Trends & Dynamics of Turkish Natural Gas Market

Gas to Power Turkey 2013
March 13, 2013 – Istanbul

Orhan Duran
Chairman of the Board

About PETFORM

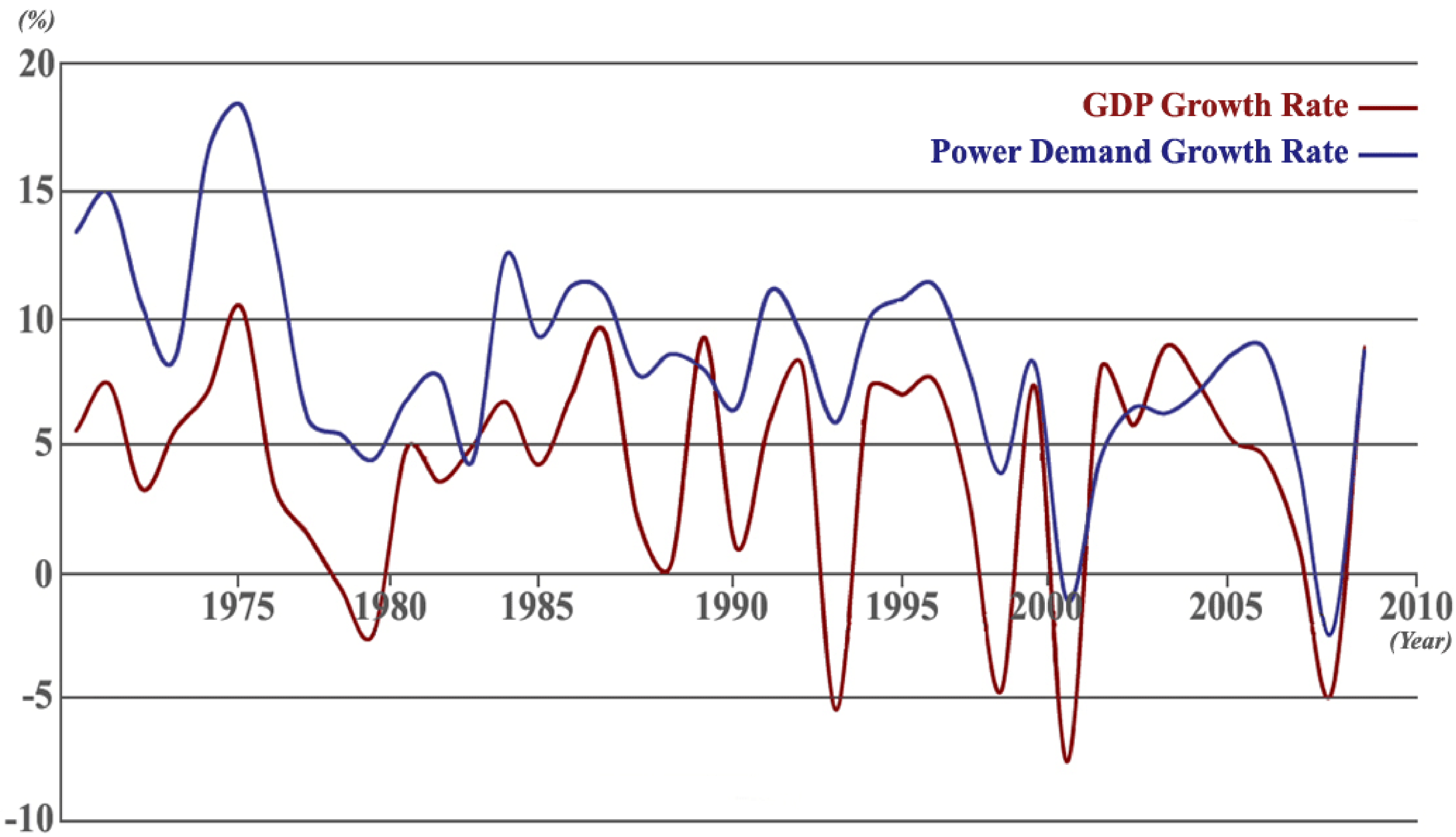
Established in 2000, PETFORM has played a crucial role in the transfer of private sector views to the public authorities regarding to Turkish energy legislation amendments. Member companies mainly have activities in 2 sectors:

- Exploration & Production Sector
- Natural Gas Market

Member Companies

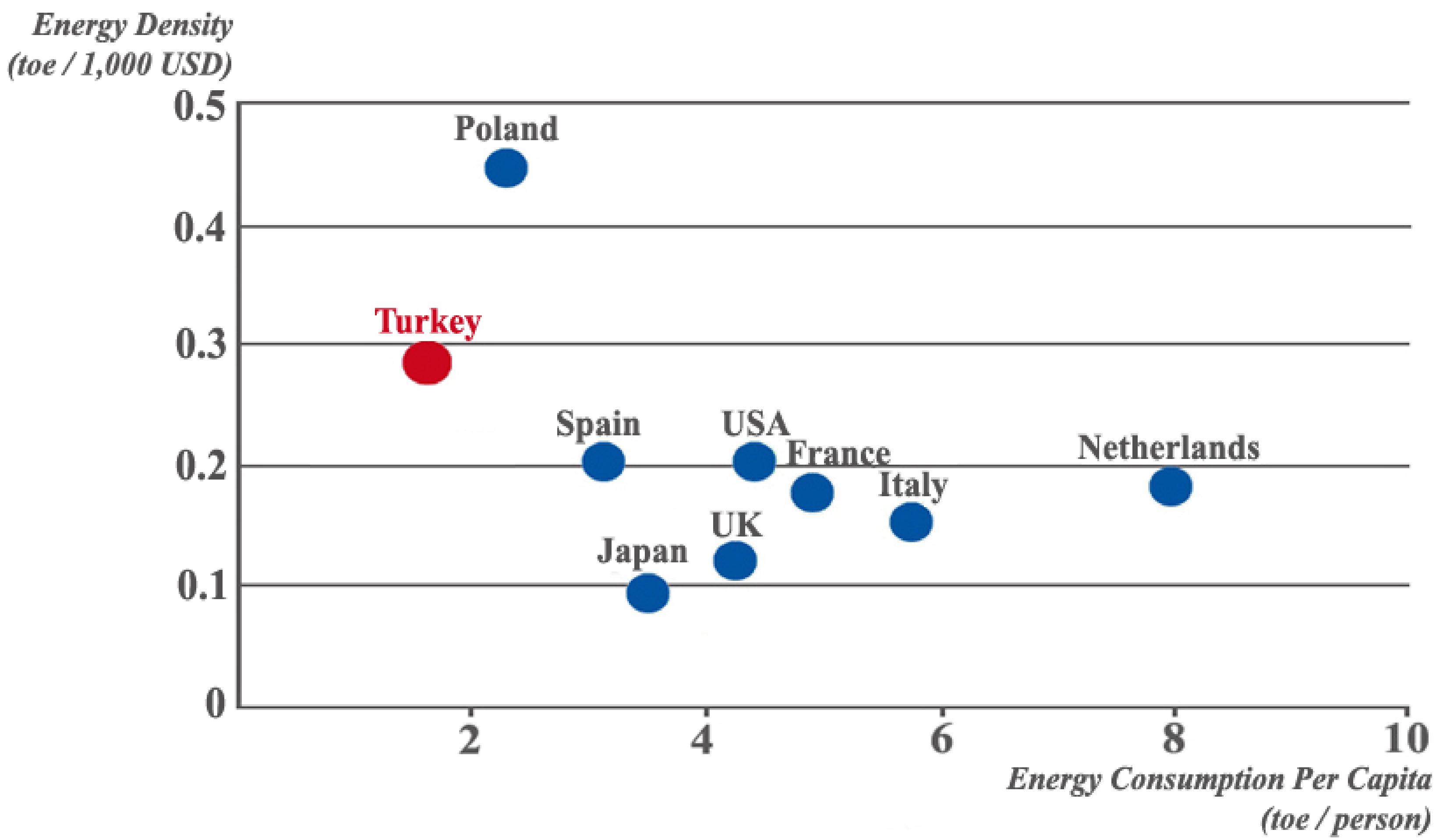
- AKENERJİ
- AKFEL
- AKSA
- ALADDIN MIDDLE EAST
- ANATOLIA ENERGY
- ANGORAGAZ
- ATTİLA DOĞAN İNŞAAT
- AVRASYA GAZ
- AYGAZ
- BATI HATTI GAZ
- BM HOLDİNG
- BOSPHORUSGAZ
- BP
- ÇALIK ENERJİ
- DEMİRÖREN EGL
- DOĞAL ENERJİ
- DOĞAN ENERJİ
- EDISON
- EGEGAZ
- ENEL
- ENERCO ENERJİ
- ENERJİSA
- ENI
- ERDGAZ
- EWE ENERJİ
- EXXONMOBIL
- GDF SUEZ
- GENEL ENERGY
- GÜNEY YILDIZI PETROL
- HATTUŞA ENERJİ
- IBS RESEARCH
- KİBAR ENERJİ
- MARSA 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



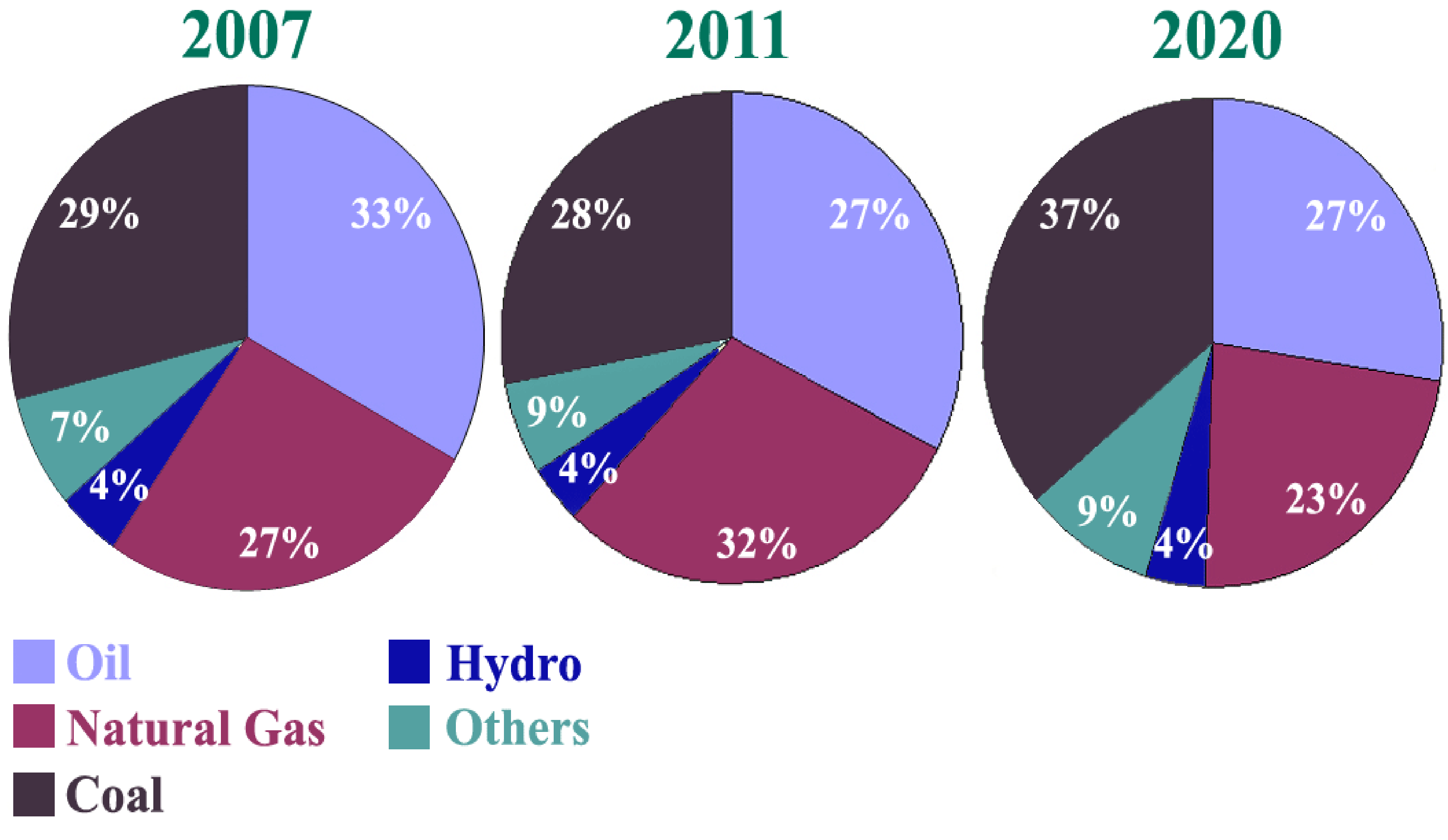
Source: Turkey Energy Efficiency Report (2010)

Change in Energy Balance (1990 – 2011)

	1990	2011	Change
Total Energy Demand *(million toe)*	52.9	114.4	↑ 116% ↑
Total Domestic Production *(million toe)*	25.6	32.2	↑ 26% ↑
Total Energy Imports *(million toe)*	30.9	90.2	↑ 196% ↑
Coverage of Domestic Production to Total Consumption	48%	28%	↓ - 41% ↓

Source: Ministry of Energy and Natural Resources

Energy Consumption by Source (2007 – 2011 – 2020)



Source: Ministry of Energy and Natural Resources

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

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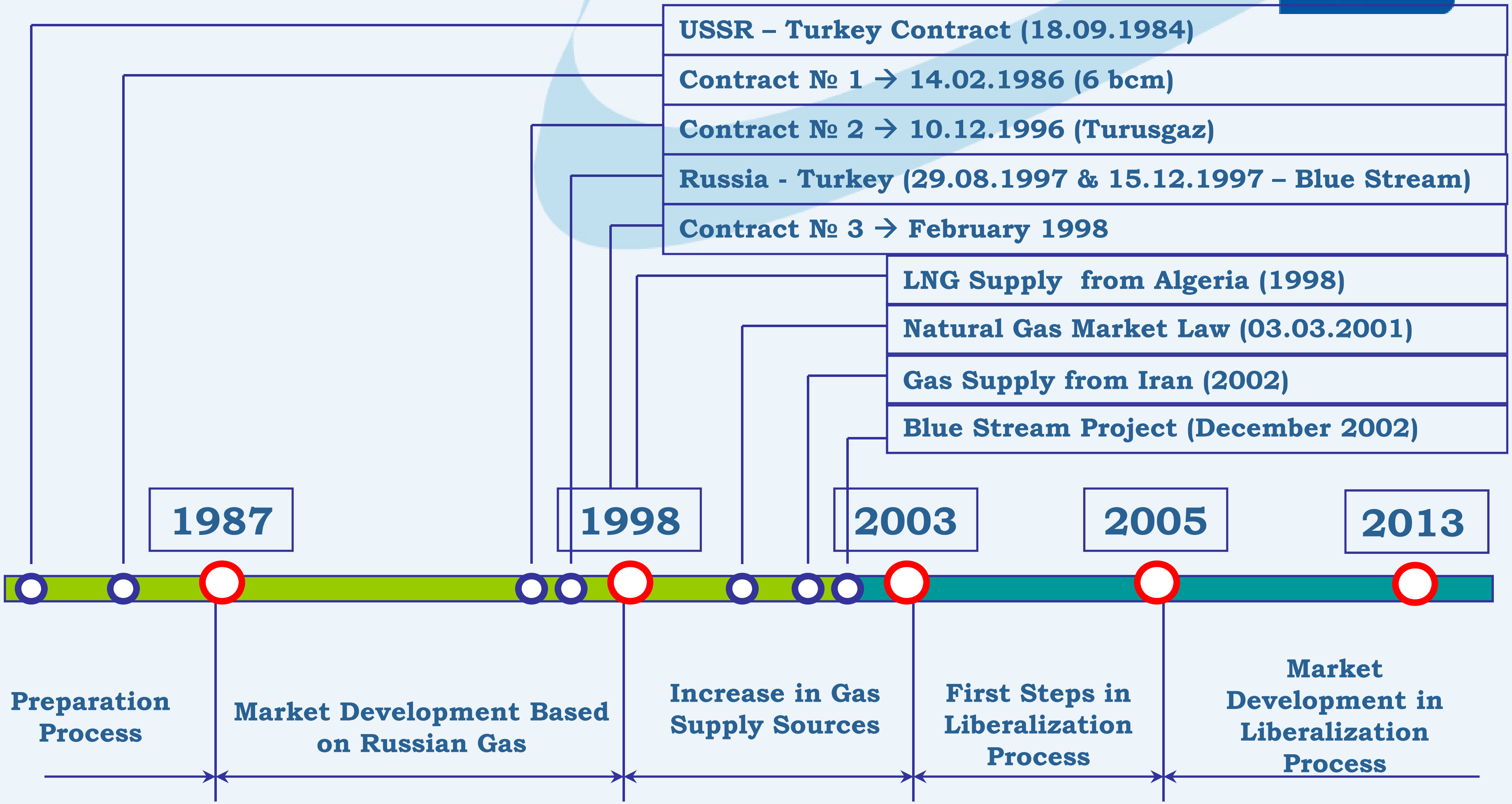
(billion USD)	2009	2010	2011	2012
Crude Oil & Petroleum Products	14.9	20.6	29.2	31.5
Natural Gas	11.6	14.1	20.2	23.2
Coal	3.1	3.3	4.1	4.6
Total Energy Imports	29.9	38.5	54.1	60.1
Turkey's Total Imports	140.9	185.5	240.8	236.5
Share of Oil & Gas in Turkey's Total Imports	18.8%	18.7%	20.5%	23.1%

Source: Ministry of Economy

Current Account Deficit vs Oil Price (2007 – 2012)

Source: TSKB

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

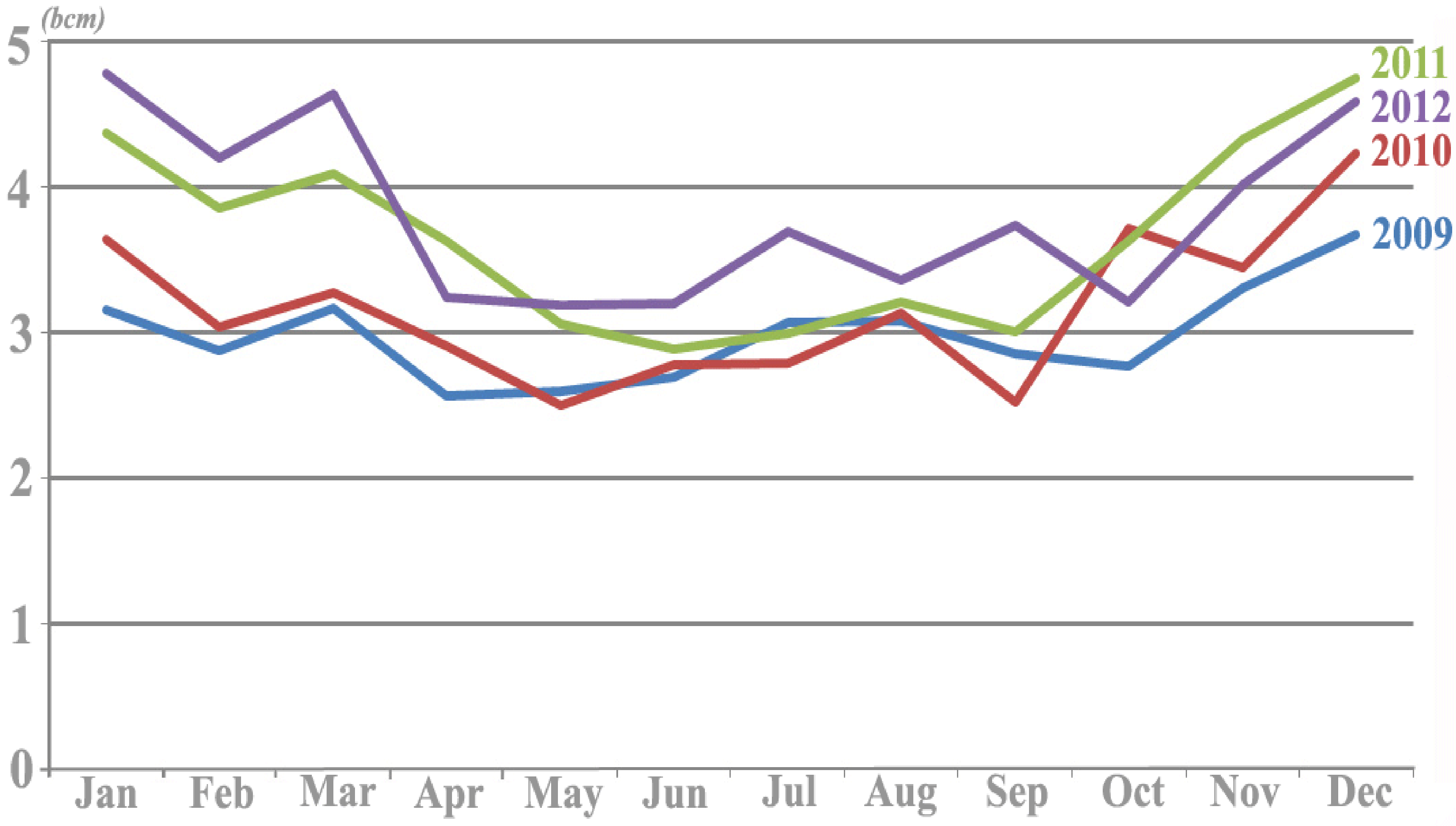
Source: Energy Market Regulatory Authority

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

(bcm)	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	

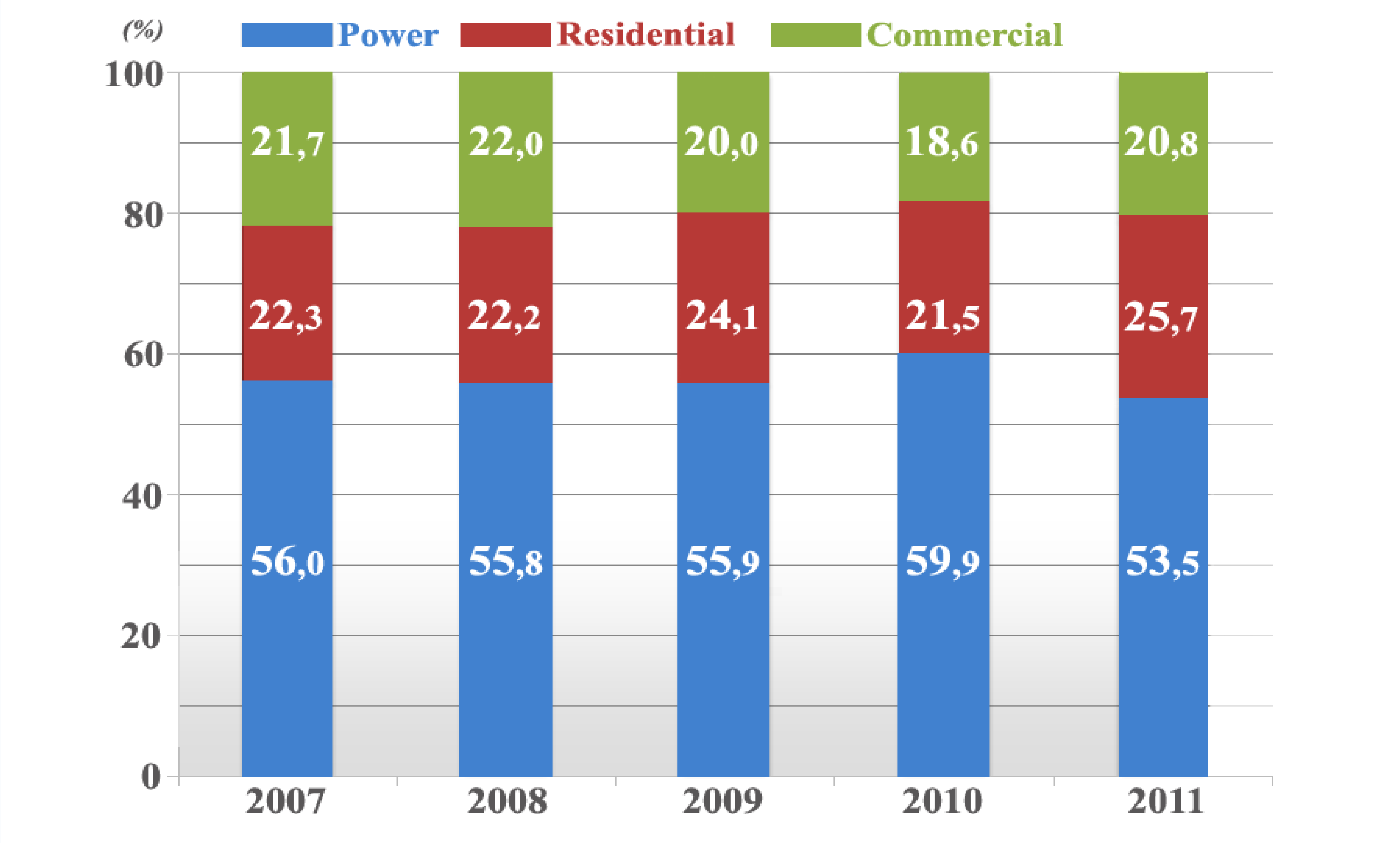
Source: Energy Market Regulatory Authority

Gas Consumption by Month (2009 – 2012)



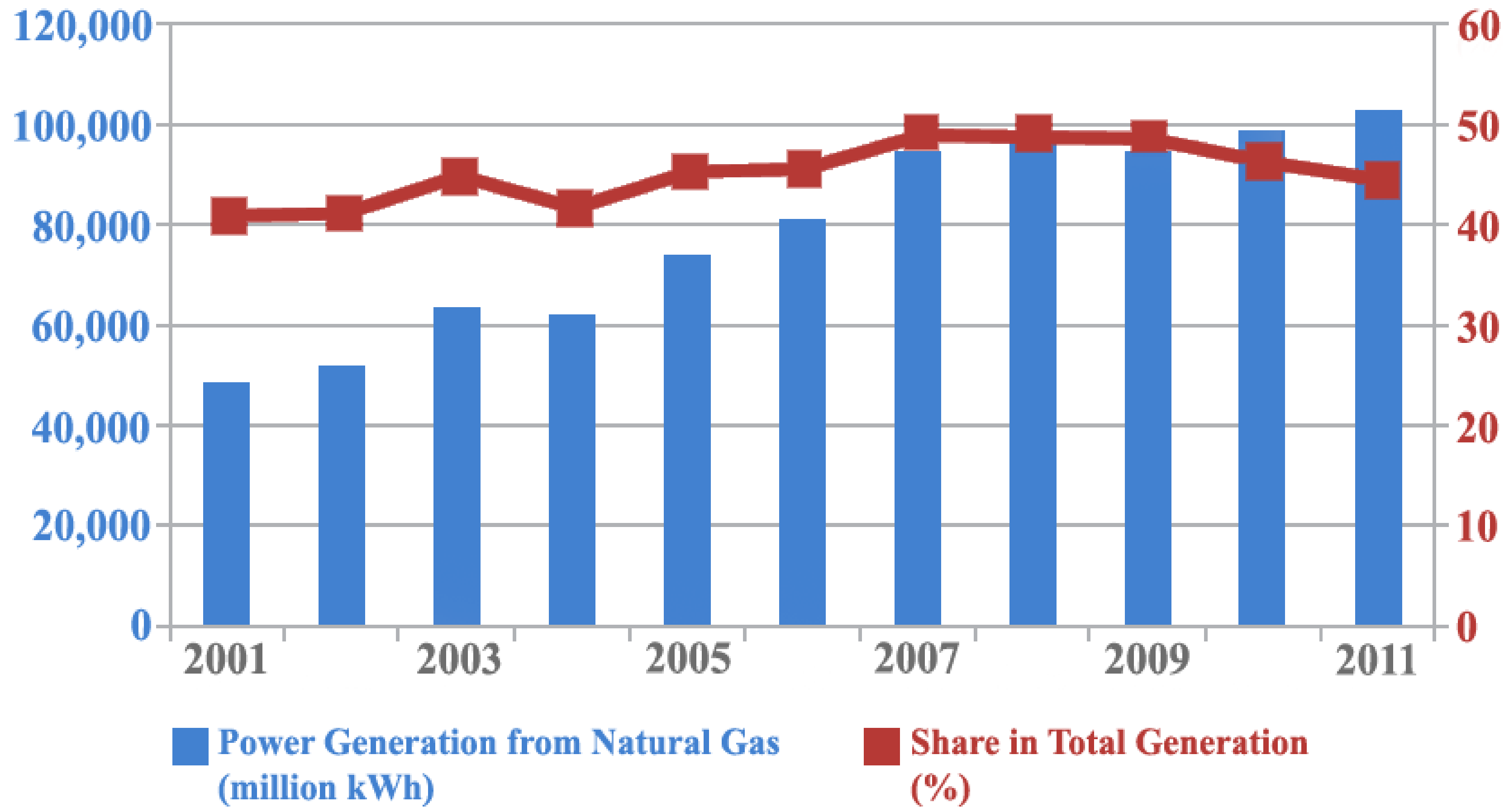
Source: Energy Market Regulatory Authority

Sectoral Breakdown of Gas Consumption (2007 – 2011)



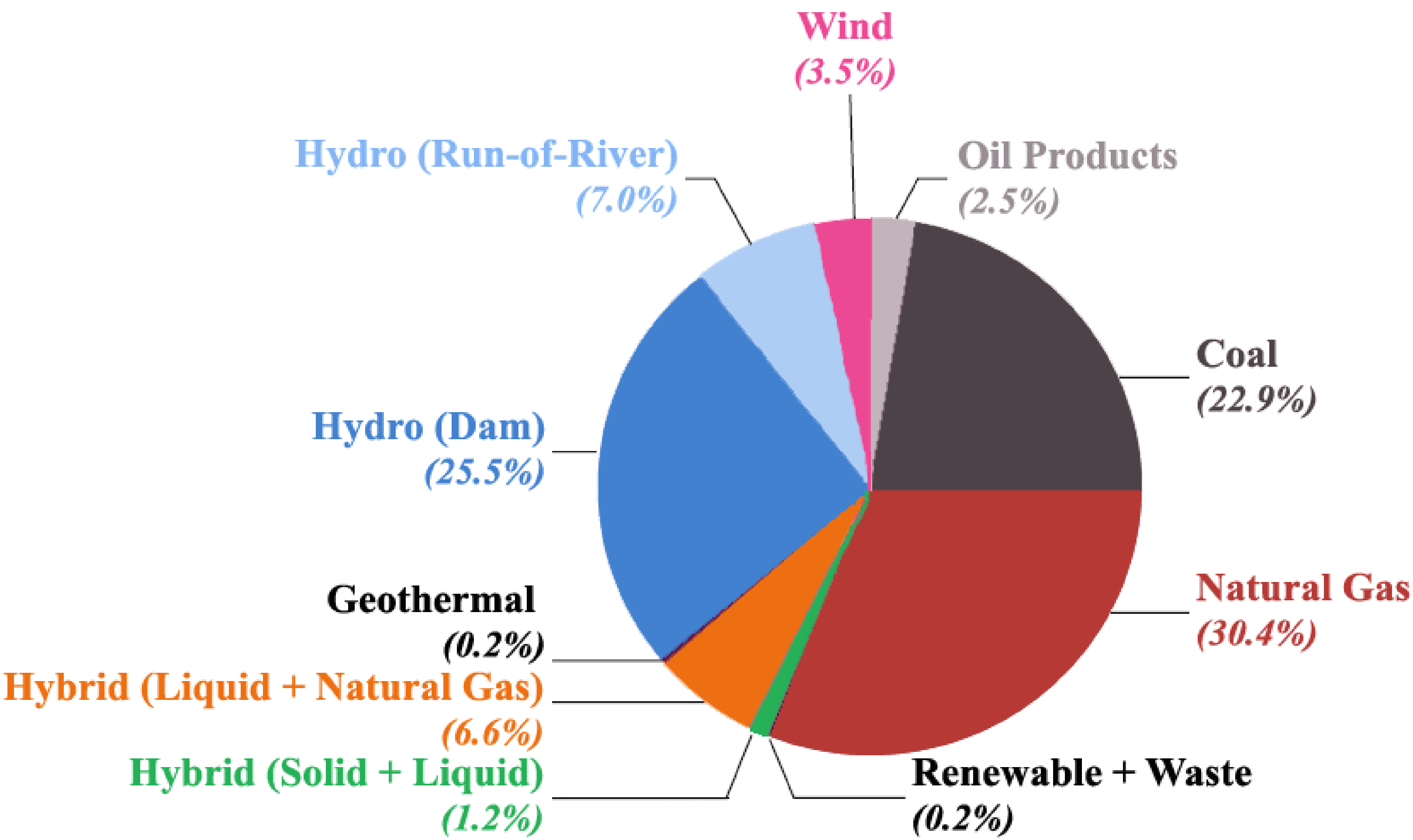
Source: Ministry of Energy and Natural Resources

Natural Gas in Power Generation (2001 – 2011)



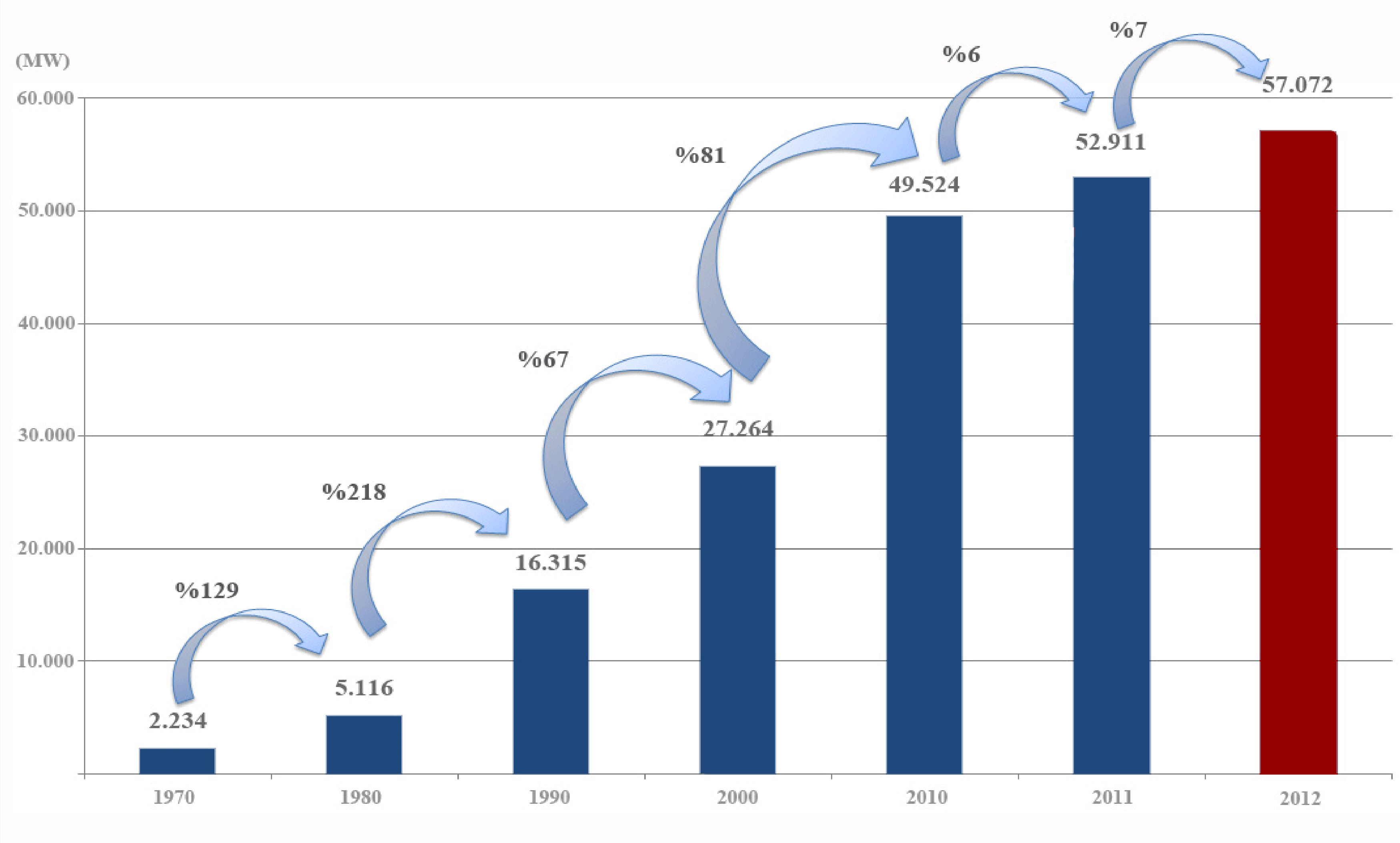
Source: Energy Market Regulatory Authority

Installed Capacity by Source (Apr 2012)



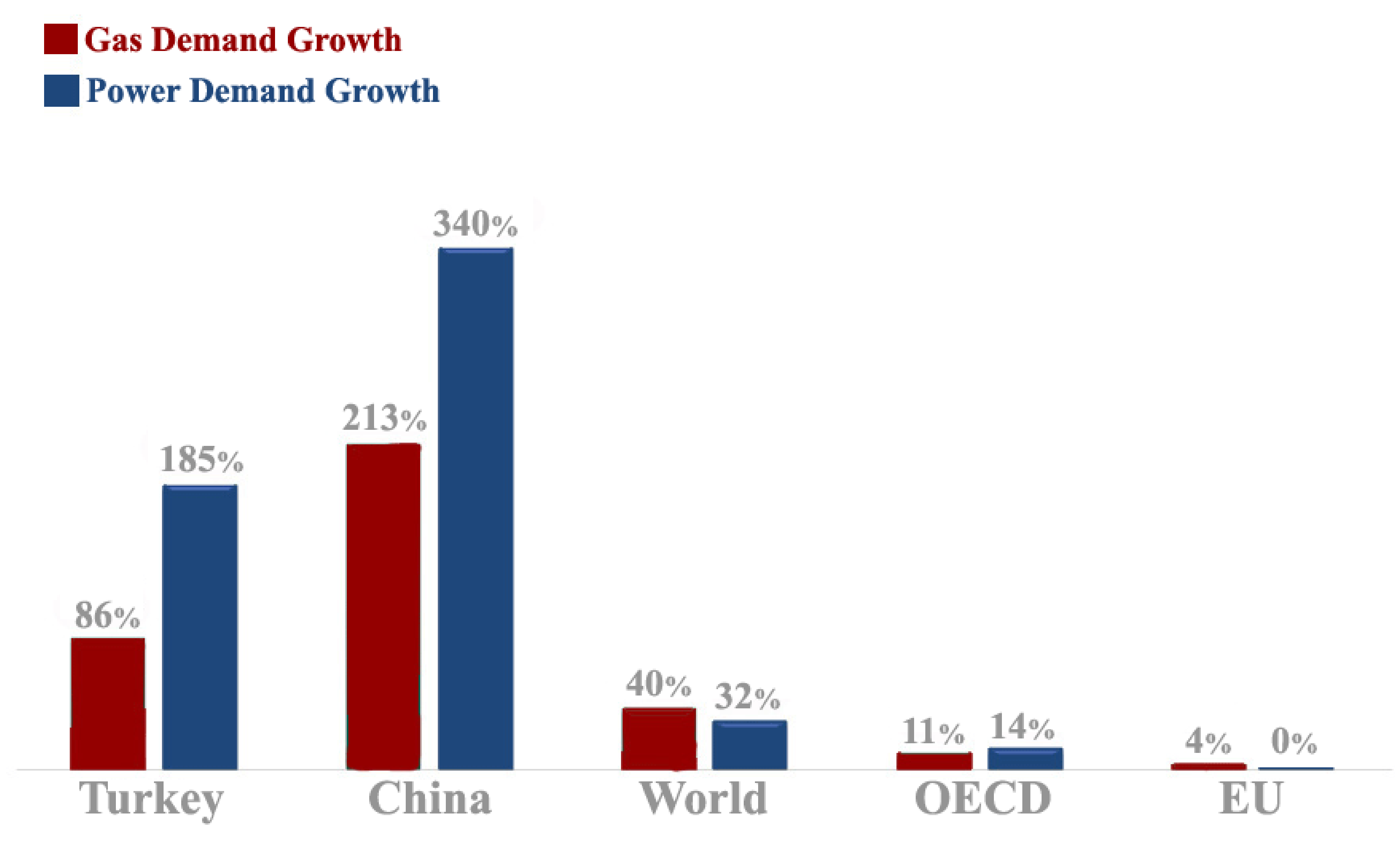
Source: Energy Market Regulatory Authority

Installed Capacity (1970 – 2012)



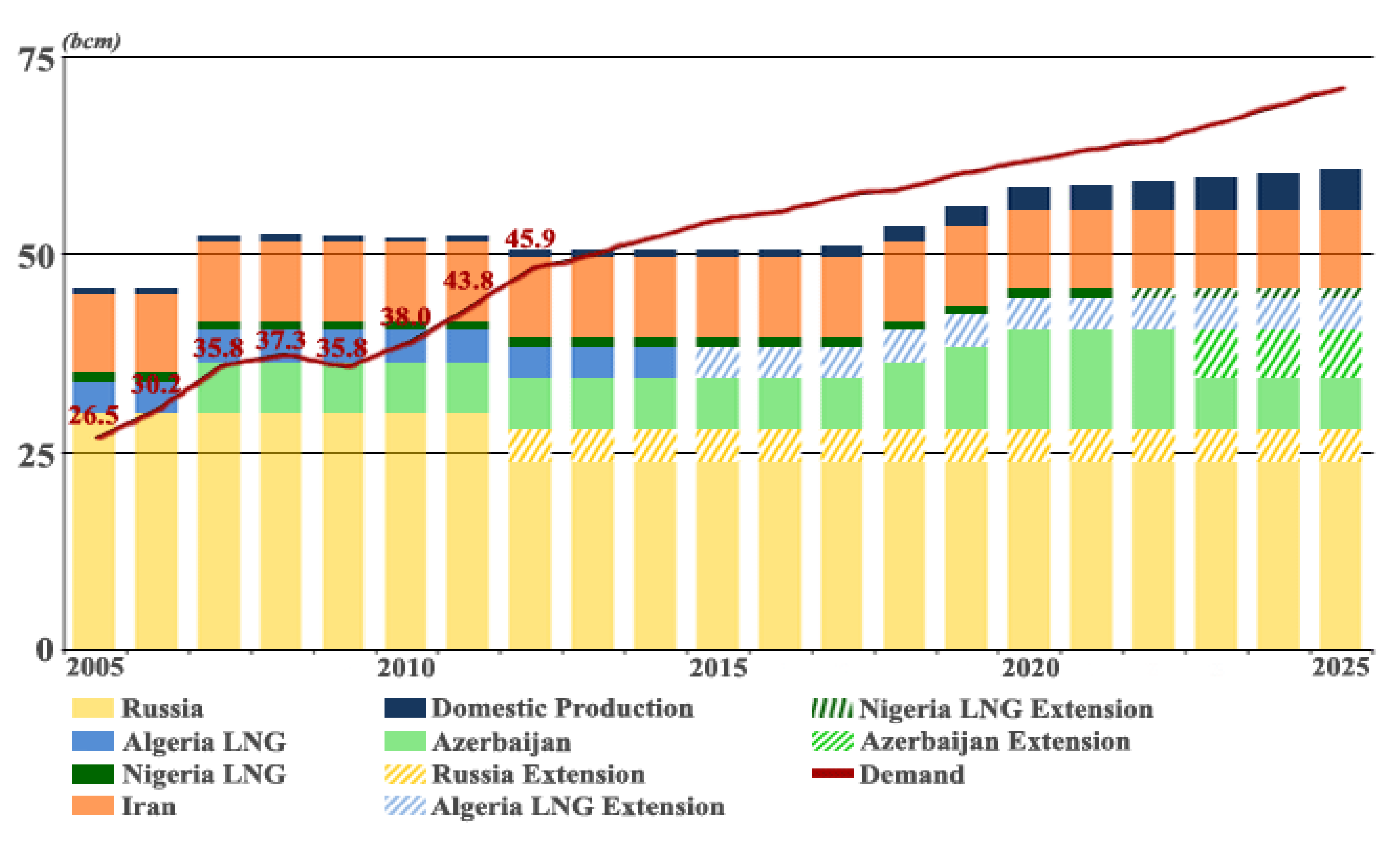
Source: TEİAŞ

Gas & Power Demand Growth (2001 – 2011)



Source: Energy Market Regulatory Authority

Natural Gas Demand vs Supply (2005 – 2025)



Source: BP

Potential and Possible New Suppliers

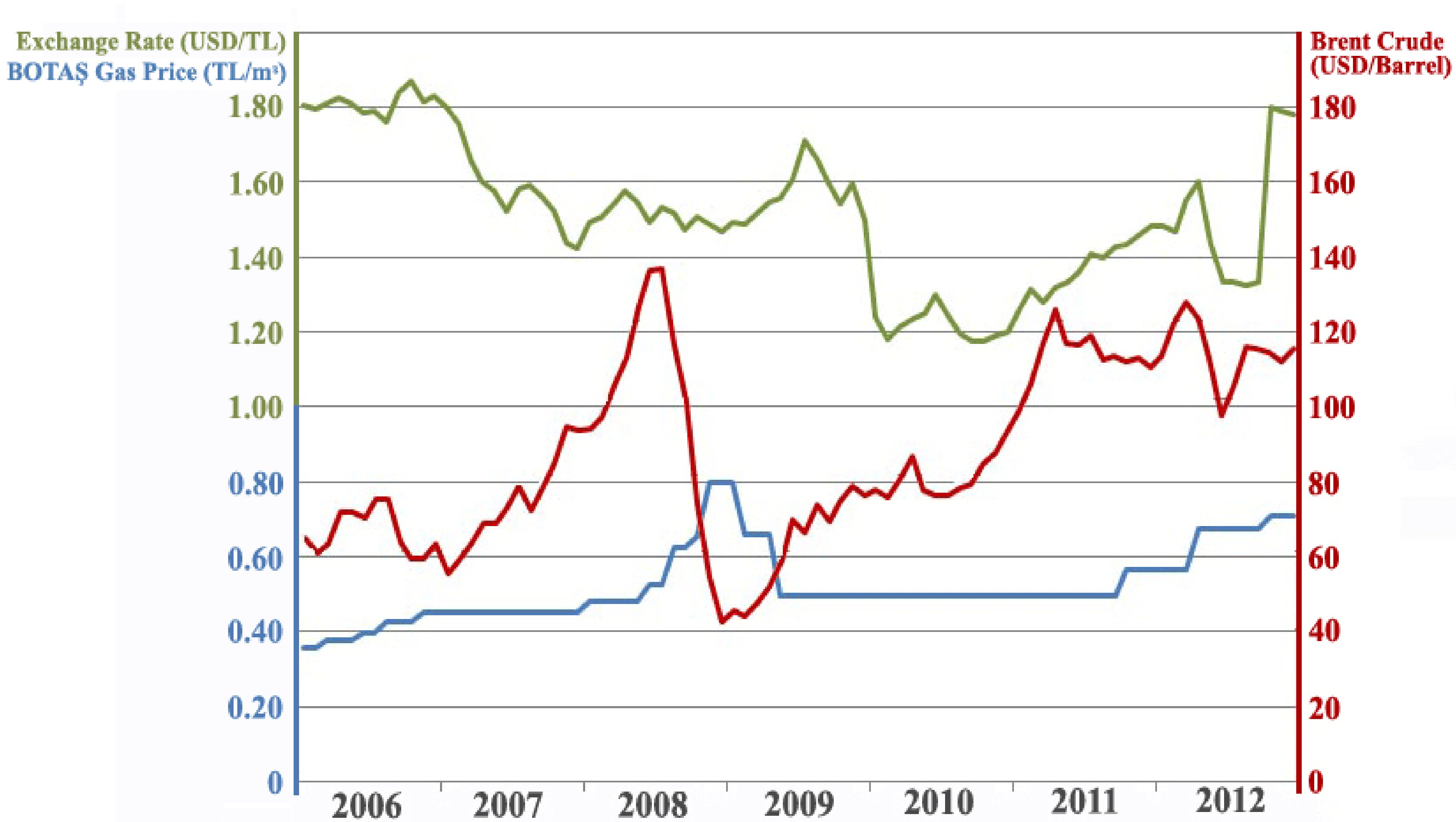
- Shah Deniz II & New Fields in Azerbaijan
- Northern Iraq / Iraq
- Shale Gas in Turkey
- Black Sea Offshore
- Eastern Mediterranean Offshore
- US LNG
- Africa

Azeri Gas in Turkey & Europe TANAP + ...?

Nabucco West?

…or TAP?

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



Source: Central Bank, BOTAŞ, Platts

Conclusion
What to do now?

For a Competitive & Liberal Internal Market

1. Removal of subsidies and cross-subsidies

2. Removal of restrictions for private sector's imports

3. Legal unbundling of BOTAŞ

4. Completion of IT (EBB & Scada) and infrastructure investments

5. Legal and commercial ground for Gas Hub

For the Realization of Transit Projects

1. Long term gas cooperation

2. Non discrimination

3. Transparent tariffs and regulations

4. Cost reflective and objective tariff mechanism

5. Bankable financial projection

THANK YOU…