

# Natural gas demand in the European Union and in Russia

*Scenarios and policies for a sustainable future*

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# Key Points

## ■ EU gas demand

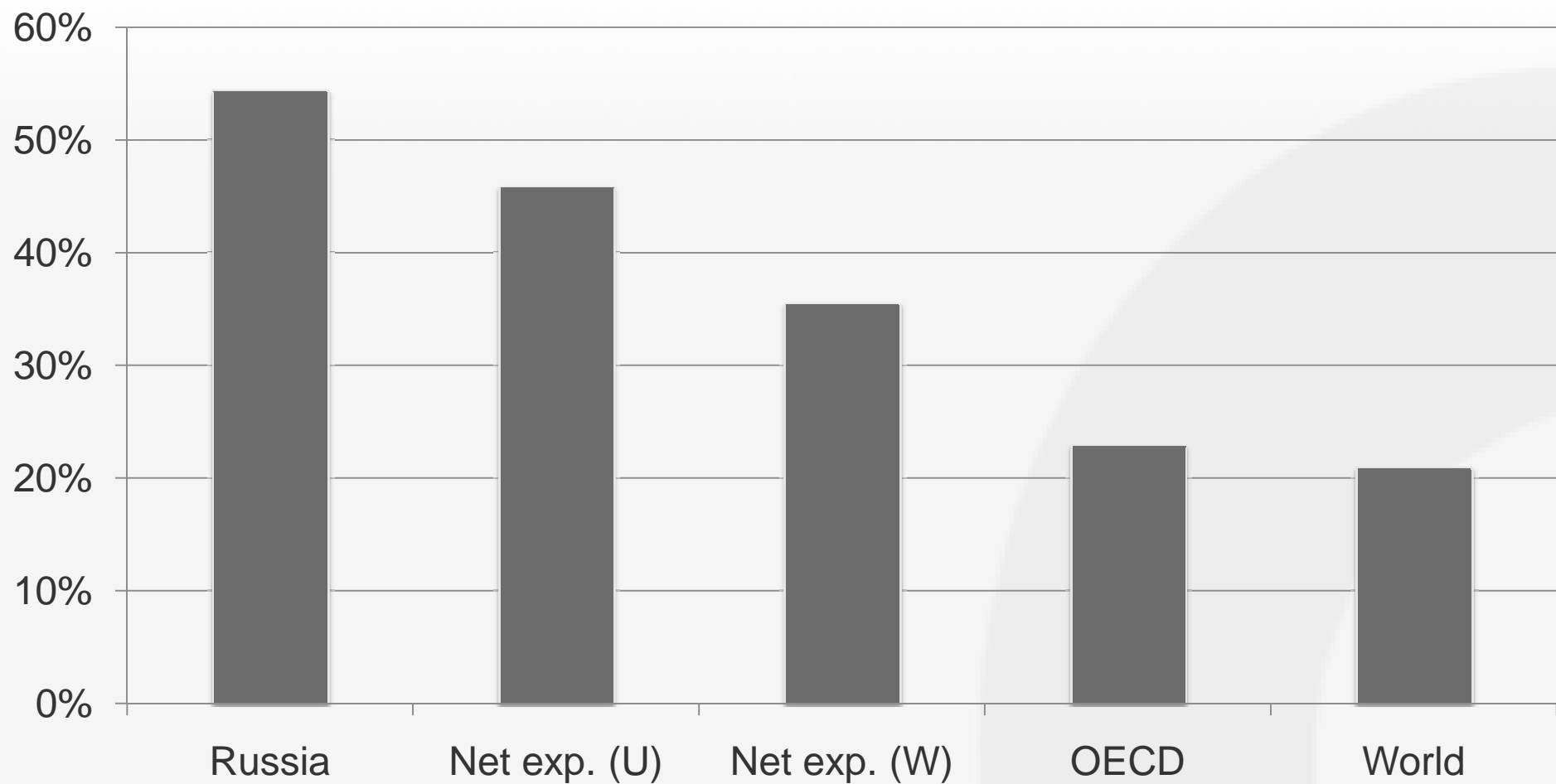
- Resource depletion and CO2 and sulphur emissions mean nat gas is attractive but scarce, so net imports rise
- 20-20-20 Initiative (NEP) will slow this down
- But to what extent?
- Uncertainty of demand
- Rising import dependence
- Could the EU set up a gas purchasing agency?

## ■ Russian gas demand

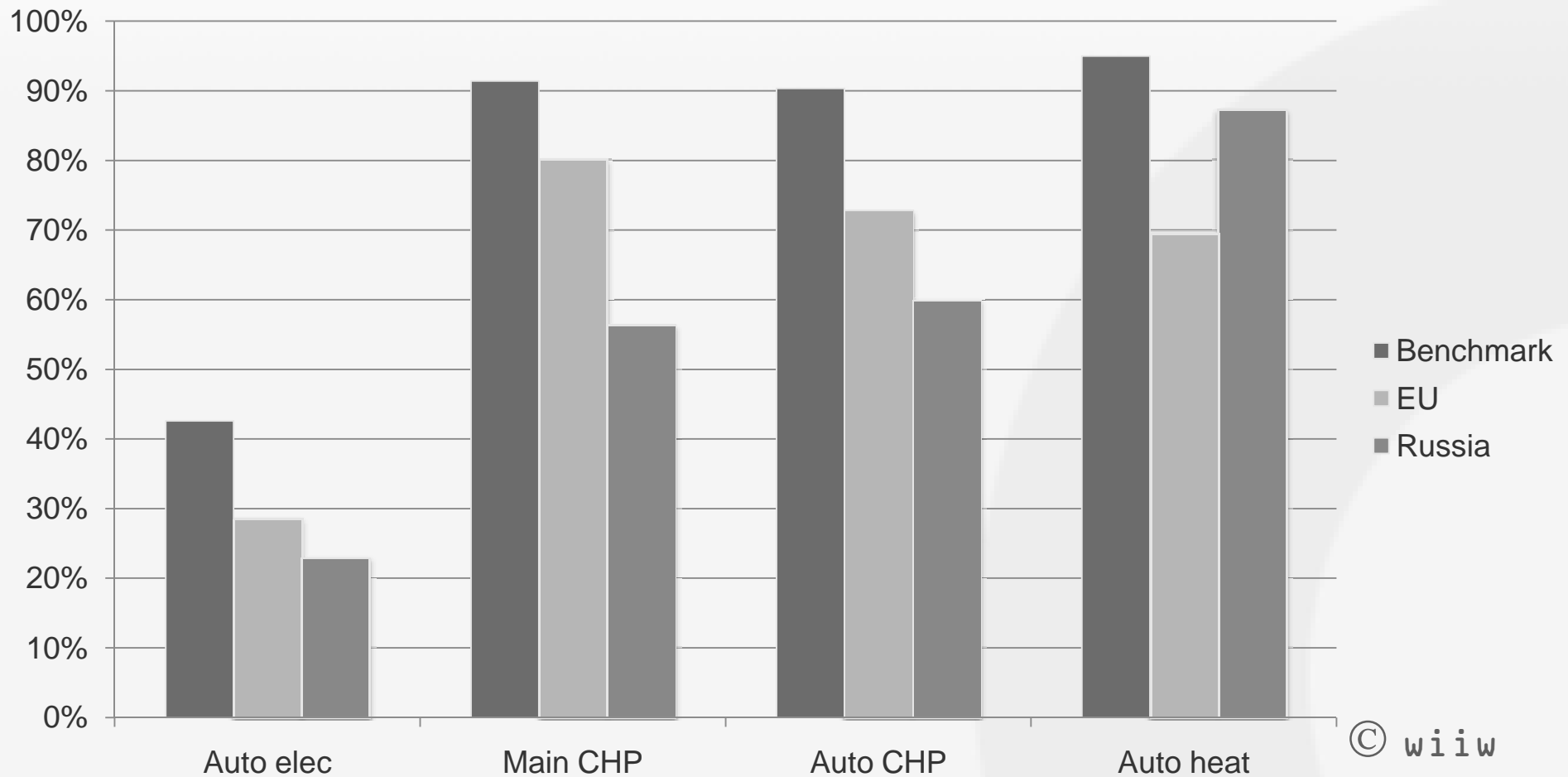
- High domestic consumption / low efficiency
- Caused by low domestic prices and inherited / non-modernised infrastructure and consumption patterns
- Now ongoing domestic reform of energy prices
- Large potential for gas savings if price increases continue
- Favourable effect on export potential

# Natural gas demand in the Russian Federation

## A higher share in the energy mix...

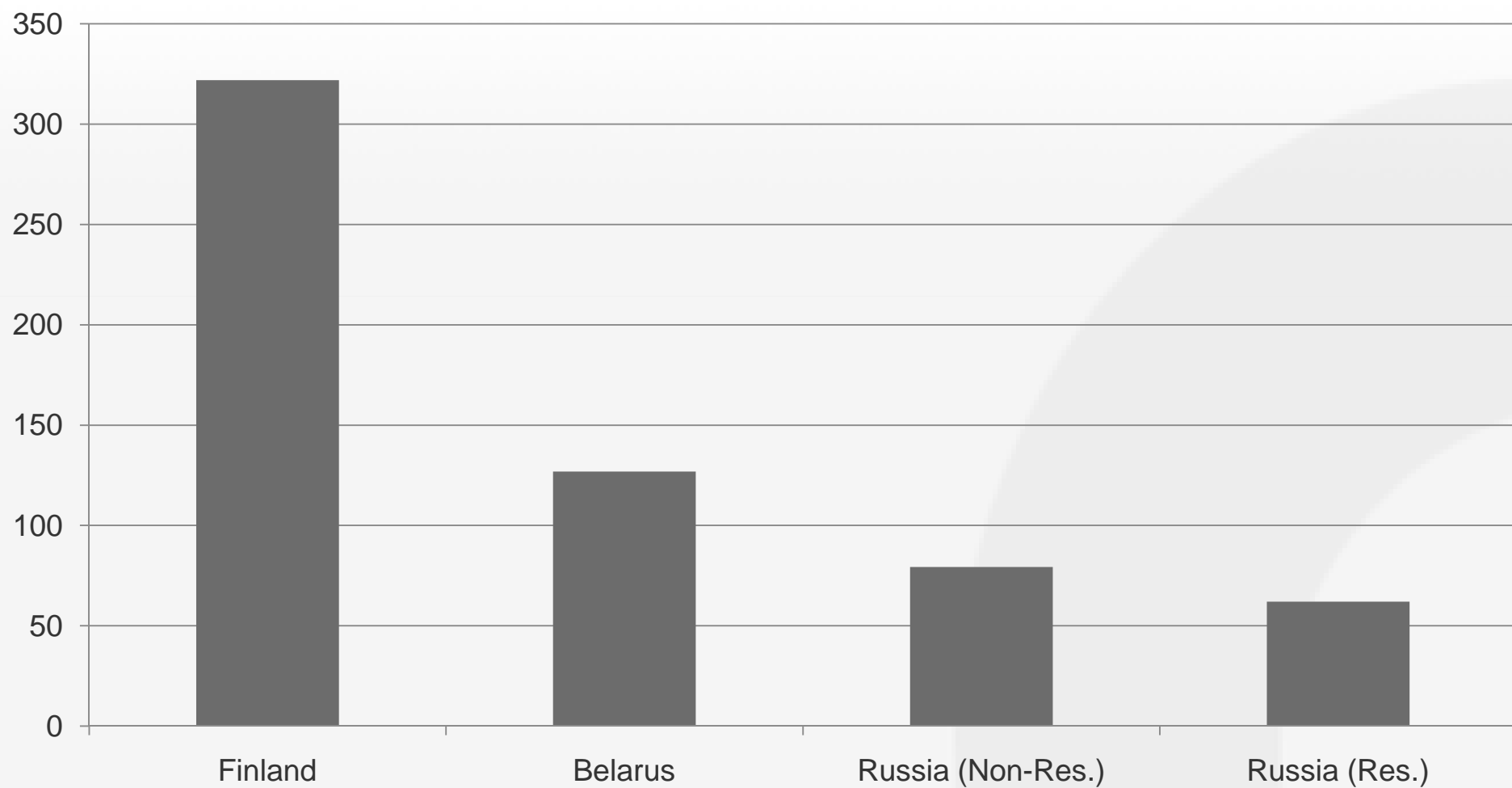


## ... and lower efficiency in electricity & heat generation by type of plant



## ... due to low prices (USD/mcm, 2008)

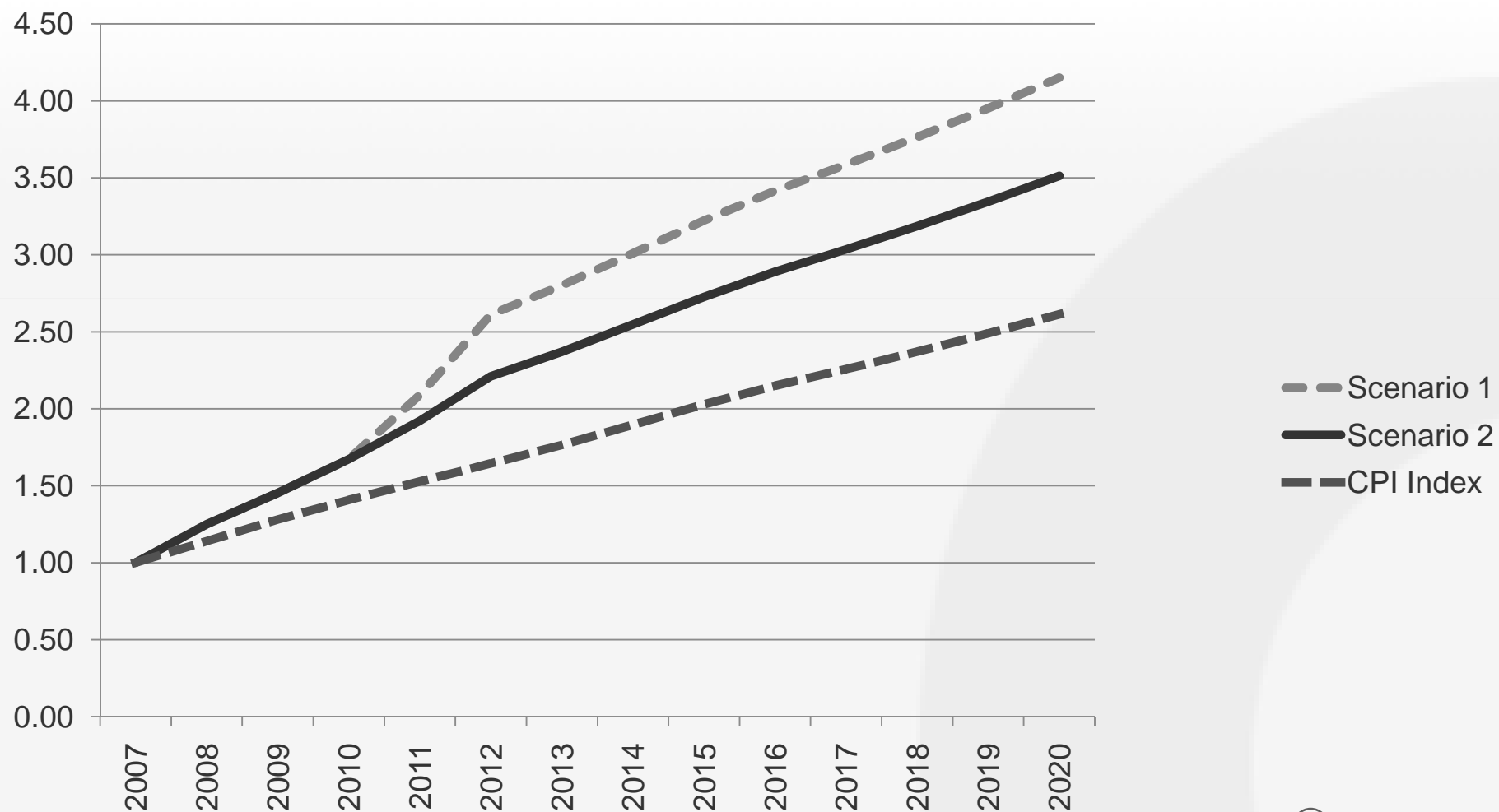
Source: EEGas, UN Comtrade, IEA



## The price reform

- Nominal increase in RUR terms is 67% for the period 2007-2010 for both residential and non-residential customers (for the average administered price)
- In spite of current economic difficulties, increases above the rate of inflation were confirmed for 2010
- Path below pre-crisis plan, but still ongoing

## Scenarios for residential prices





# Consolidated results

(estimated potential savings in bcm per year by 2020 as compared to 2007 levels)

	Lower Bound	Upper Bound
Residential consumption	8.8	17.6
Industrial consumption	2.3	6.5
Input mix in generation	15.0	15.0
Generation efficiency and demand	52.5	85.6
Transmission and distribution	4.0	9.0
<b>Total savings</b>	<b>82.6</b>	<b>133.7</b>
Consumption in 2020	379.4	328.3

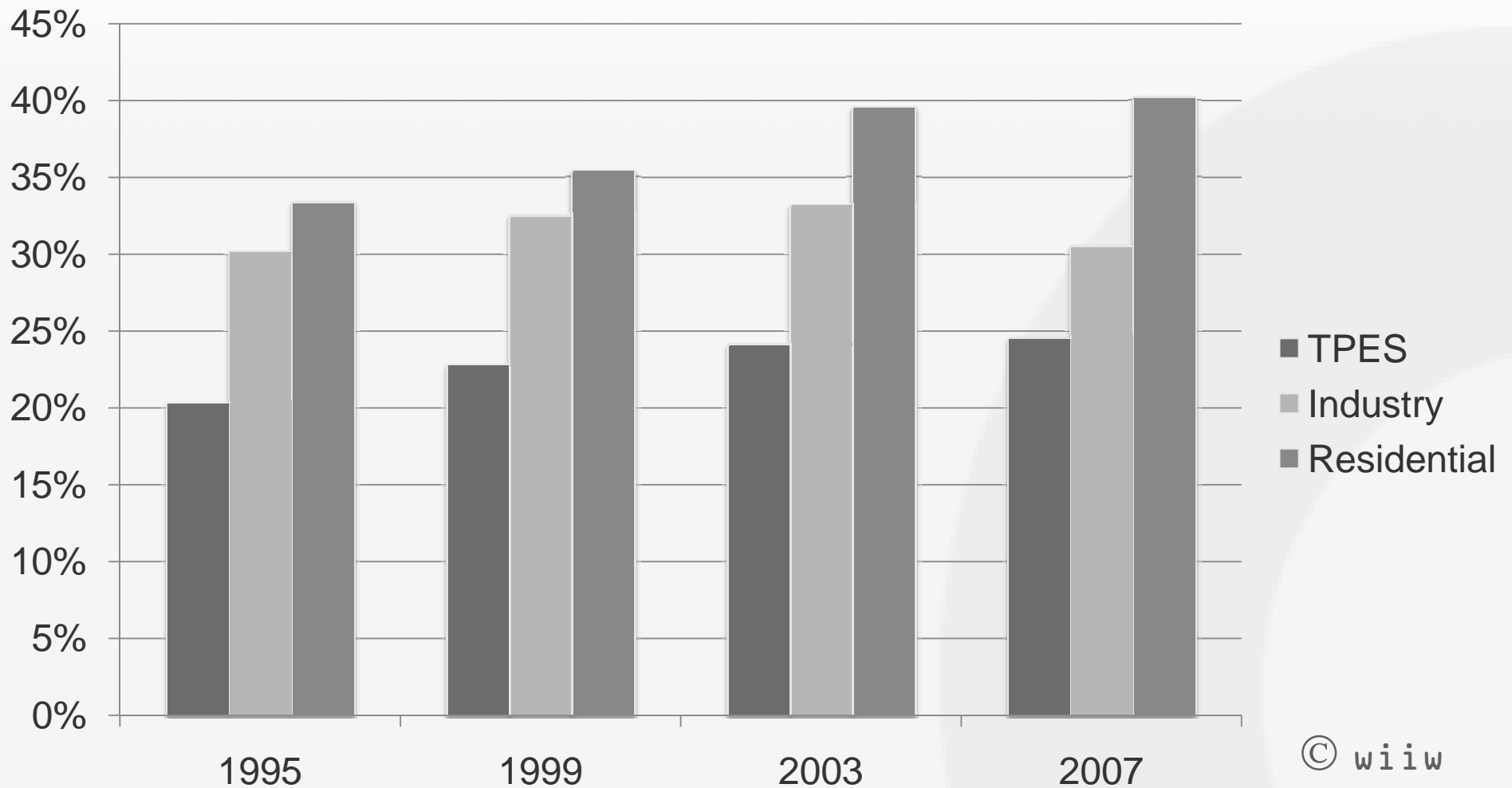
## Conclusions (Russian demand)

- A disciplined price reform path should lead to substantial savings
- The key to the largest savings lies in the generation sector where large investments would be necessary
- The latter would require state intervention and facilitation, as the rate of return on those investments would be too low for private investors to undertake by themselves (see wiiw Monthly Report, Feb 2010)

# Natural gas demand in the European Union

# The rise of natural gas use in the EU

Source: IEA Energy Balances



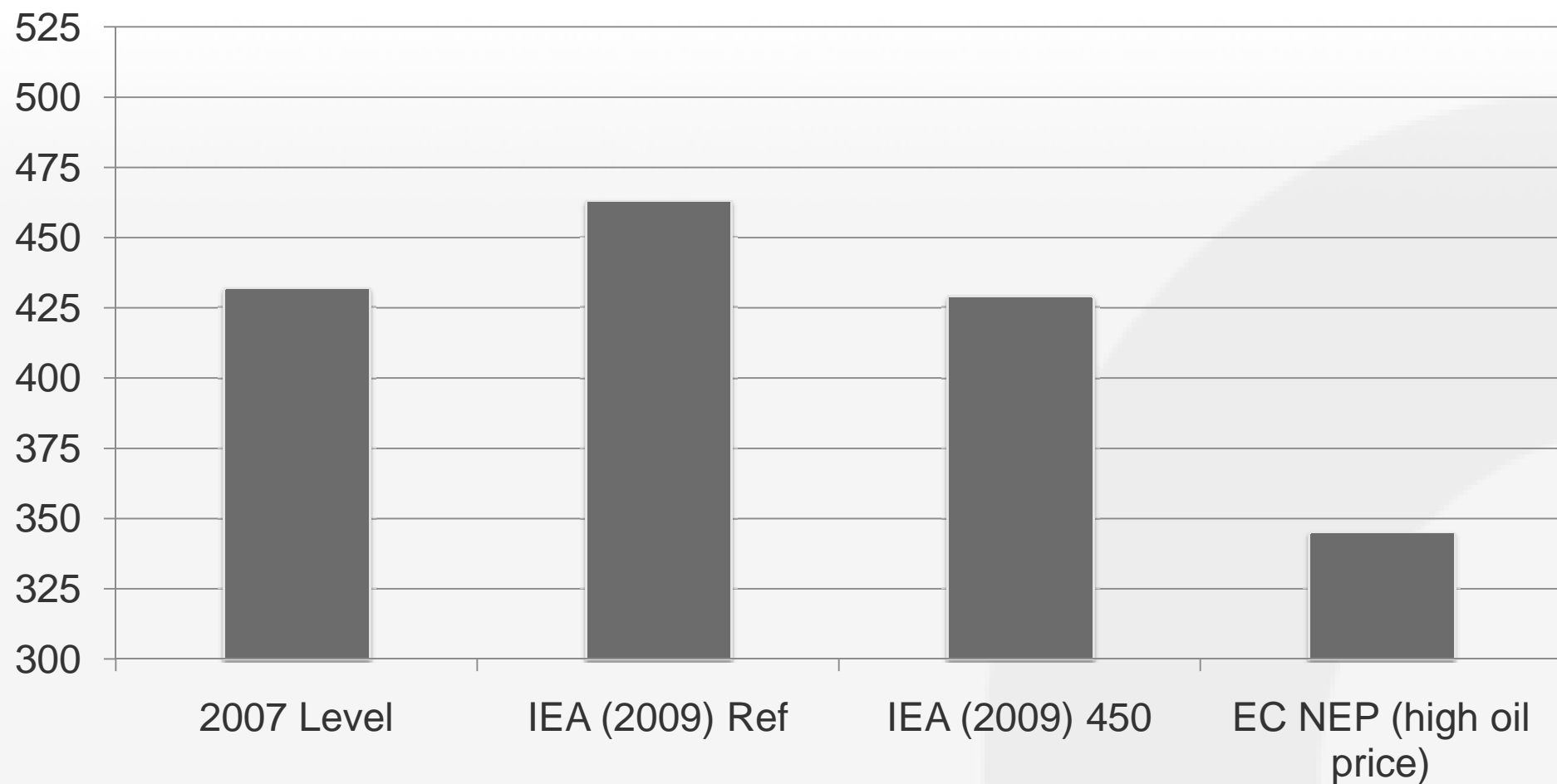
## EU Production

- Conventional gas: depletion is fast and clear
- Non-conventional: large potential, but how much will really occur, by when, and at what cost?
- IEA WEO 2009 is not particularly bullish about European non-conventional gas production
- Total supply (conventional and non-conventional) still falling substantially to 2020-2030

## EU Energy and climate policy

- The New Energy Policy (NEP), i.e. the 20-20-20 targets:
- Achieve by 2020: 20% energy efficiency improvement; 20% renewables; 20% reduction of GHG emissions;
- Effect on natural gas demand unclear: PRIMES projections published by DG TREN in November 2008 versus IEA WEO 2009: big differences

## Net import demand (bcm) in 2020



## Are the scenarios comparable?

- IEA WEO *Reference Scenario* is: -20% on emissions that are covered by the EU ETS, but renewable energy target not met
- IEA WEO *450 Scenario*: renewable energy target is met, and emissions reduced in the residential and transport sector as well
- IEA WEO *450 Scenario* is roughly comparable to EC NEP high oil price scenario – but some differences in energy mix not easy to understand



# Demand uncertainty and dependence

- Whatever demand path materialises, there is a problem of demand uncertainty
- Gazprom feels vindicated in its use of take-or-pay
- But renegotiations could become an issue
- However net import dependence to rise significantly anyway - according to IEA WEO 2009 scenarios from 60% in 2007 to 83%-84% by 2030

## From fragmentation to consolidation

- Idea of an EU **Gas Purchasing Agency** to strengthen bargaining power wrt external suppliers
- Suggested by this author in 2008 [ref. 1, 2]
- Put forward by the French government as an element for 'prospective reflection' [ref. 3]
- Supported by the Notre Europe think tank and by Jacques Delors [ref. 4]
- Researchers with close links to EU gas industry give qualified support [ref. 5]

# How to move towards an EU Gas Purchasing Agency

- As noted in [ref. 4], exemptions to competition law are foreseen under Art. 101 (3) TFEU
- Light option: ‘gas purchasing groups’ (consortia of companies) → authorisation through Art. 103
  - European Council (member state governments) must approve
  - May delegate oversight to the Commission
- Strong option: fully-fledged agency
  - Additionally must comply with Art. 106 and 107 TFEU

## References

- (1) Christie, Edward H. (2008). “European Energy Security after the 2008 South Ossetia War”. *Presentation. NATO-EAPC Seminar: ‘Energy security through development of cooperation’*. Yerevan, 2-3 October 2008.
- (2) Christie, Edward H. (2008). “EU-Russia Energy Relations: Russian strategies and ideas for EU responses”. *Presentation. Turku School of Economics conference: ‘Energy challenges in Northern Europe’*. Turku, 27-28 November 2008.
- (3) Auverlot, Dominique, Hervé Pouliquen and Christian Stoffaës (2010). “La sécurité gazière de l’Europe: De la dépendance à l’interdépendance”. Centre d’Analyse Stratégique. March 2010.
- (4) Andoura, Sami, Leigh Hancher and Marc Van der Woude (2010). “Towards a European Energy Community: A Policy Proposal”. Notre Europe. March 2010.
- (5) De Jong, Jacques, Jean-Michel Glachant, Manfred Hafner and Robert Grant (ed) (2010). “A smart EU energy policy – final report”. CIEP, LdP-EUI, FEEM and Wilton Park. April 2010.

Thank you for your attention

*Comments and questions welcome*

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