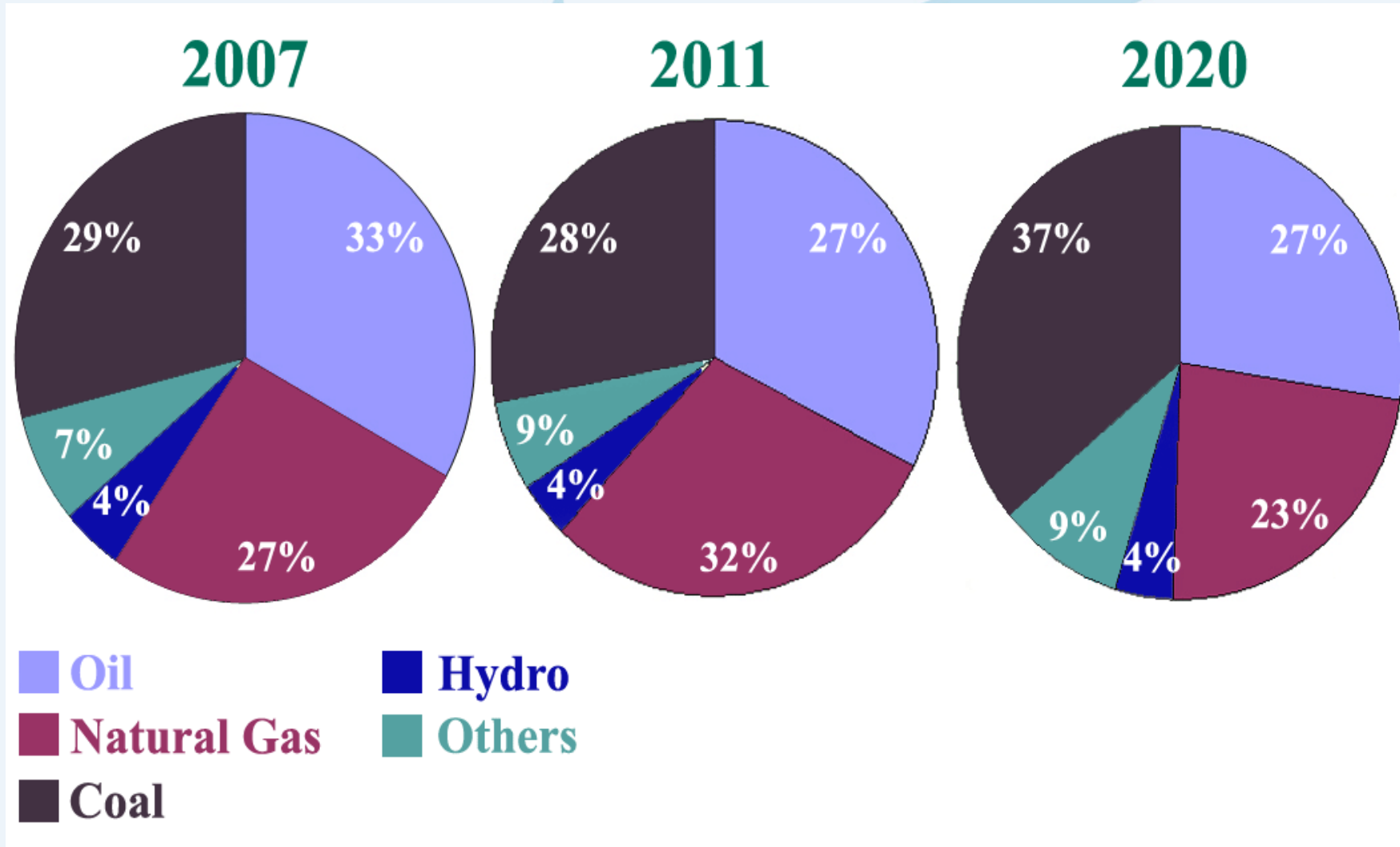
Turkey's Overall Energy Balance (1990 – 2011)



	1990	2011	Change
Total Energy Demand (<i>million toe</i>)	52.9	114.4	↑ 116% ↑
Total Domestic Production (<i>million toe</i>)	25.6	32.2	↑ 26% ↑
Total Energy Imports (<i>million toe</i>)	30.9	90.2	↑ 192% ↑
Coverage of Domestic Production to Total Consumption	48%	28%	↓ - 42% ↓

Source: MENR

Energy Consumption by Source (2007 – 2011 – 2020)



Source: Ministry of Energy and Natural Resources

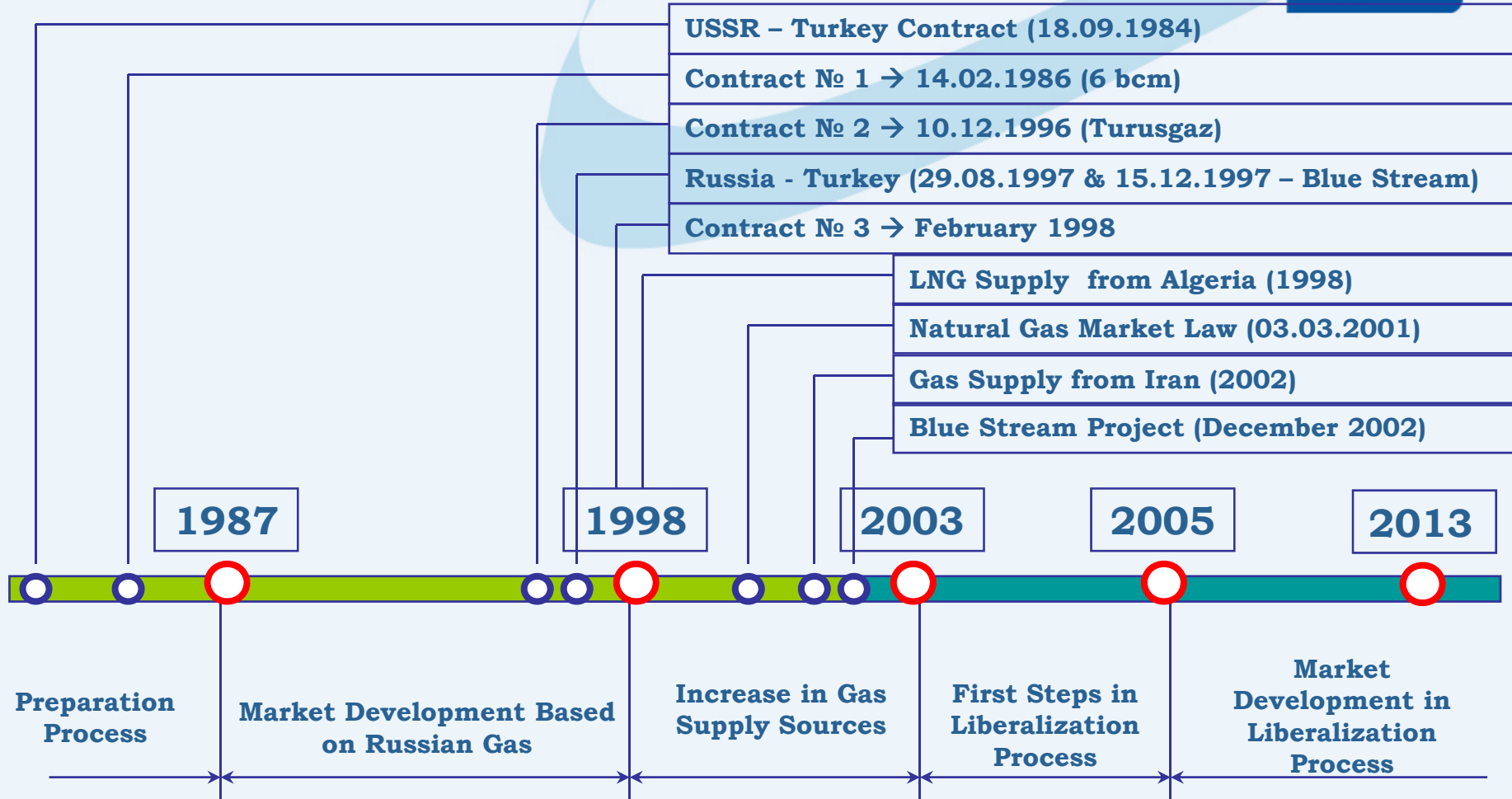
Share of Energy in Turkey's Total Imports (2009 – 2012)



<i>(billion USD)</i>	2009	2010	2011	2012
Crude Oil & Petroleum Products	14,9	20,6	29,2	31,5
Natural Gas	11,6	14,1	20,2	23,2
Coal	3,1	3,3	4,1	4,6
Total Energy Imports	29,9	38,5	54,1	60,1
Turkey's Total Imports	140,9	185,5	240,8	236,5
Share of Oil & Gas in Turkey's Total Imports	%18,8	%18,7	%20,5	%23,1

Source: Ministry of Economy

Development Process of Turkish Natural Gas Market



Gas Purchase Agreements



Contract	Date of Signature	Date of Operation	Duration (Years)	Volume (Plateau bcma)	Date of Expiration
Russia (West)	Feb 1986	Jun 1987	25	6	2012
Algeria (LNG)	Apr 1988	Aug 1994	20	4	2014
Nigeria (LNG)	Nov 1995	Nov 1999	22	1.2	2021
Iran	Aug 1996	Dec 2001	25	10	2026
Russia (B.Stream)	Dec 1997	Feb 2003	25	16	2028
Russia (West)	Feb 1998	Mar 1998	23	8	2021
Azerbaijan	Mar 2001	Jul 2007	15	6.6	2022

Source: Energy Market Regulatory Authority

Private Players' Entrance into the Market



Contract Release (2007)

Enerco Enerji	2.50
BosphorusGaz	0.75
AvrasyaGaz	0.50
Shell Enerji	0.25
	+

4 bcm

Contract Renewal (2013)

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

6 bcm

TR – AZ Agreement (2013)

SOCAR	1.20
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Private Wholesalers in the Market



<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
Aksa Turcas	Aksa Turcas	Aksa Turcas	Aksa Turcas	Aksa Turcas	Aksa Turcas	Aksa Turcas
		Aygaz Dogal EWE Gazport NaturGaz Pozitif Zorlu DG	Aygaz Dogal EWE Gazport NaturGaz Pozitif Zorlu DG	Aygaz Dogal EWE Gazport NaturGaz Pozitif Zorlu DG	Aygaz Dogal EWE Gazport NaturGaz Pozitif Zorlu DG	Aygaz Dogal EWE Gazport NaturGaz Zorlu DG
			Akenerji EnerjiSA GDF SUEZ Hattuşa Medgaz Zorlu Ted.	Akenerji EnerjiSA GDF SUEZ Hattuşa Medgaz Zorlu Ted.	Akenerji EnerjiSA GDF SUEZ Hattuşa Medgaz Zorlu Ted.	EnerjiSA GDF SUEZ Hattuşa Medgaz Zorlu Ted.
				OMV Enerji OMV Gaz	OMV Enerji OMV Gaz	OMV Enerji OMV Gaz
					AngoraGaz Erdgaz	AngoraGaz Erdgaz
						SOCAR Gaz SOCAR Turkey
(2)	(2)	(9)	(15)	(17)	(19)	(19)

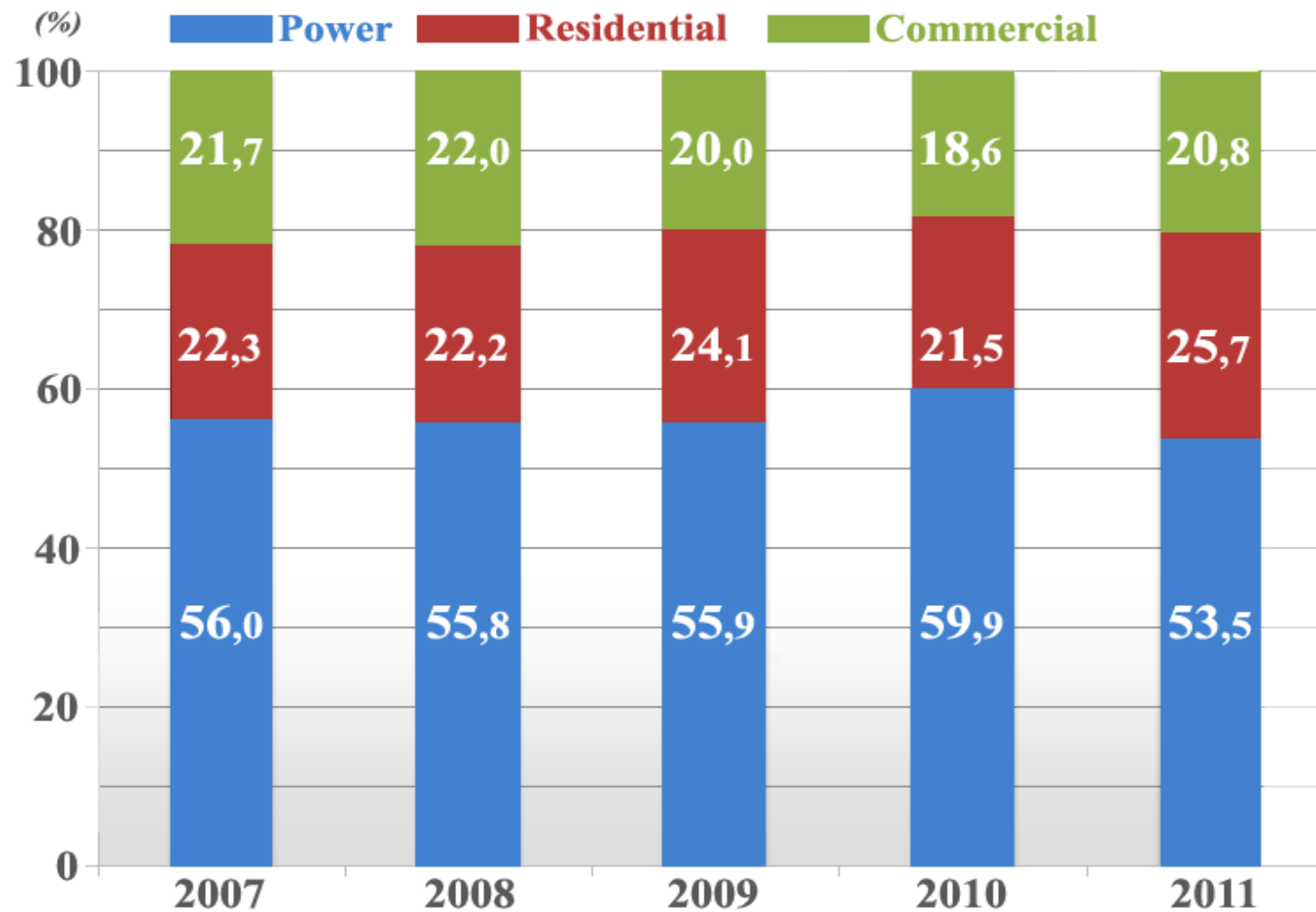
Gas Imports by Source Country (2009 – 2010 – 2011)



<i>(bcm)</i>	2009	2010	2011	Share in Total (2011)
Russia	19.473	17.576	25.406	57.9%
Iran	5.252	7.765	8.190	18.7%
Azerbaijan	4.960	4.521	3.806	8.6%
Algeria (LNG)	4.487	3.906	4.156	9.5%
Nigeria (LNG)	0.903	1.189	1.248	2.8%
Spot LNG	0.781	3.079	1.069	2.5%
Total	35.856	38.036	43.874	

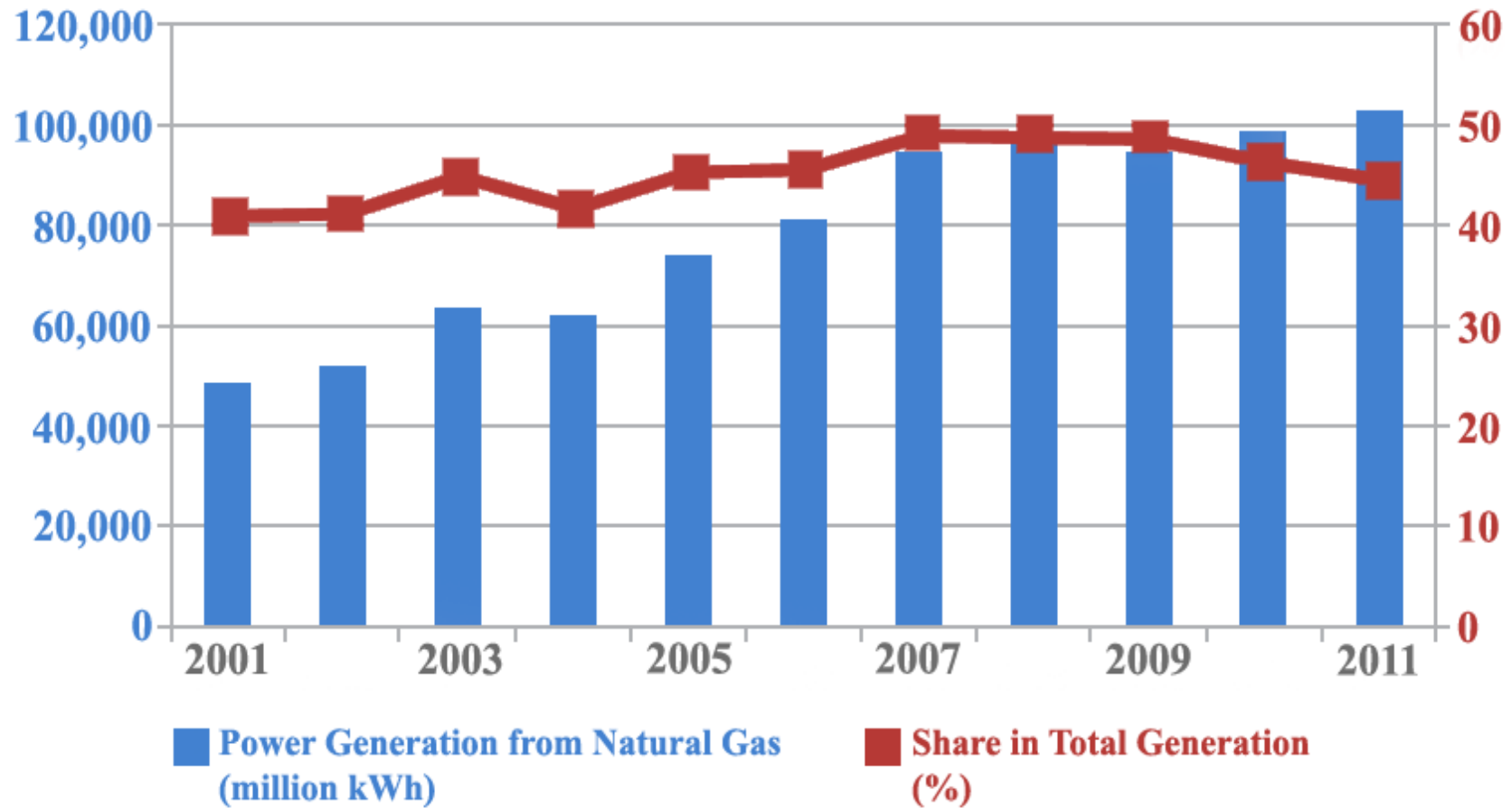
Source: Energy Market Regulatory Authority

Sectoral Breakdown of Gas Consumption (2007 – 2011)



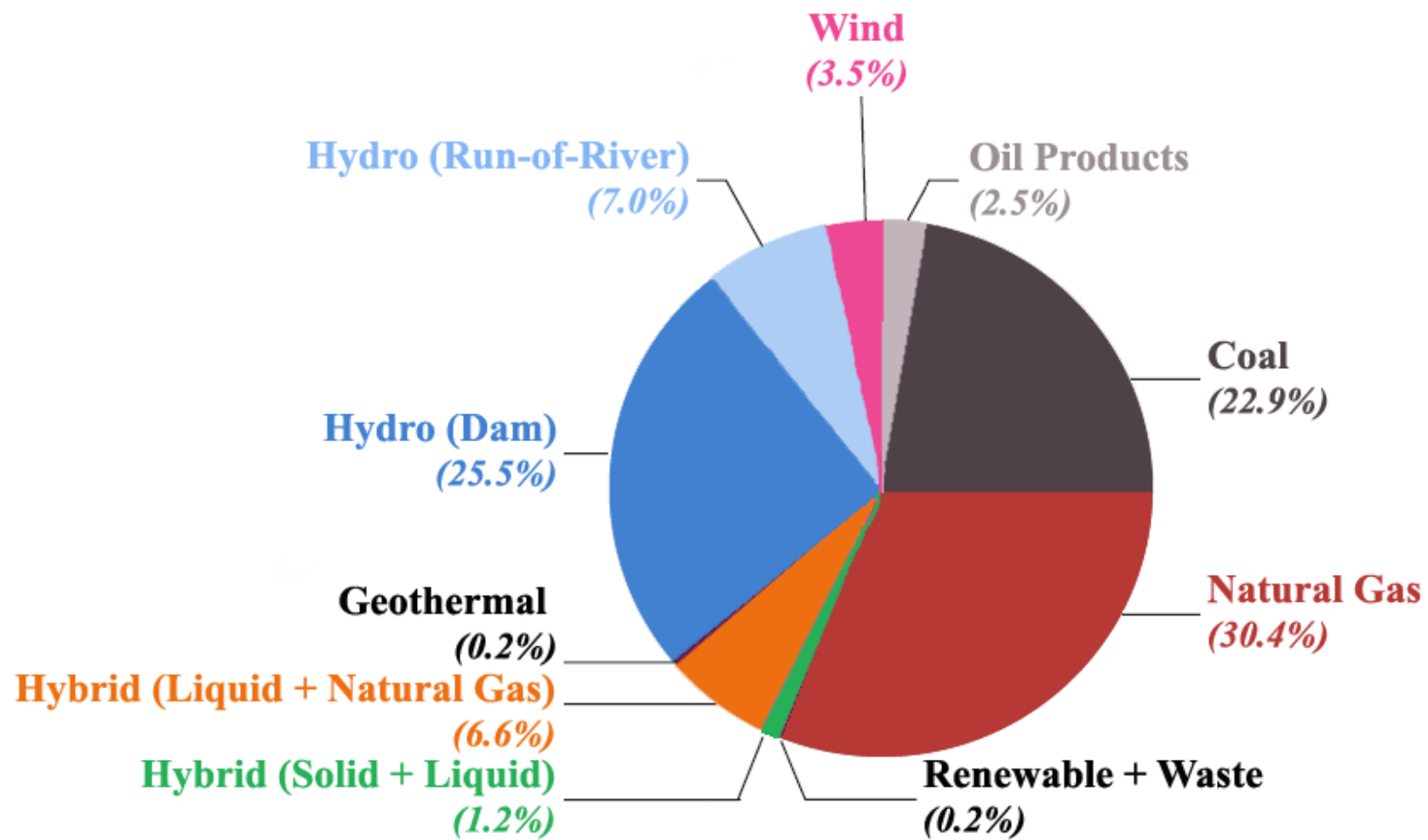
Source: Ministry of Energy and Natural Resources

Natural Gas in Power Generation (2001 – 2011)



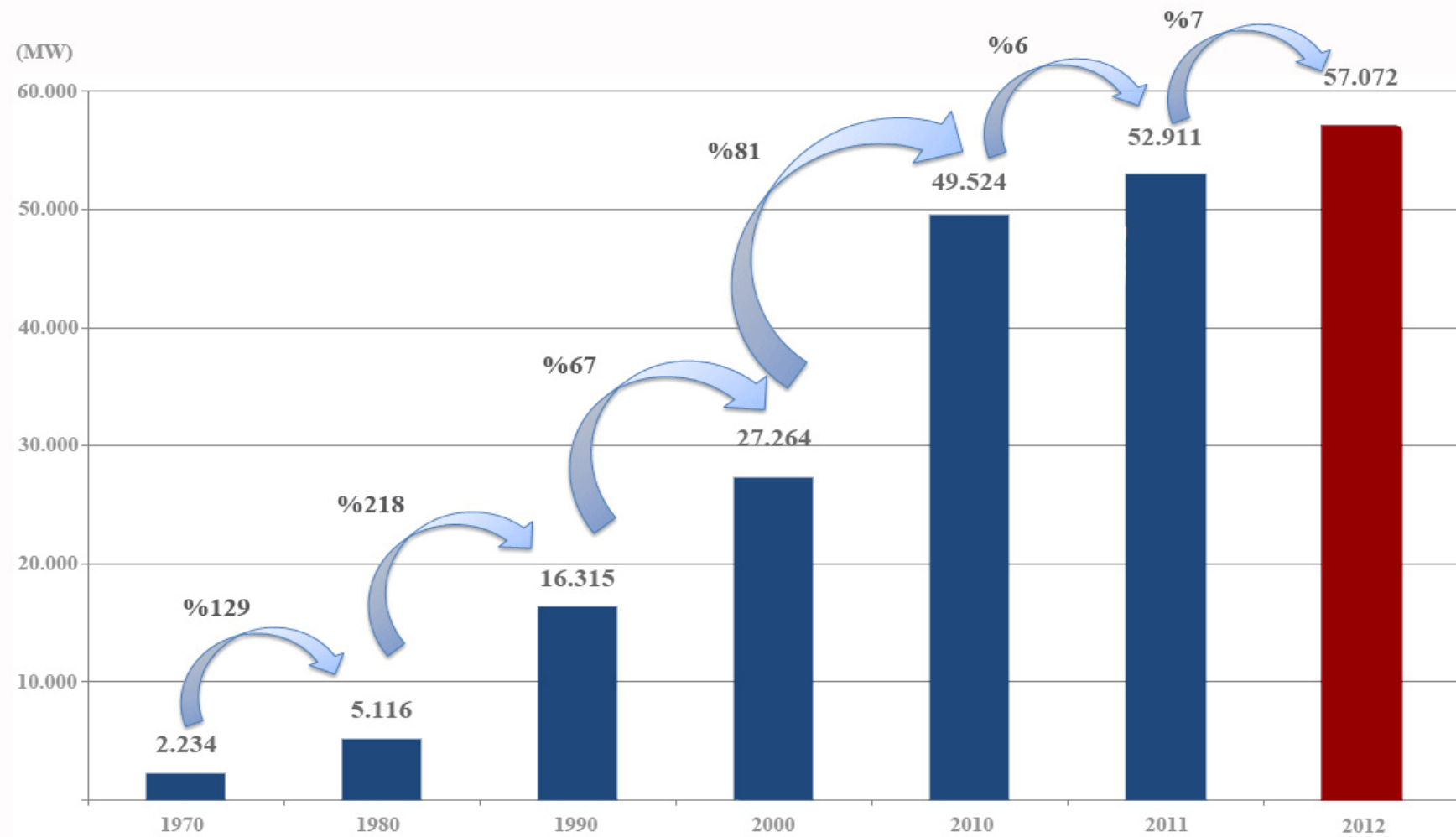
Source: Energy Market Regulatory Authority

Installed Capacity by Source (Apr 2012)



Source: Energy Market Regulatory Authority

Installed Capacity (1970 – 2012)

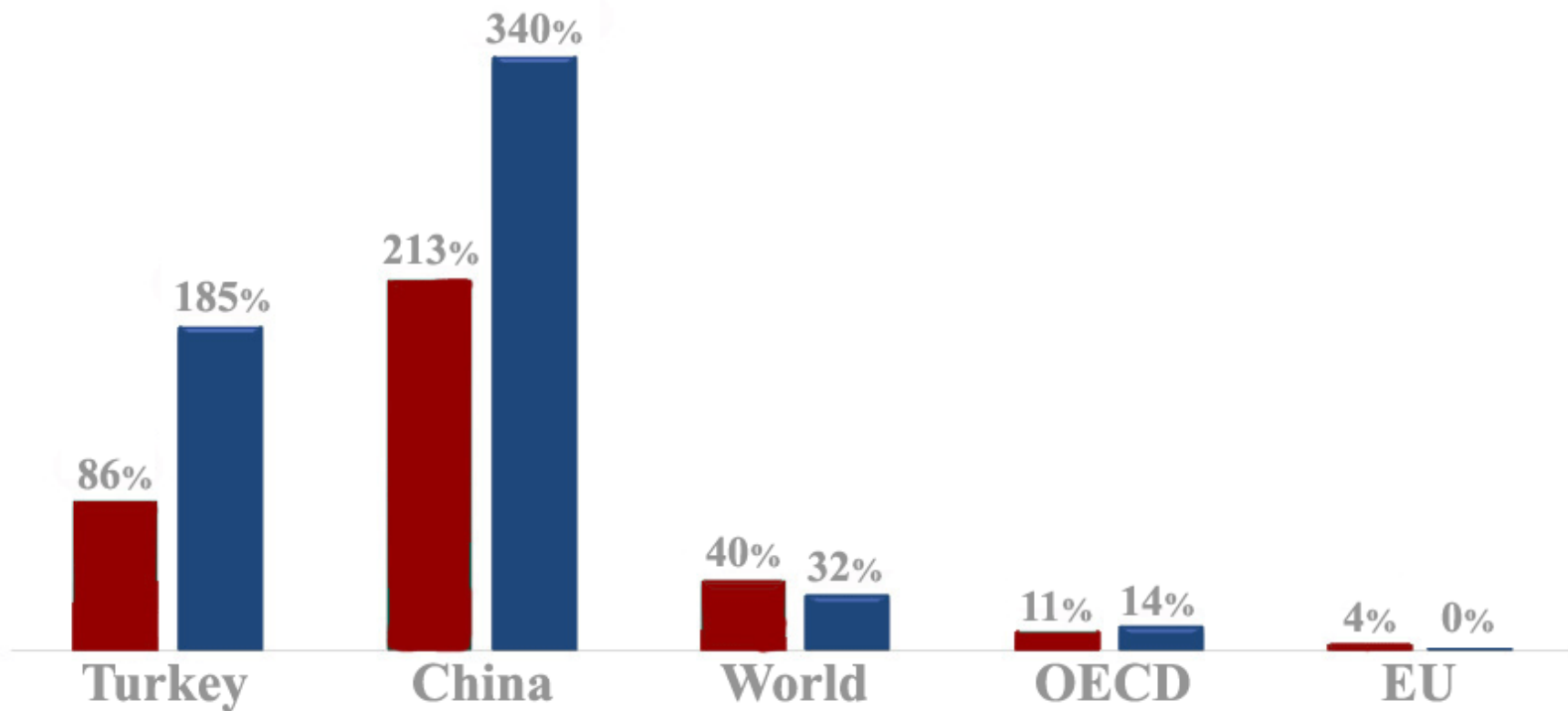


Source: TEİAŞ

Gas & Power Demand Growth (2001 – 2011)

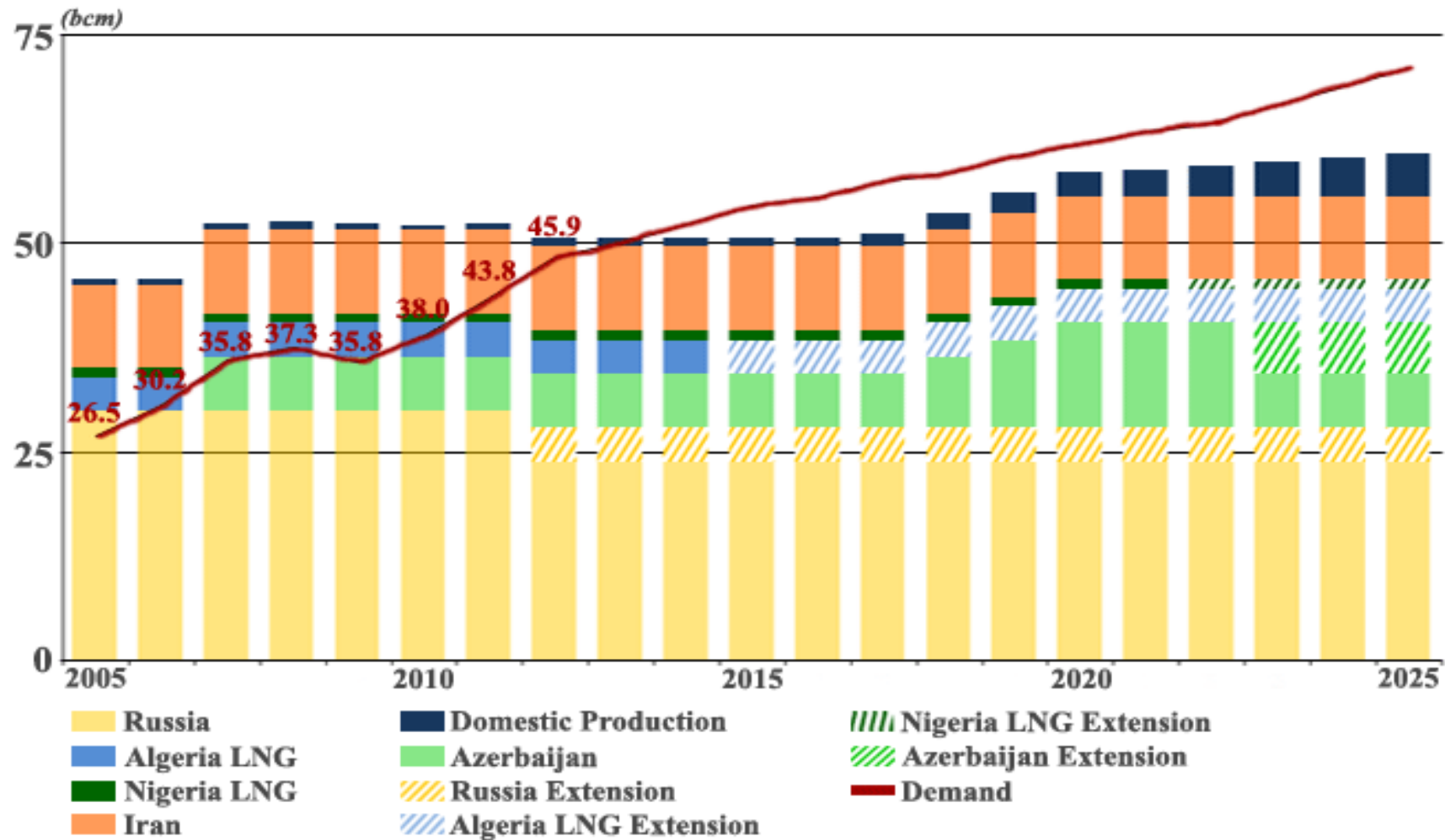


■ Gas Demand Growth
■ Power Demand Growth



Source: Energy Market Regulatory Authority

Natural Gas Demand vs Supply (2005 – 2025)

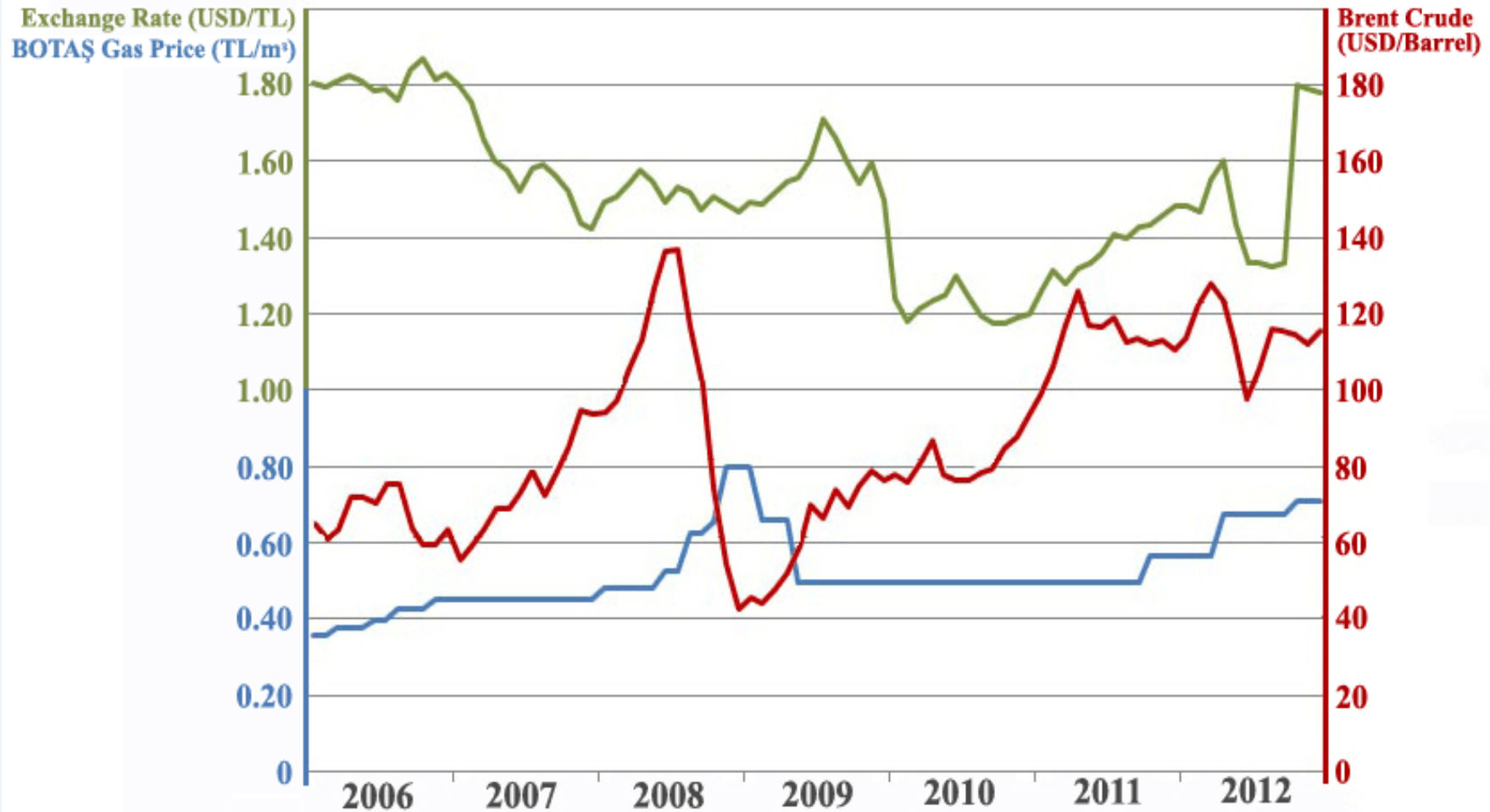


Potential and Possible New Gas Suppliers



- Shah Deniz II & New Fields in Azerbaijan
- Northern Iraq / Iraq
- Eastern Mediterranean Offshore
- Shale Gas

Oil Price, Exchange Rate & BOTAS Gas Price (2006 – 2012)



Source: Central Bank, BOTAS, Platts



Policy Recommendations

Policy Recommendations (I)

Energy Sector in General



- 1. Implementation of new policies in order to increase the share of domestic resources in total energy consumption and to promote energy efficiency**
- 2. Preparation of a comprehensive plan in order to examine the shale oil/gas potential of Turkey**
- 3. Promotion of alternative resources, nuclear energy in particular**
- 4. Sensibility on implementation of environment-friendly energy strategies**

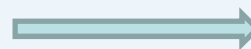
Policy Recommendations (II)

Natural Gas Market



1. Removal of subsidies and cross-subsidies
2. Removal of restrictions for private sector's imports
3. Decreasing Botaş market share
4. Legal unbundling of BOTAŞ
5. Completion of IT (EBB & Scada) and technical infrastructure investments in a timely manner
6. Legal and commercial ground for Gas Hub / Gas Trading

NATURAL GAS MARKET LAW



2013



THANK YOU...