

European Gas Import Requirements and Russian Gas Export Potential **Looking for the Balance**

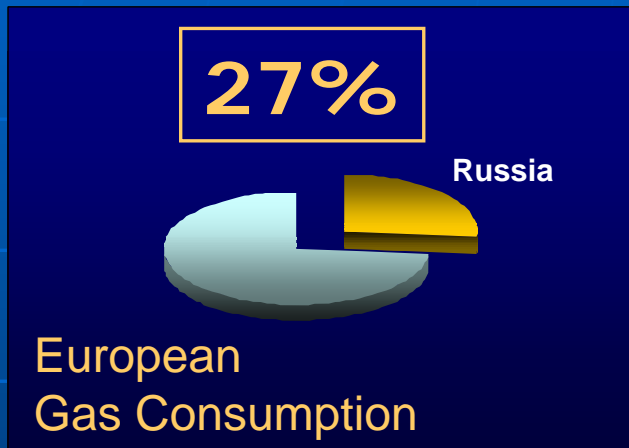


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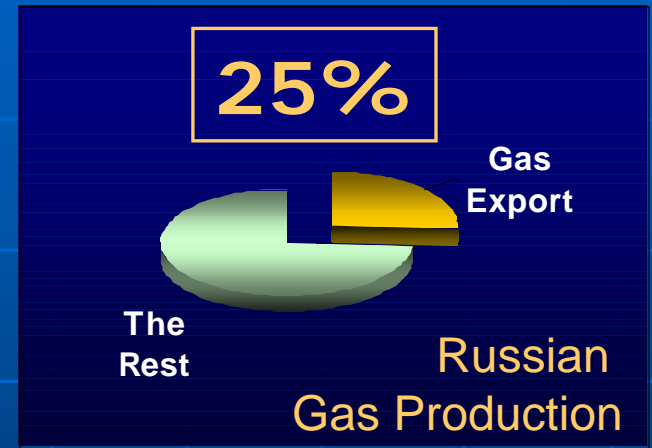
Warsaw, June 2008

Former Equilibrium : EU & Russia

Role of Russian gas
for Europe



Role of gas export to EU
for Russia



Security of Supply

(state investments, long-term contracts, state guarantees)

Security of Demand

(bilateral inter-governmental long-term agreements
guaranteed return of investments)

Security of Transit

(one country, one block, inter-governmental agreements on transit)

Changing Framework: Rising Risks

EU:

Market liberalization

EU policy on gas supply sources diversification, LNG development, growing competition

Development of alternative energy sources and energy saving

Uncertain gas demand in EU

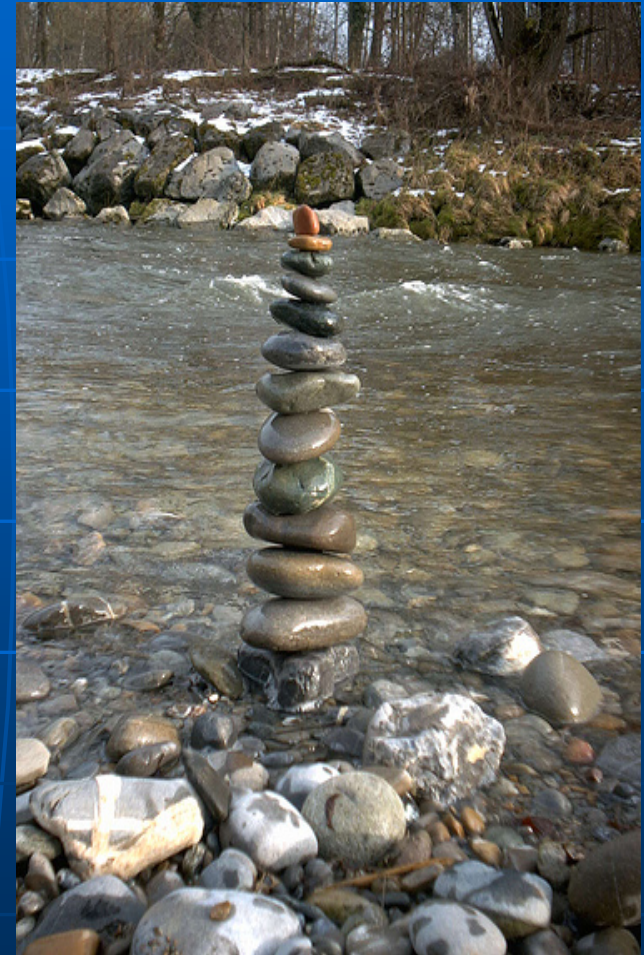
Russia:

Growing domestic demand

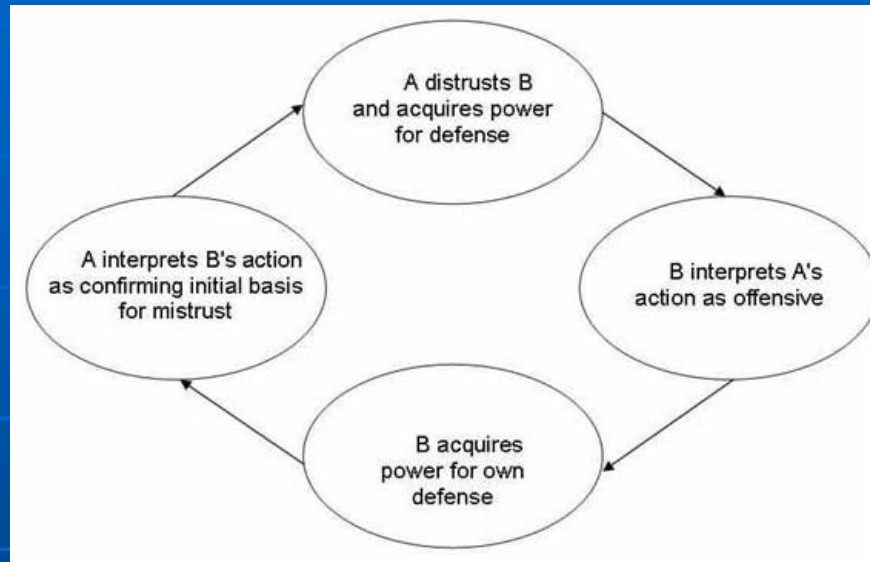
Diversification of export markets

Private-public ownership

End of paternalistic Russian price policy for CIS



Security Dilemma Spiral in Conditions of Uncertainty



Europe

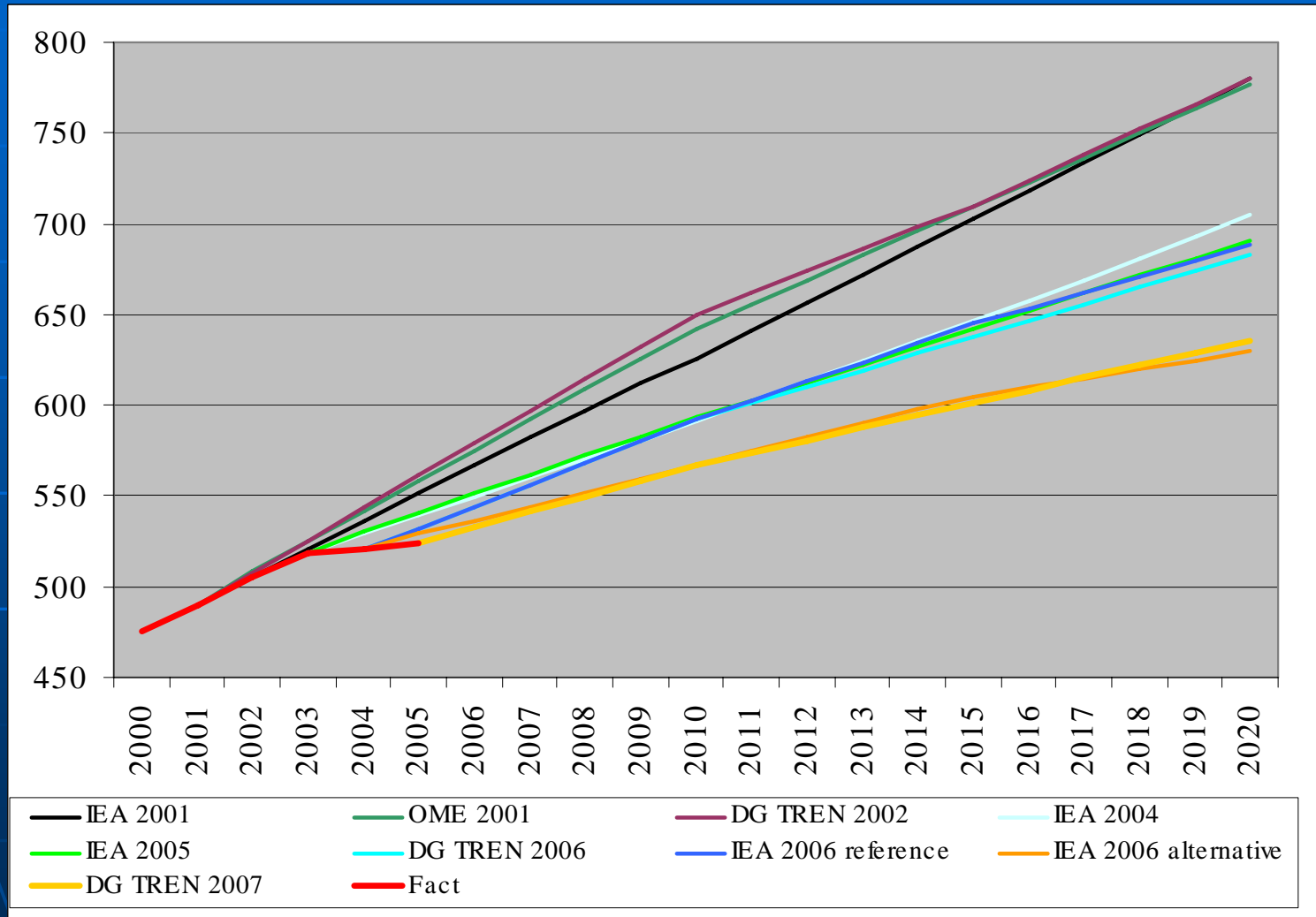
Green Paper
Pressure on Energy Charter
Diversification of supply
"Supported projects" (Nabucco, Caspian)
Pressure on long term contracts
Gas release programs
Barriers for Gazprom moving downstream
3d liberalization Proposal

Russia

De jure Gazprom export monopoly
Refuse from Energy Charter
Diversification of export markets
Alternate transit routes
Strategic fields
Control over Central Asian gas
Attempts to participate in Iran, etc.
Gas OPEC

Contradictions and misunderstanding multiply disregarding strong investment needs

EU Gas Consumption Forecasts, bcm

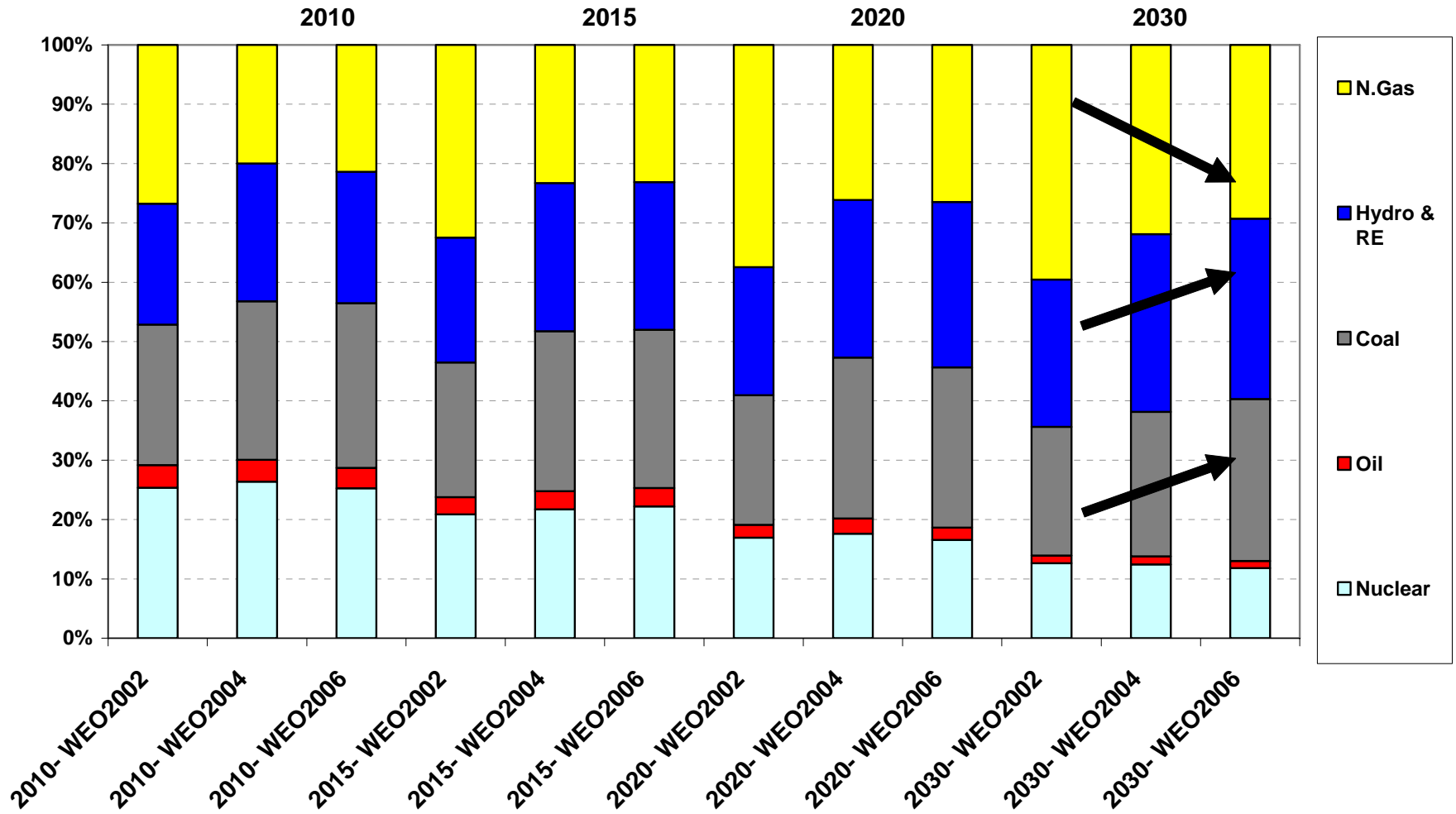


Source: ERI RAS.

IEA (WEO) 2002-2006

Change in fuel shares for power generation

WEO 2002 to 2006 : Compraison by Source

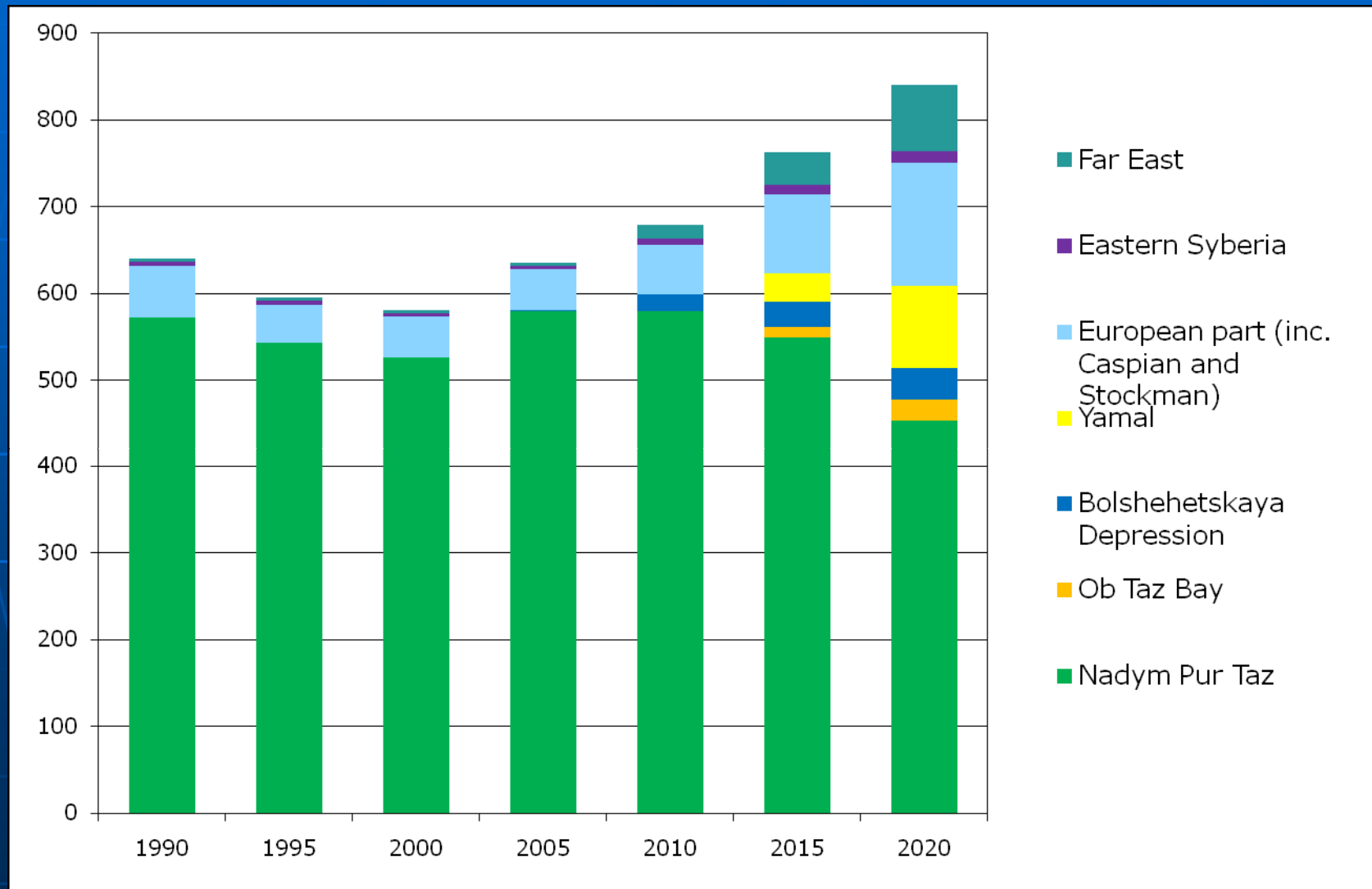


European Gas Import Requirements

EU-27 - bcm/year	2005	2010	2020
Demand	524	567	636
Domestic Production	227	179	120
Deficit	297	388	516
<i>Import dependence</i>	<i>56,7%</i>	<i>68,4%</i>	<i>81,1%</i>
Sources of import			
Algeria	57	71	91
Norway	80	95	115
Nigeria	11	16	28
Iran	0	0	8
Egypt	5	17	25
Libya	6	10	10
Qatar	5	25	50
Azerbaijan	0	0	6
Other sources	4	4	4
Call on Russia	129	150	179
<i>Russia as % of the total demand</i>	<i>24,6%</i>	<i>26,5%</i>	<i>28,1%</i>
<i>Russia as % of the total import</i>	<i>43,4%</i>	<i>38,7%</i>	<i>34,7%</i>

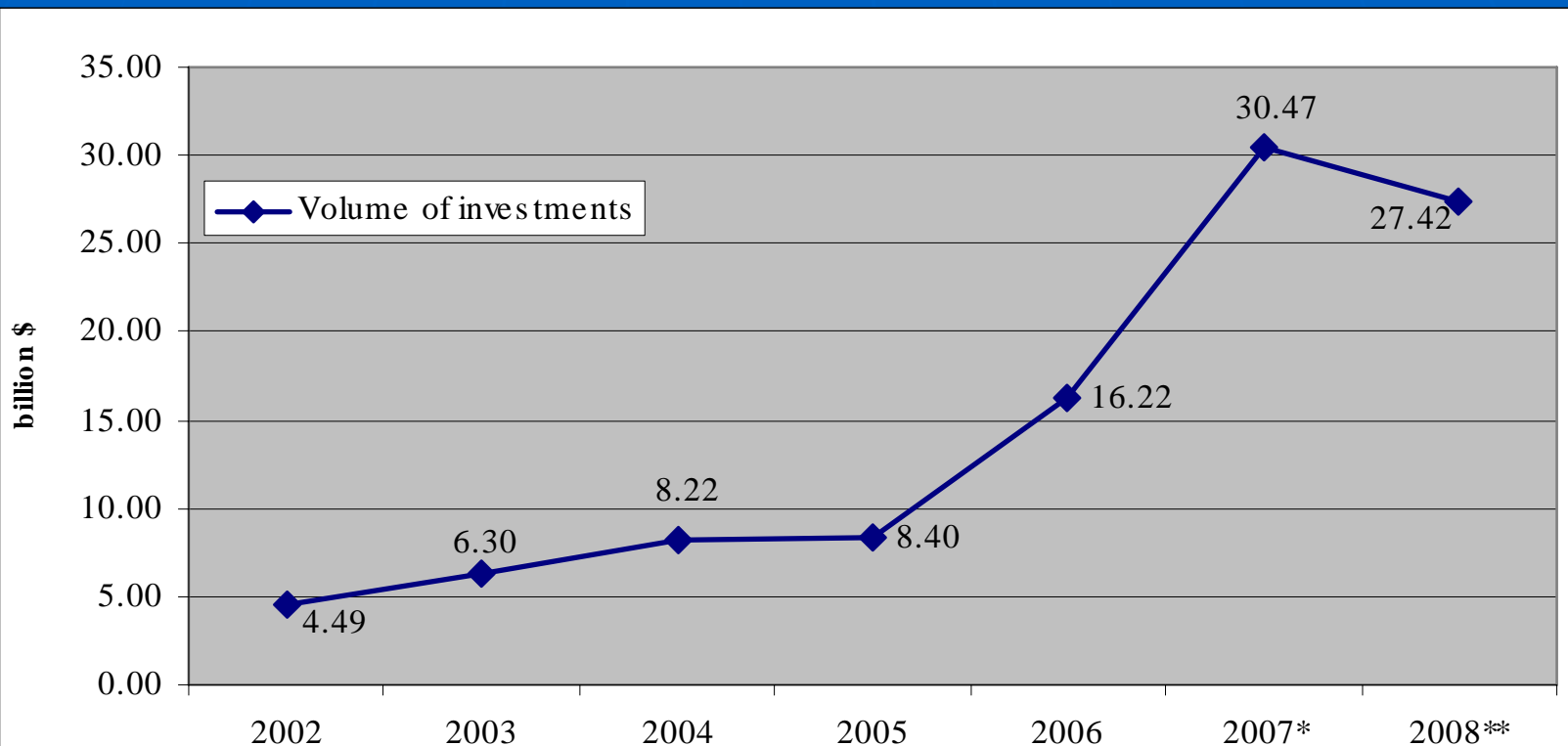
Sources : Cedigaz, BP, European Commission (PRIMES).

Russian Gas Production, bcm



Source: ERI RAS.

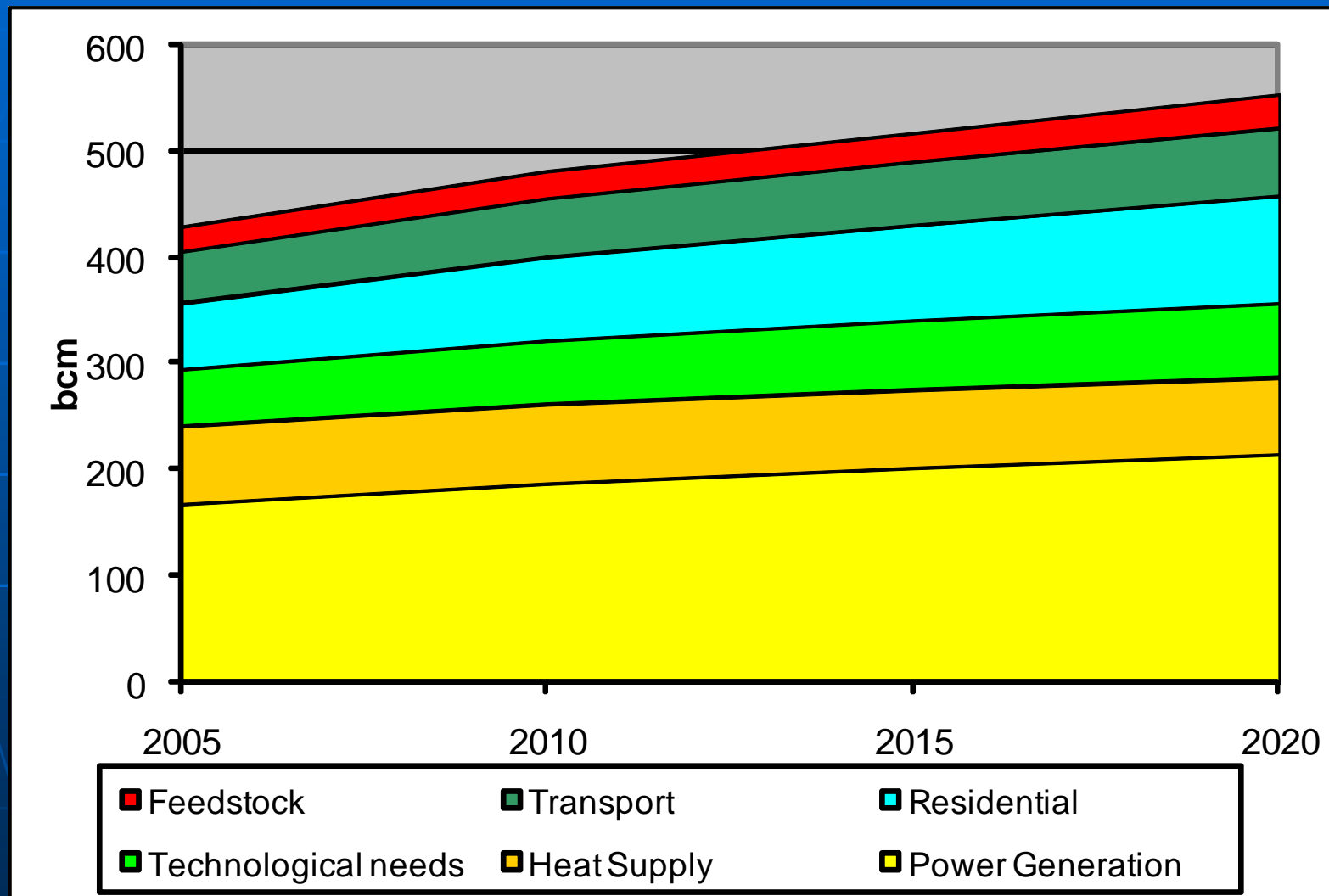
Gazprom`s Capital investments in 2002-2008, \$ bln.



* - The Investment program of JSC "Gazprom" on 2007 in a new wording. It is approved by board of directors on August, 10th, 2007.

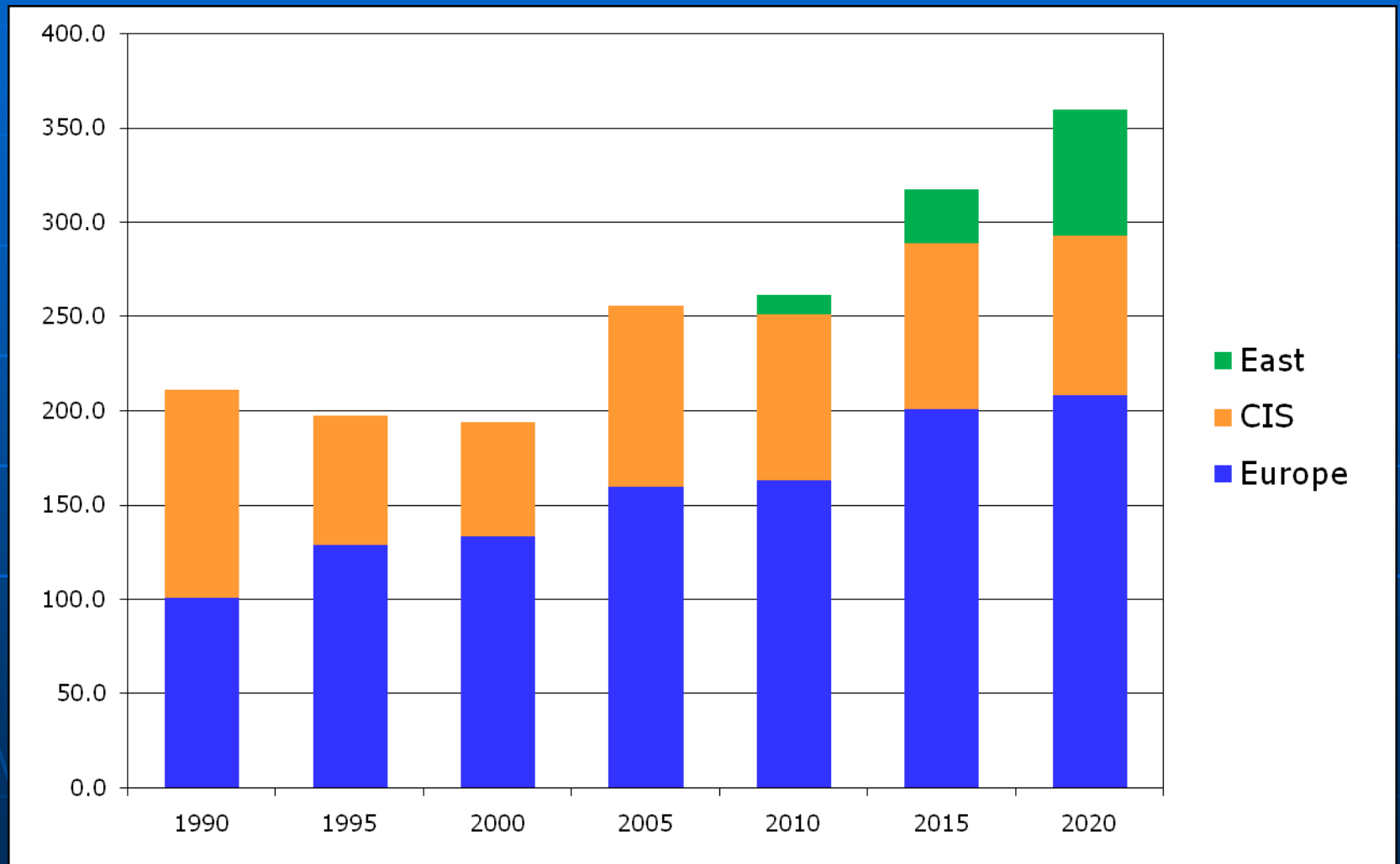
** - The Investment program of JSC "Gazprom" on 2008. Is approved by board of directors on December, 28th, 2007. A dollar exchange rate according to the forecast of the budget of the Russian Federation for 2008-2010.

Russian Domestic Gas Consumption, bcm



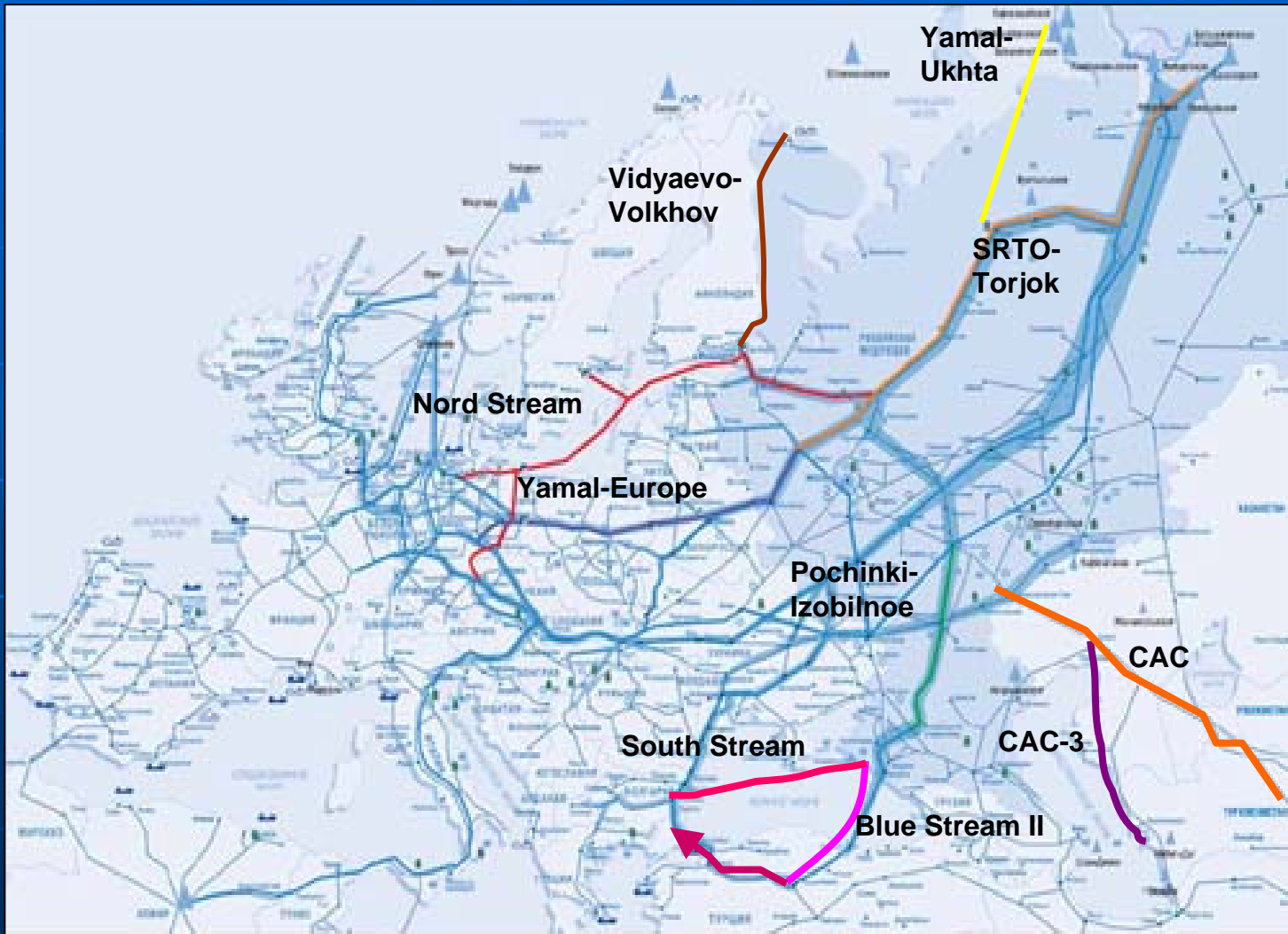
Source: ERI RAS.

Russian Gas Export Potential, bcm



Source: ERI RAS.

Pipelines



Looking for New Equilibrium

Main Pragmatic Goals:

European Union

To guarantee necessary supply volumes



Russian Federation

To guarantee sales and investments returns

To guarantee reliable transportation

Long-term commodity contracts and long-term transit contracts will remain the backbone to secure investments and to provide a balanced risk sharing between buyers and sellers

**New instrument: guarantees by swaps of assets
along the whole gas supply chain**

**Regress: assets become guarantees along with weakening governments
(Alternative to vertical integration)**

Ensure timely investments and their return

Ensure reliable supply by gas chain building