



# Liberalization Process of Turkish Natural Gas Market

**Gas to Power Turkey 2014**  
**22 May 2013 – Istanbul**

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*Member 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:

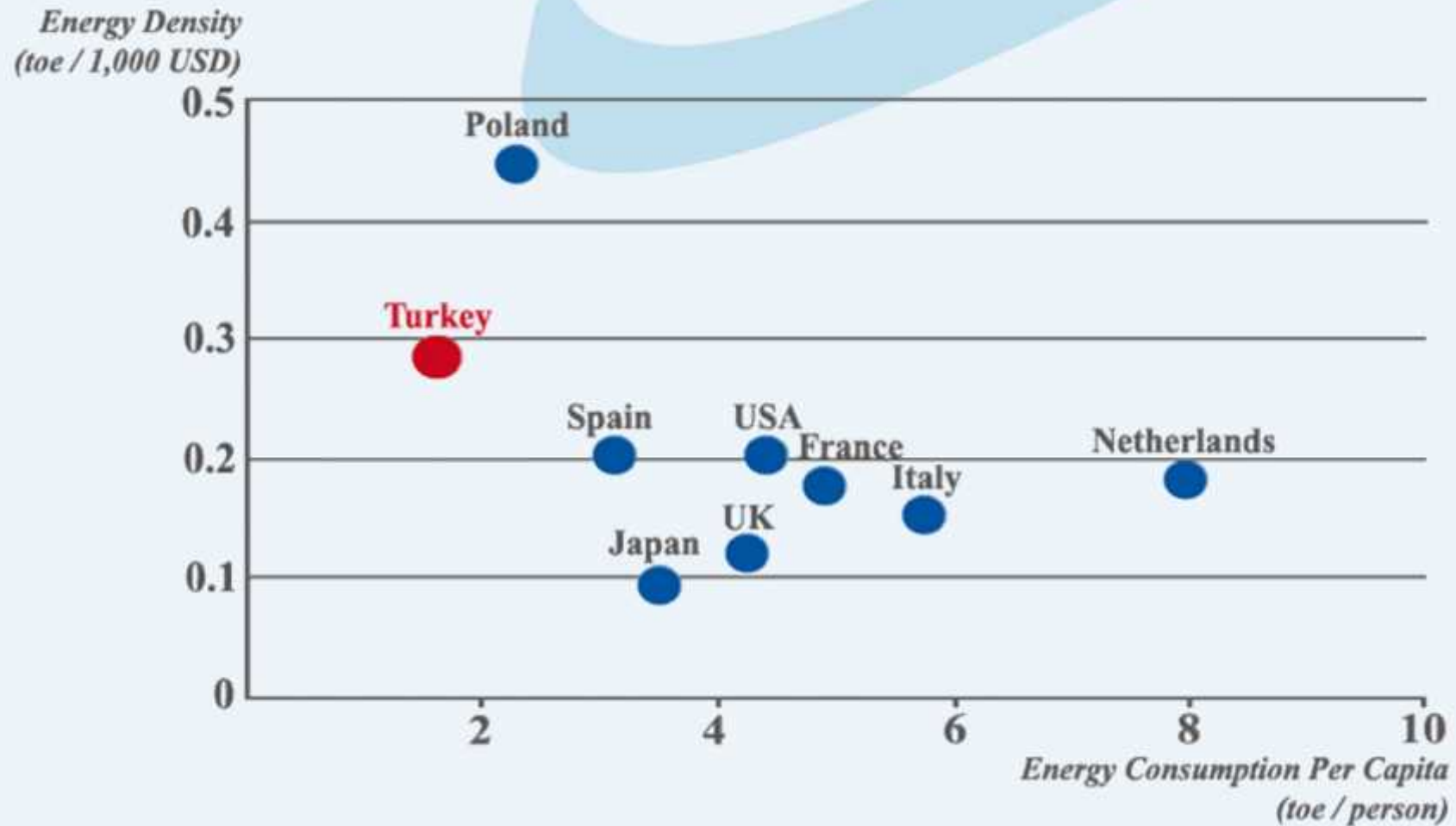
- Exploration & Production Sector
- Natural Gas Market

# Member Companies



- AKENERJ
- AKFEL
- AKSA
- ALADDIN MIDDLE EAST
- ANATOLIA ENERGY
- ANGORAGAZ
- ATT LA DO AN N AAT
- AVRASYA GAZ
- AYGAZ
- BATI HATTI GAZ
- BM HOLD NG
- BORDRILL SONDAJ
- BOSPHORUSGAZ
- BP
- CHEVRON
- ÇALIK ENERJ
- DEM RÖREN EGL
- DO AL ENERJ
- DO AN ENERJ
- ED SON
- EGEDAZ
- ENEL
- ENERCO ENERJ
- ENERJ SA
- ERDGAZ
- EWE ENERJ
- EXXONMOBIL
- GDF SUEZ
- GENEL ENERGY
- GLOBAL ENERGY
- GÜNEY YILDIZI PETROL
- HATTU A ENERJ
- H POT ENERJ
- IBS RESEARCH
- K BAR ENERJ
- MARSА ENERGY
- MEDGAZ
- NATURGAZ
- OMV
- PALMET ENERJ
- PERENCO
- PETRAKO
- POLMAK
- POZ T F DO ALGAZ
- SHELL ENERJ
- SOCAR
- STATOIL
- TBS PETROL
- TEKFEN N AAT
- TEM
- THRACE BASIN
- TIWAY
- TOTAL
- TURCAS
- VALEURA ENERGY
- YEN ELEKTR K
- ZMB GAZ DEPO
- ZORLU ENERJ

# Energy Density vs. Energy Consumption Per Capita



Source: Turkey Energy Efficiency Report (2010)

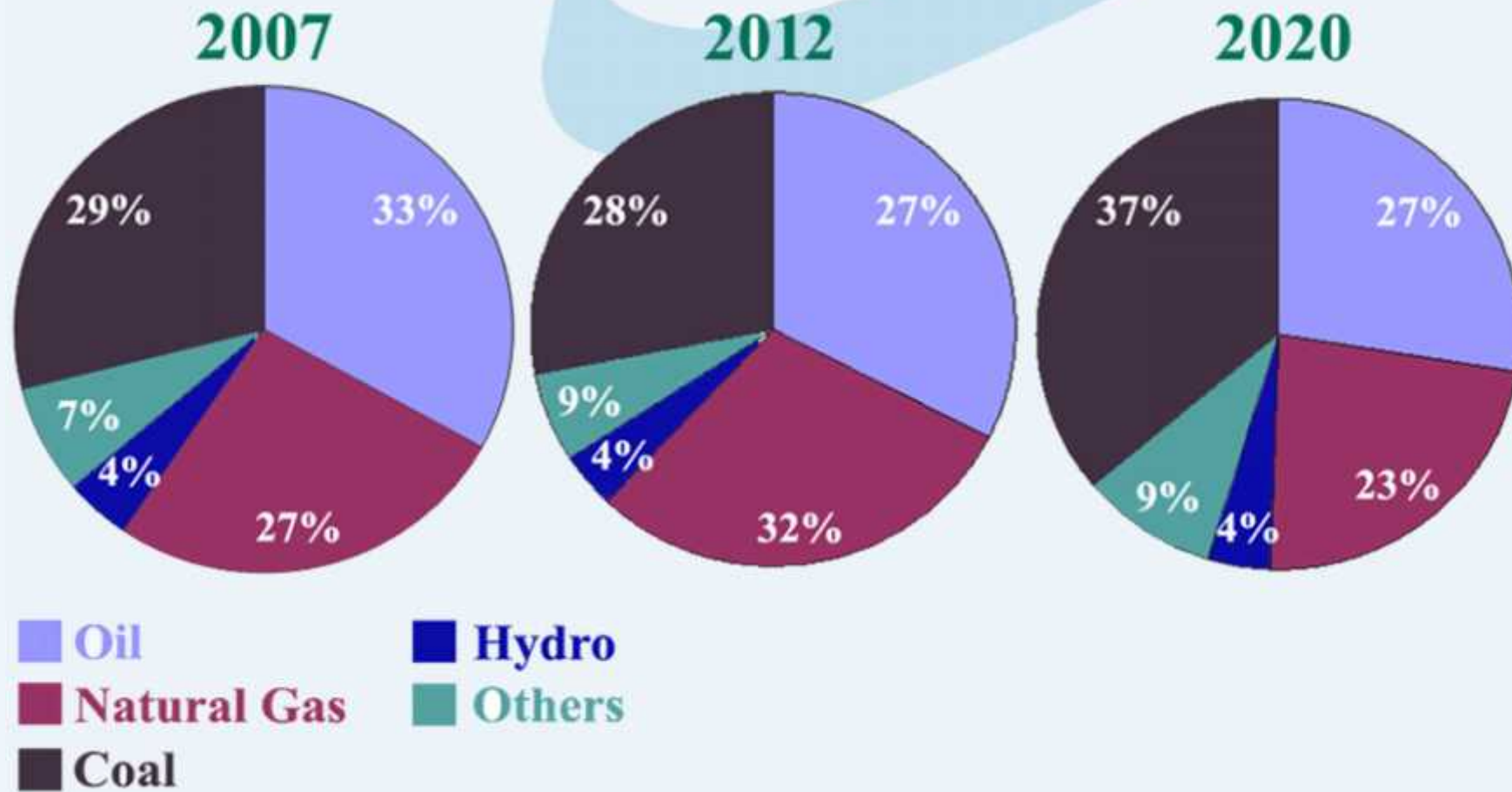
# Turkey's Overall Energy Balance (1990 – 2012)



	1990	2012	Change
Total Energy Demand (million toe)	52.9	119.5	118%
Total Domestic Production (million toe)	25.6	32.2	26%
Total Energy Imports (million toe)	30.9	90.2	192%
Coverage of Domestic Production to Total Consumption	48%	28%	- 42%

Source: MENR

# Energy Consumption by Source (2007 – 2012 – 2020)



Source: Ministry of Energy and Natural Resources

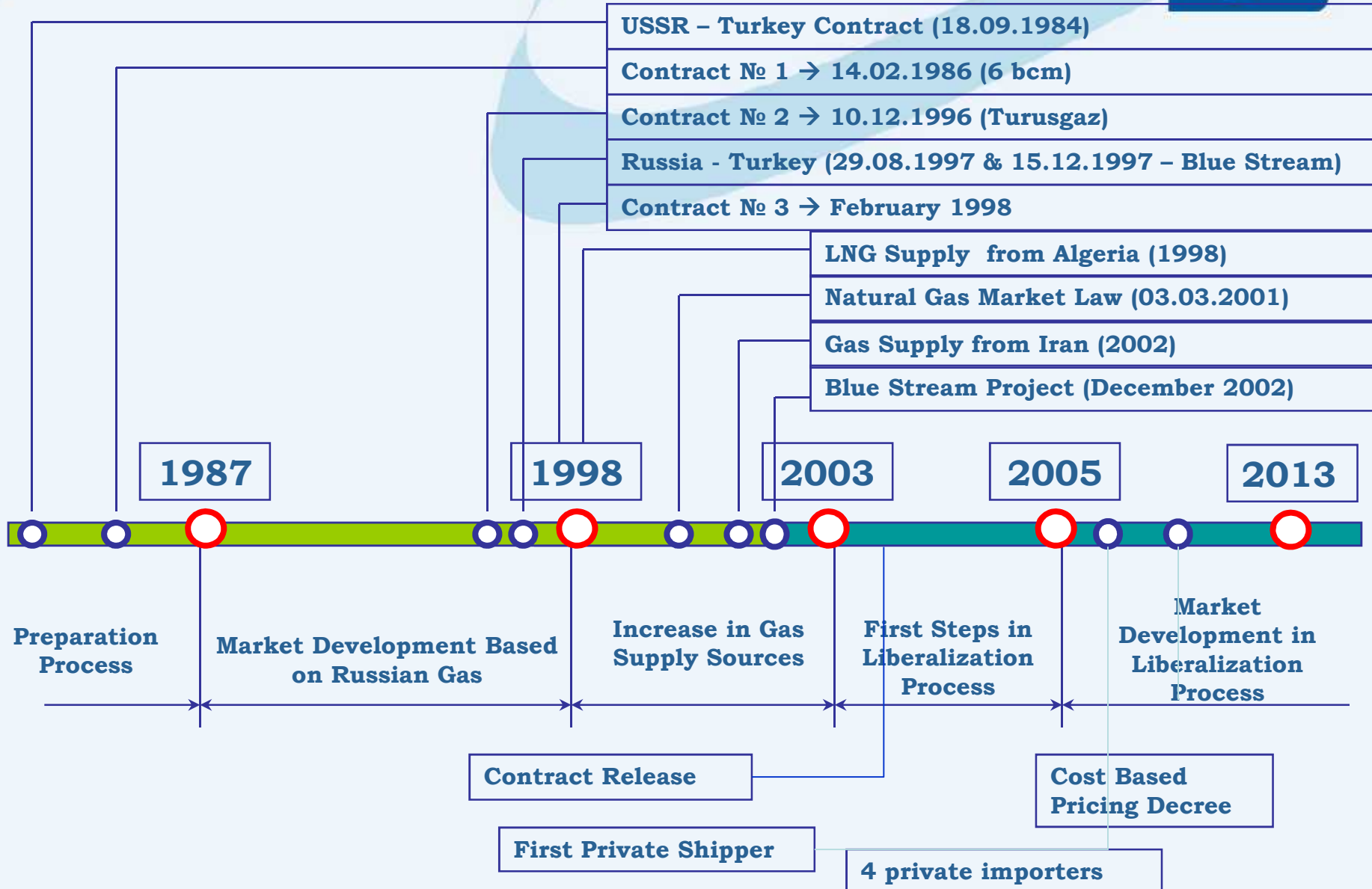
# Share of Energy in Turkey's Total Imports (2009 – 2013)



(billion USD)	2010	2011	2012	2013
Crude Oil & Petroleum Products	20,6	29,2	31,5	29,4
Natural Gas	14,1	20,2	23,2	21,2
Coal	3,3	4,1	4,6	4,3
Total Energy Imports	38,5	54,1	60,1	55,9
Turkey's Total Imports	185,5	240,8	236,5	251,6
Share of Oil & Gas in Turkey's Total Imports	%18,7	%20,5	%23,1	%22,2

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
Azerbaijan (Faz II)	Oct 2011	Oct 2018	15	6	2026

Source: Energy Market Regulatory Authority

# Private Players' Entrance into the Market



## Contract Release (2007)

<b>Enerco Enerji</b>	<b>2.50</b>
<b>BosphorusGaz</b>	<b>0.75</b>
<b>AvrasyaGaz</b>	<b>0.50</b>
<b>Shell Enerji</b>	<b>0.25</b>
	<b>+</b>

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**4 bcm**

## Contract Renewal (2013)

<b>Akfel Gaz</b>	<b>2.25</b>
<b>BosphorusGaz</b>	<b>1.75</b>
<b>Kibar Enerji</b>	<b>1.00</b>
<b>Batı Hattı</b>	<b>1.00</b>
	<b>+</b>

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**6 bcm**

## TR – AZ Agreement (2013)

<b>SOCAR</b>	<b>1.20</b>
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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>	<u>2014</u>
Aksa Turcas	Aksa Turcas	Aksa Turcas	Aksa Turcas	Aksa Turcas	Aksa Turcas	Aksa Turcas	Aksa SOCAR Gaz
		Aygaz Do al EWE Gazport NaturGaz Pozitif Zorlu DG	Aygaz Do al EWE Gazport NaturGaz Pozitif Zorlu DG  Akenerji EnerjiSA GDF SUEZ Hattu a Medgaz Zorlu Ted.	Aygaz Do al EWE Gazport NaturGaz Pozitif Zorlu DG  Akenerji EnerjiSA GDF SUEZ Hattu a Medgaz Zorlu Ted.  OMV Enerji OMV Gaz	Aygaz Do al EWE Gazport NaturGaz Pozitif Zorlu DG  Akenerji EnerjiSA GDF SUEZ Hattu a Medgaz Zorlu Ted.  OMV Enerji OMV Gaz  AngoraGaz Erdgaz	Aygaz Do al EWE Gazport NaturGaz Zorlu DG  EnerjiSA GDF SUEZ Hattu a Medgaz Zorlu Ted.  OMV Enerji OMV Gaz  AngoraGaz Erdgaz  SOCAR Gaz SOCAR Turkey	Aygaz Do al EWE Gazport NaturGaz Zorlu DG  GDF SUEZ Hattu a Medgaz Hipot  OMV Enerji ODA AngoraGaz Global Energy Erdgaz Torunlar TT Elektrik SOCAR Turkey
<b>(2)</b>	<b>(2)</b>	<b>(9)</b>	<b>(15)</b>	<b>(17)</b>	<b>(19)</b>	<b>(19)</b>	<b>(20)</b>

# Gas Imports by Source Country (2011–2012–2013)



(bcm)	2011	2012	2013	Share in Total (2013)
Russia	25.406	26.491	26.212	58 %
Iran	8.190	8.215	8.730	19 %
Azerbaijan	3.806	3.354	4.245	9 %
Algeria (LNG)	4.156	4.076	3.917	9 %
Nigeria (LNG)	1.248	1.322	1.274	3 %
Spot LNG	1.069	2.464	892	2 %
<b>Total</b>	<b>43.874</b>	<b>45.922</b>	<b>45.270</b>	

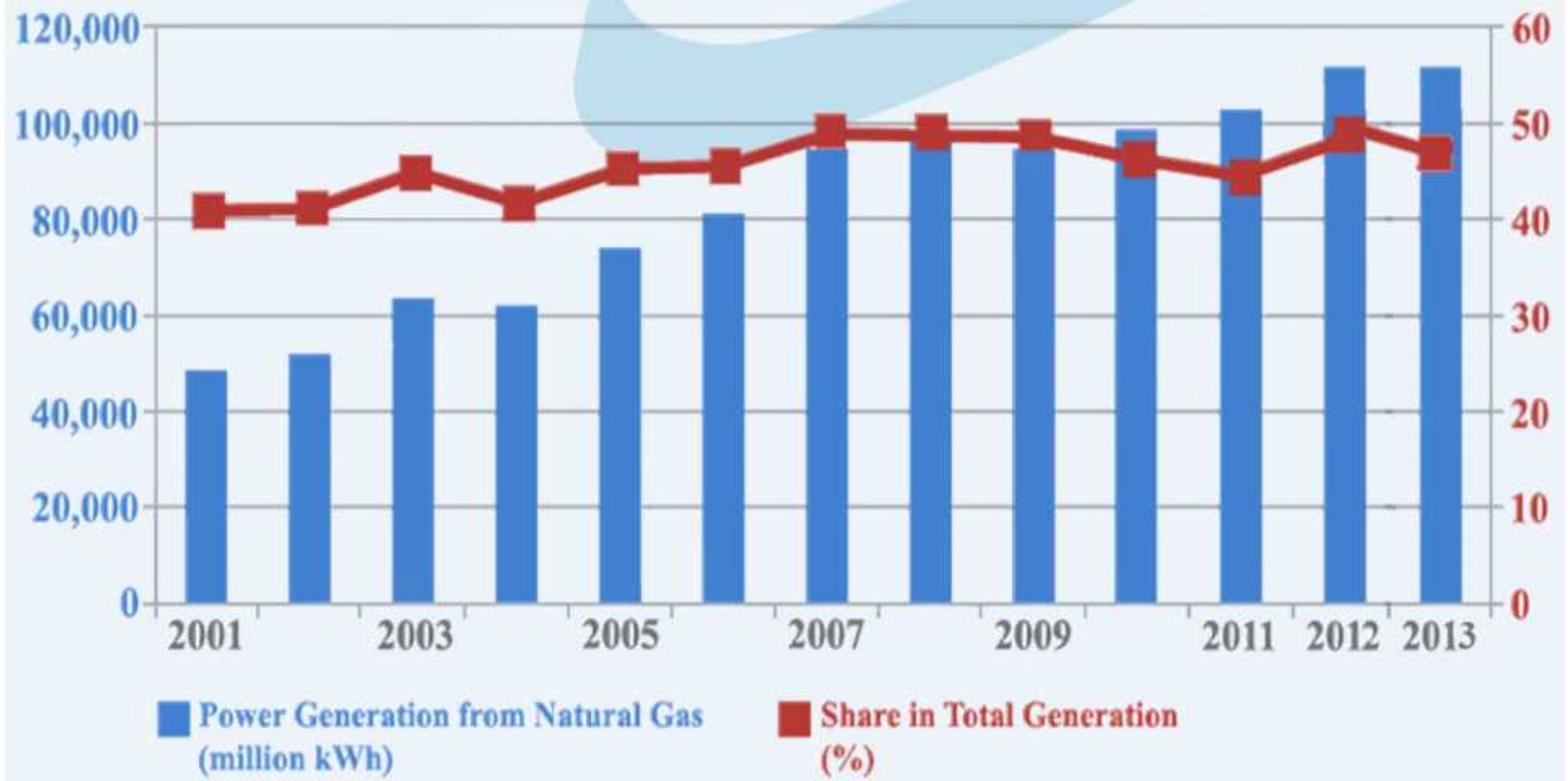
Source: Energy Market Regulatory Authority

# Sectoral Breakdown of Gas Consumption (2007 – 2012)



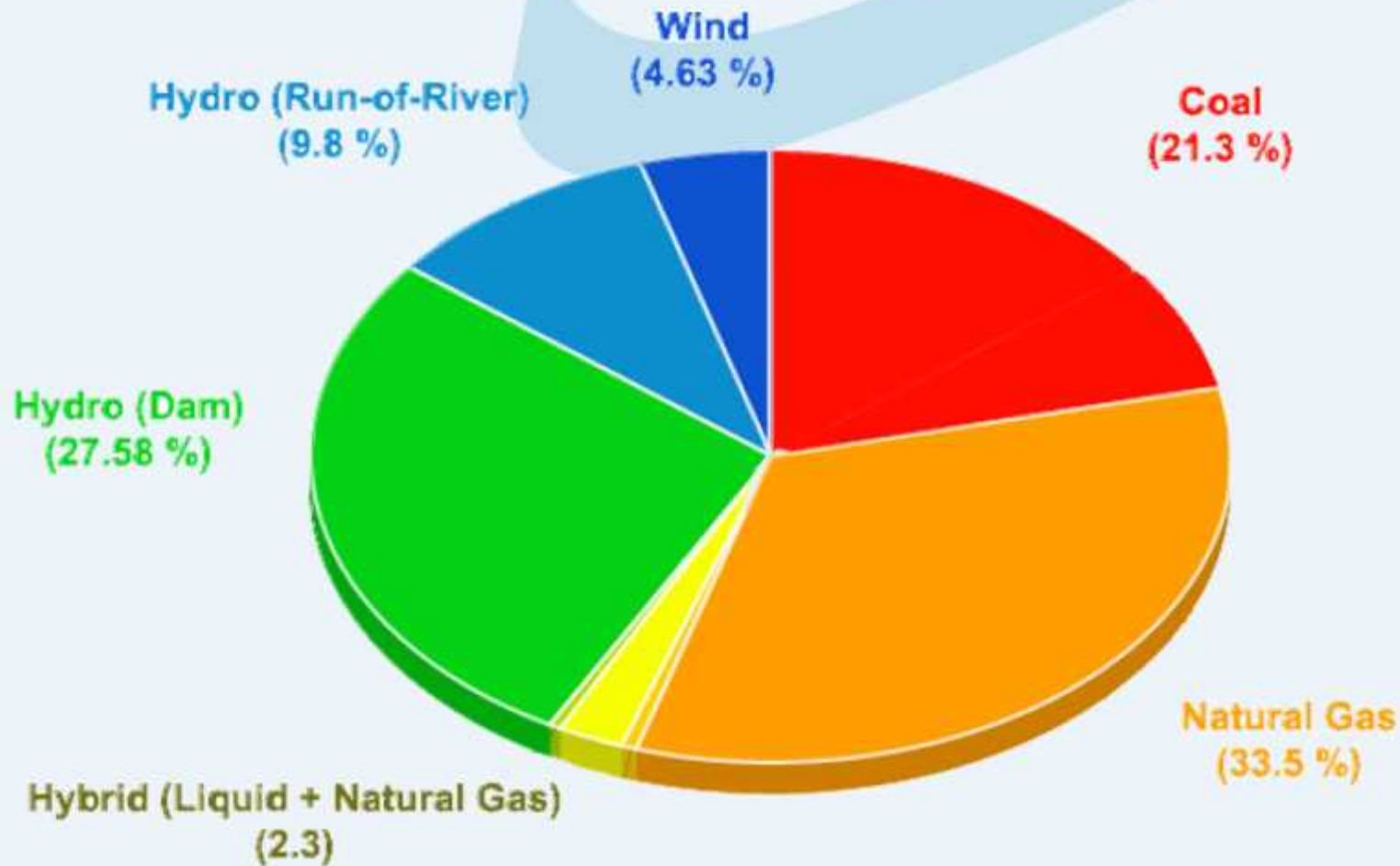
Source: Ministry of Energy and Natural Resources

# Natural Gas in Power Generation (2001 – 2013)



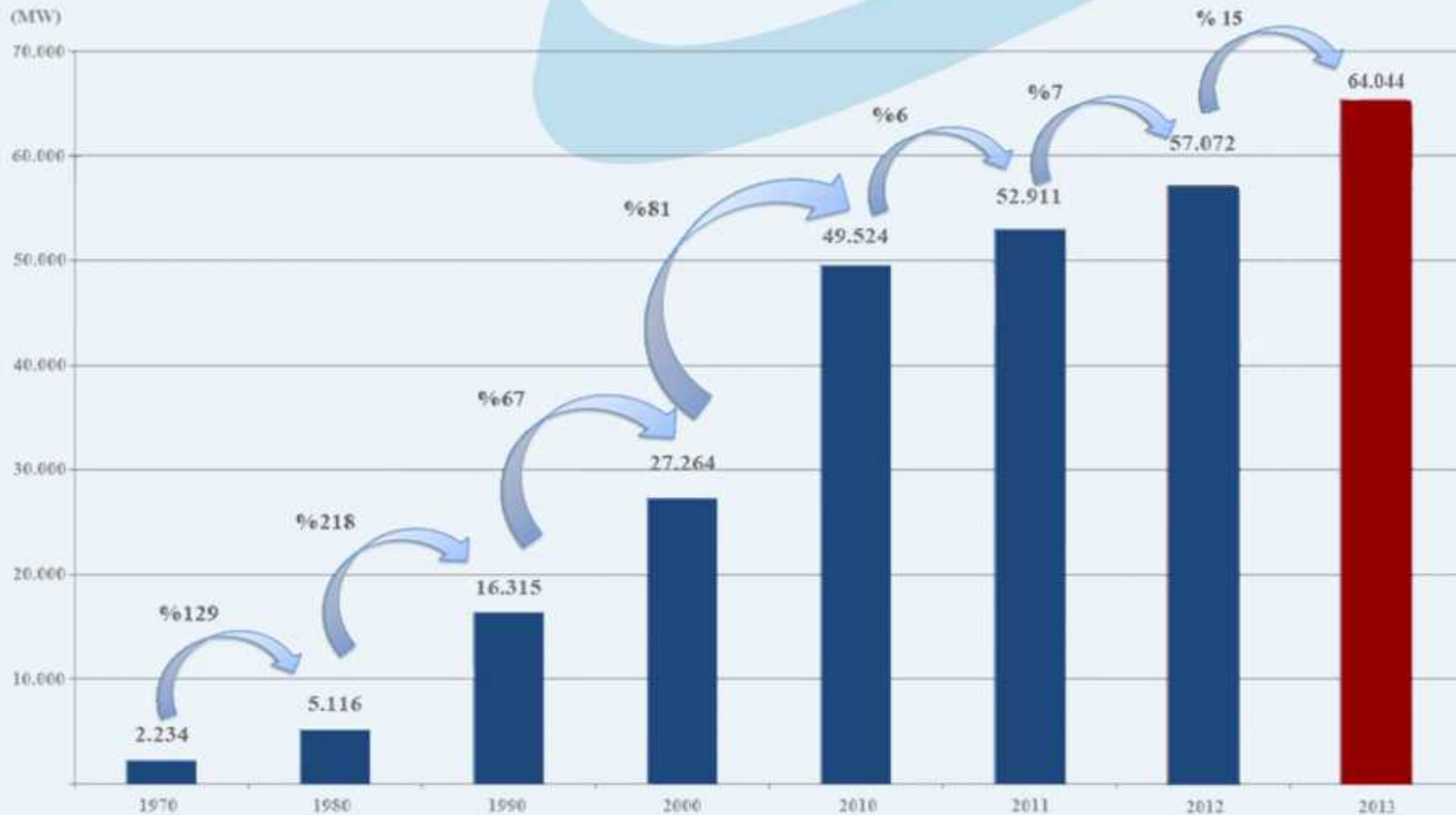
Source: Energy Market Regulatory Authority

# Installed Capacity by Source (2013)



Source: Energy Market Regulatory Authority

# Installed Capacity (1970 – 2013)



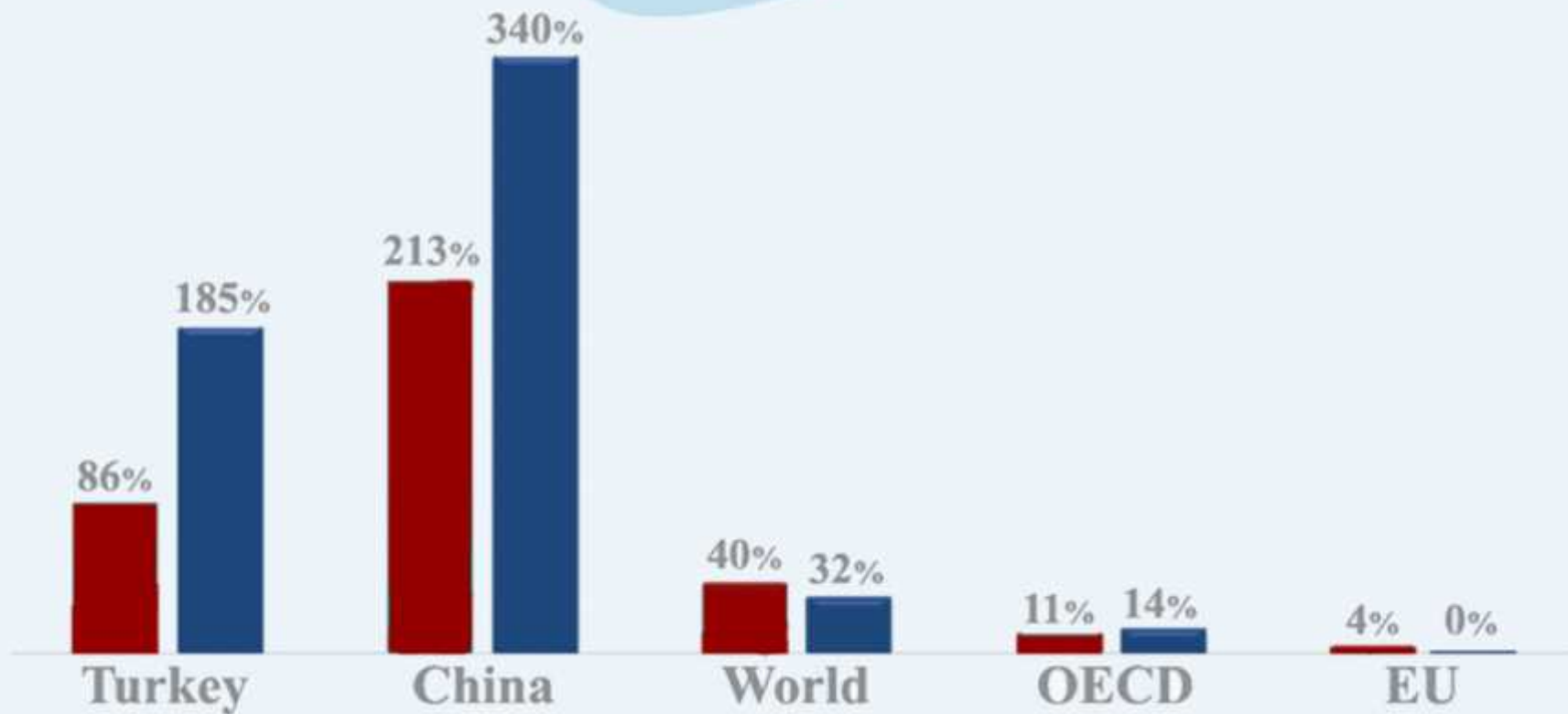
Source: TEİAŞ



# Gas & Power Demand Growth (2001 – 2012)

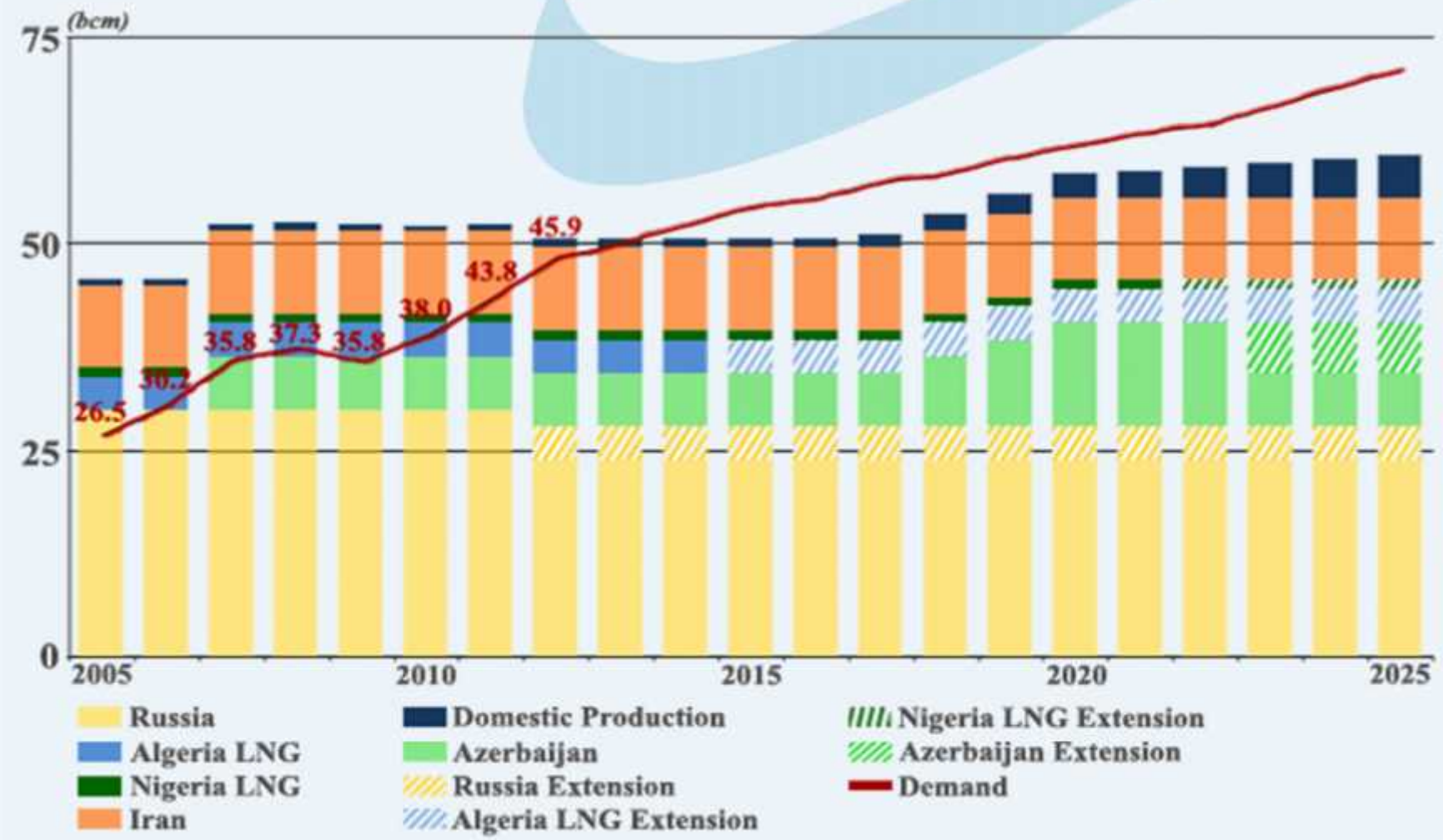


■ Gas Demand Growth  
■ Power Demand Growth



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 Bota market share**
- 4. Legal unbundling of BOTA**
- 5. Completion of IT (EBB & Scada) and technical infrastructure investments in a timely manner**
- 6. Legal, technical and commercial ground for Gas Hub / Gas Trading**

**NATURAL GAS MARKET LAW**  **2014**



***THANK YOU...***