



# It's never business as usual!

4th Energy Forum - Budapest, 15-17 November 2009

Dr. Thierry Bros

Phone: +33 1 58 98 11 70

**IMPORTANT: PLEASE READ DISCLOSURES AND DISCLAIMERS BEGINNING ON PAGE 31**



**SOCIETE GENERALE**  
Cross Asset Research



# It's never business as usual!



## 1. Overview of the European gas market

- ▶ Gazprom
- ▶ Security of Supply vs. Security of Demand
- ▶ Price

## 2. What strategies for Europe?

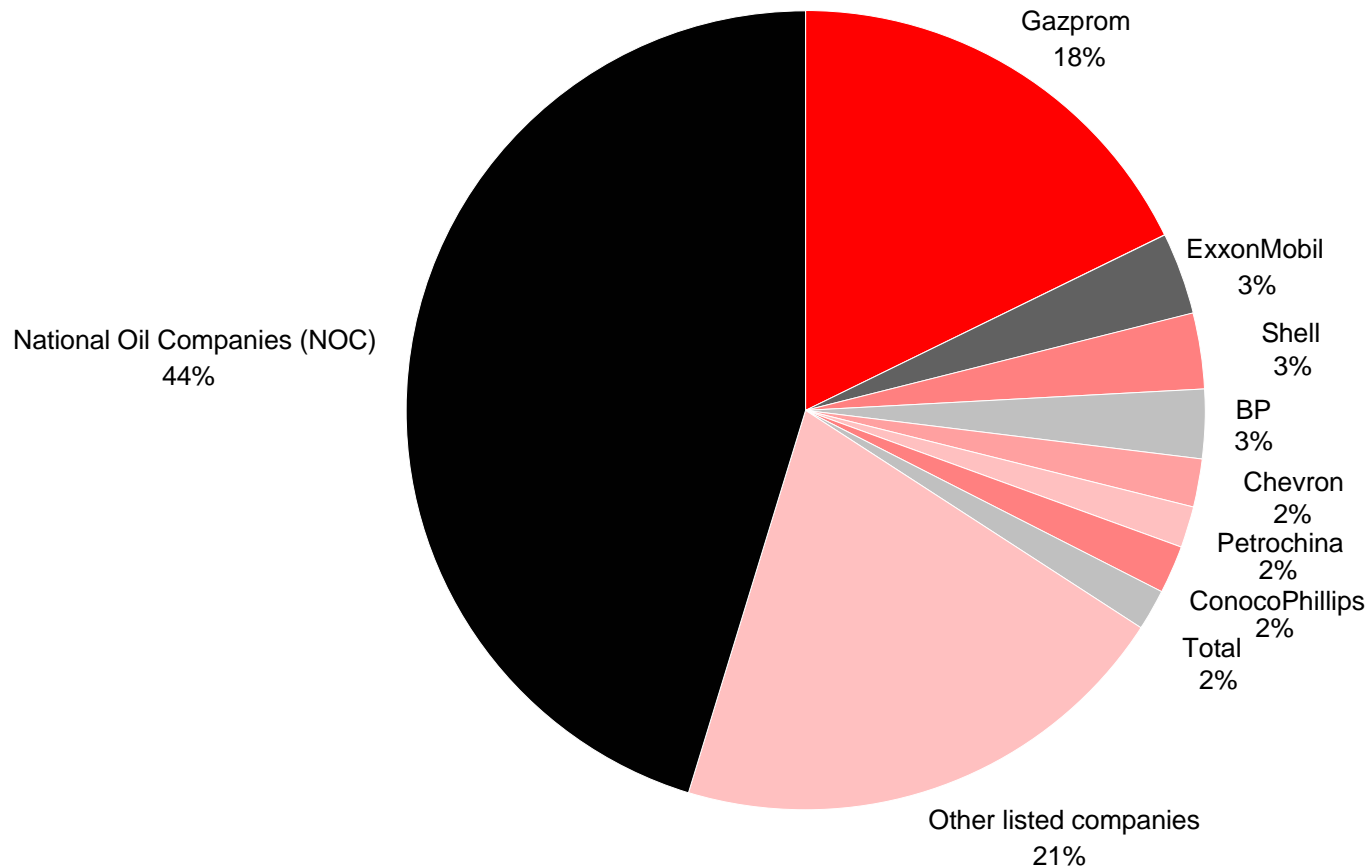
- ▶ Security of Transit
- ▶ More storage

## 3. Conclusion

- ▶ Gas is a strategic commodity to take into account when liberalising
- ▶ Short, medium and long term solutions for Europe

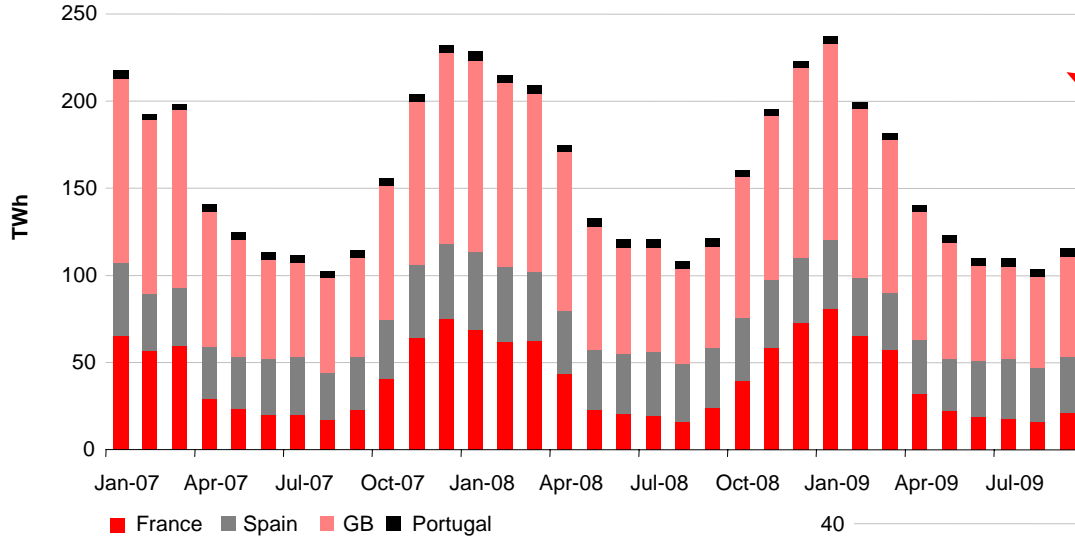
# 1. Overview of the European gas market

## Share of worldwide gas production in 2008



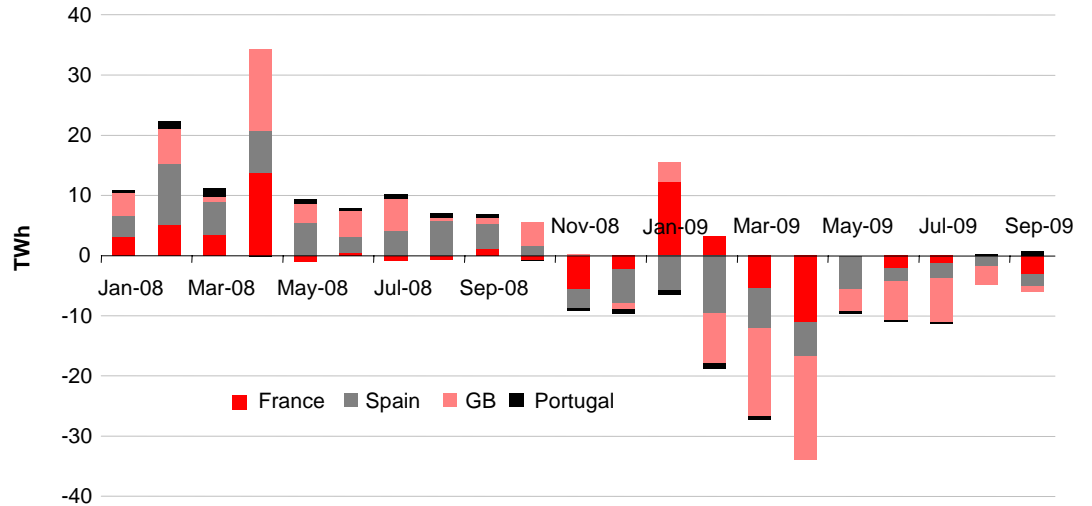
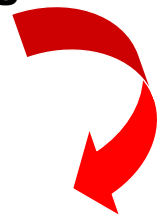
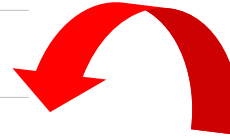


# Security of Demand vs...



Source: SG Cross Asset Research

4 countries accounting for 37% of EU-27 gas consumption



Source: SG Cross Asset Research

**SG Smart Gas Index**

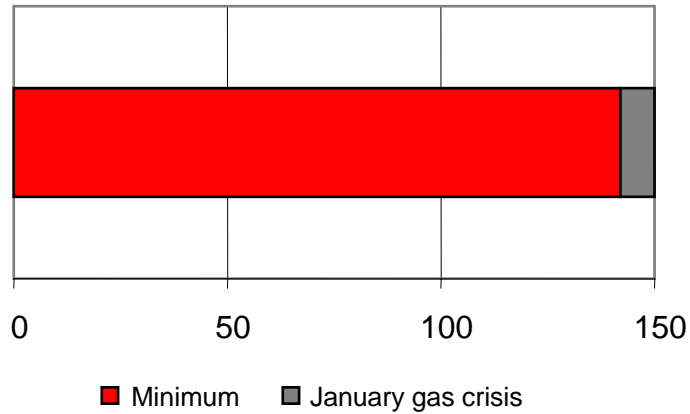
**Ytd: -7.7%**



# ... Security of Supply

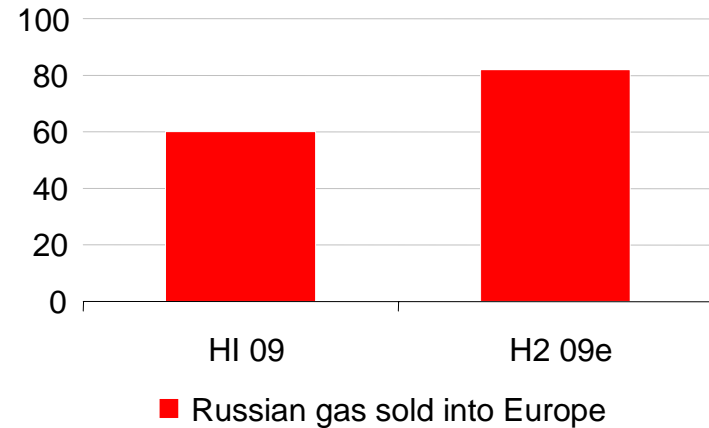


## Gazprom take-or-pay contracts (bcm)



Source: SG Cross Asset Research

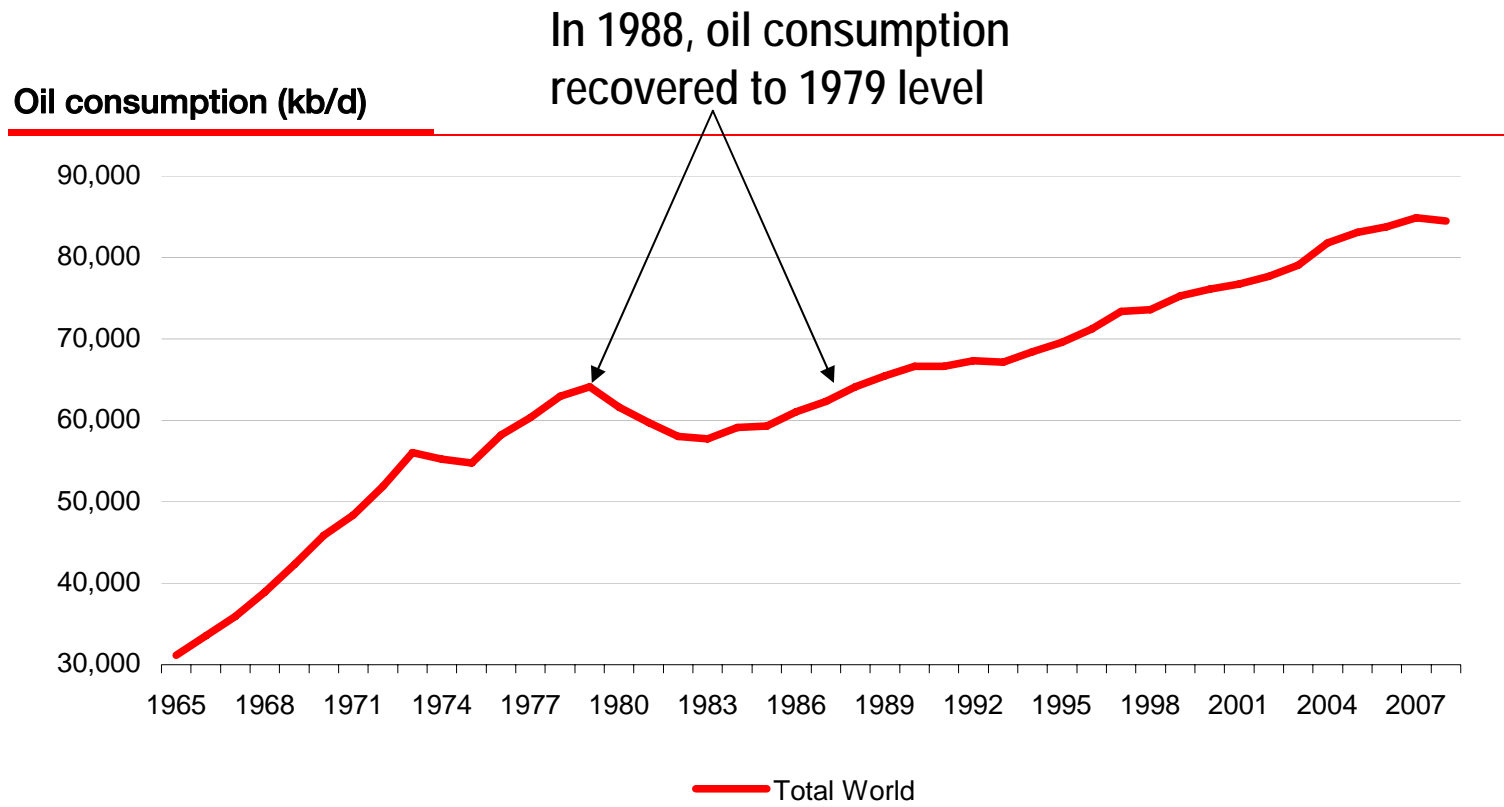
## Gazprom exports (bcm)



Source: SG Cross Asset Research



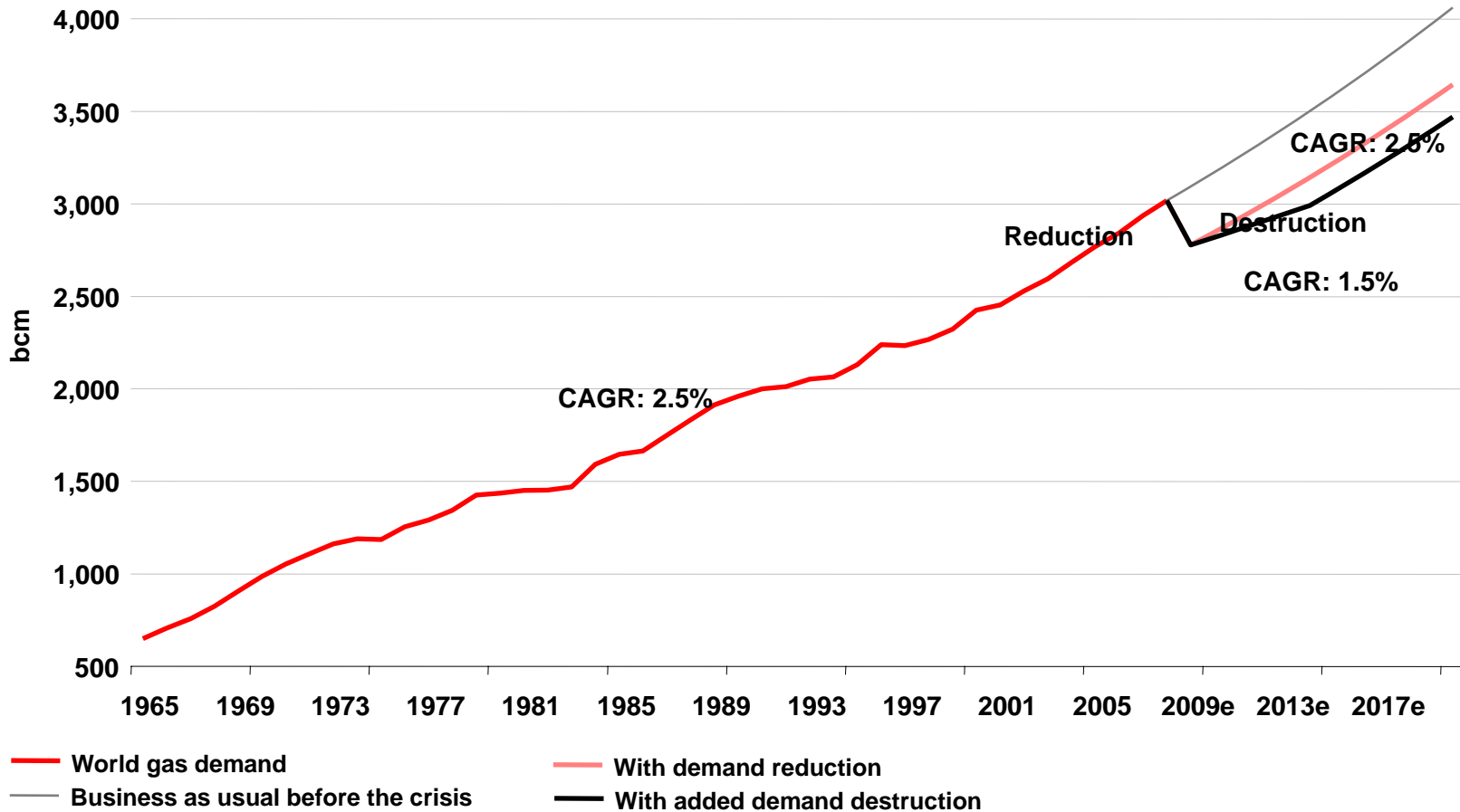
# Remember oil in 1979



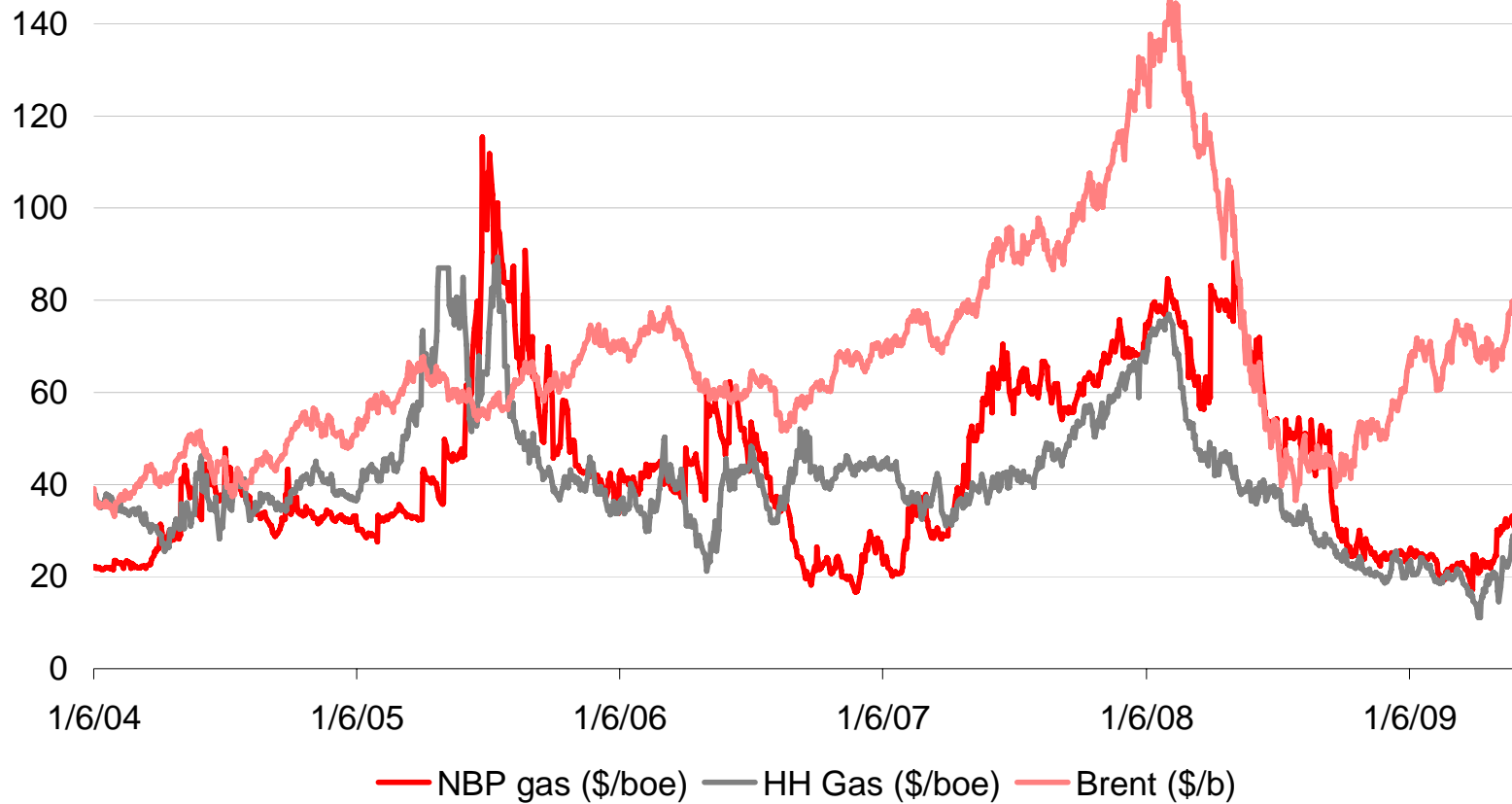
Source: SG Equity Research / BP Statistical Review 2009



# Demand destruction to come next!



# Spot gas price likely to stay depressed in medium term...





... but could spike after 2015e



☹️ **Oil production plateau**

☹️ **Nuclear renaissance not ready**

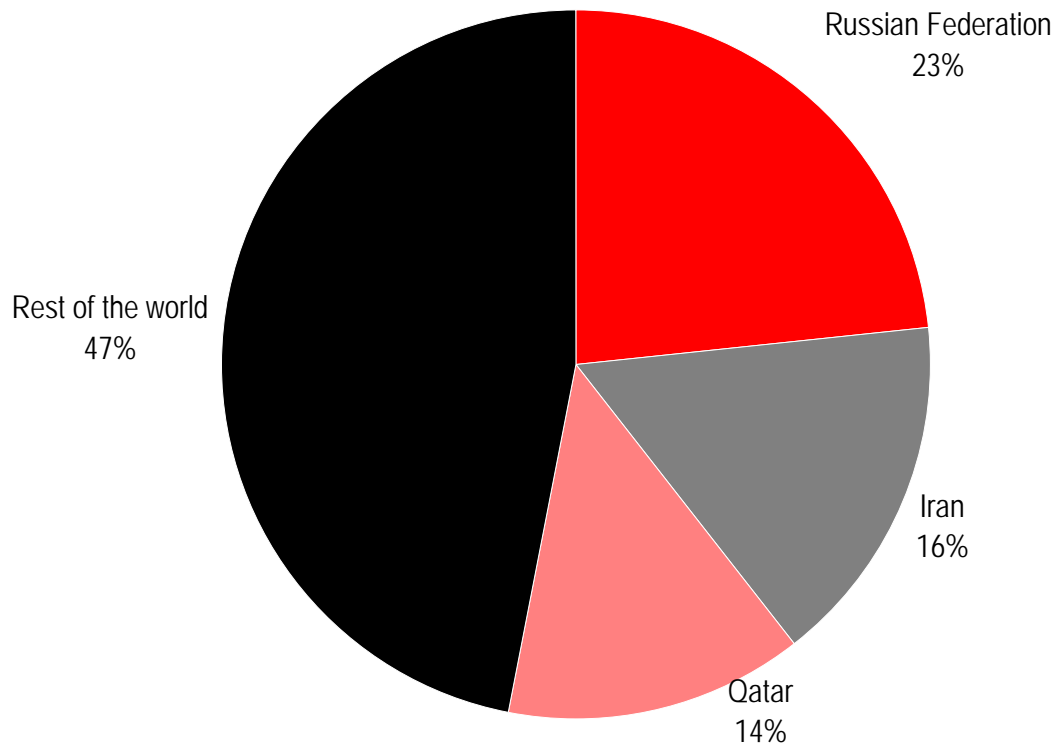
☹️ **Carbon Capture and Sequestration not readily available**



## 2. What strategy for Europe?



### Share of worldwide gas reserves



**Europe cannot  
do without  
Russian AND  
Iranian supply**

# Transit risk is increasing



Source: SG Cross Asset Research / GIE



# Major pipeline projects for Europe



Who's going to pay?

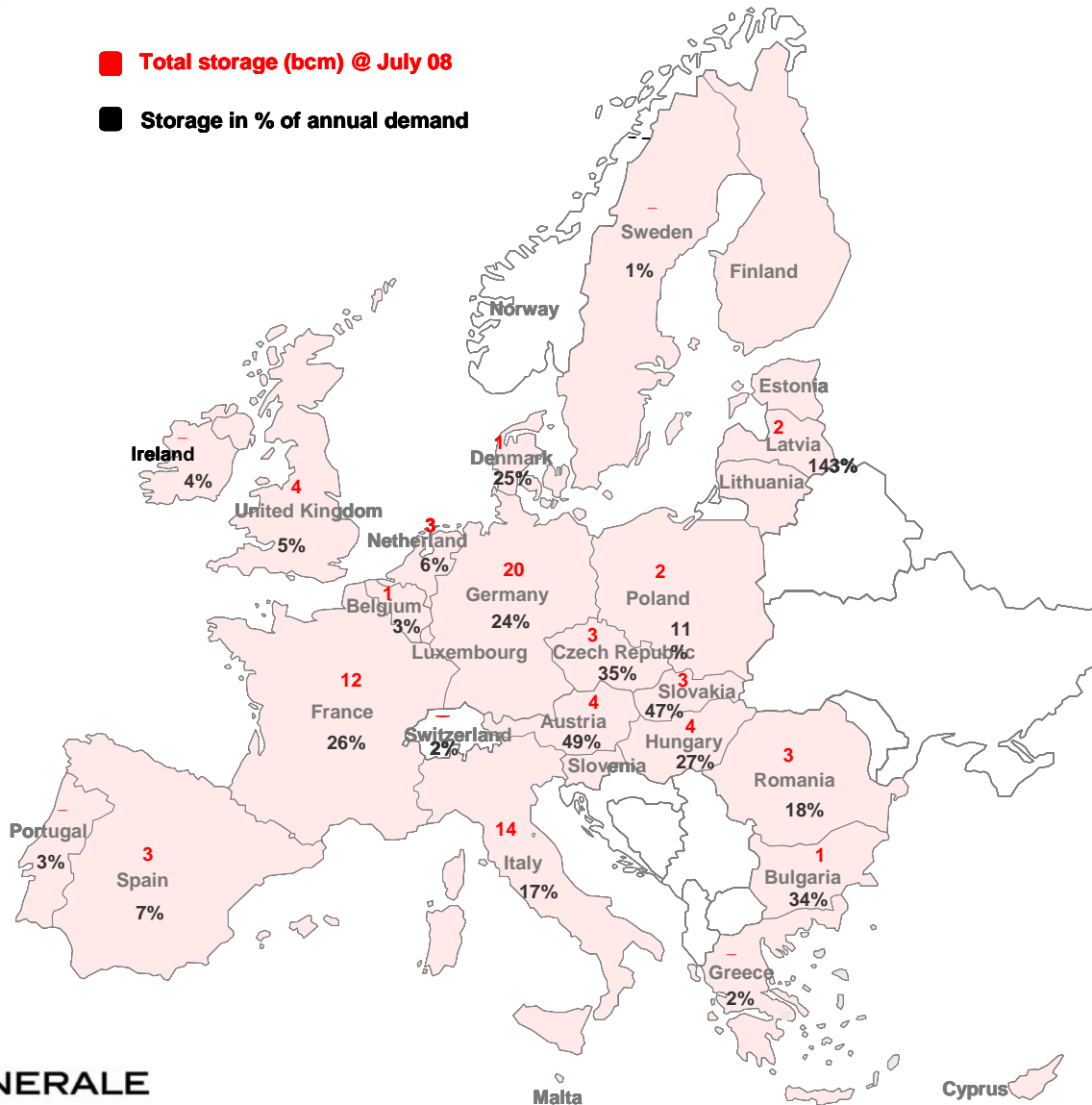


## Transit: freedom and cost+ are the principles

- **Basic principle of the international economic system**
- **Rules set out in 1947 (GATT)**
  - ▶ Traffic in transit is exempt from customs duties and all charges except for transportation and administrative expenses
- **Energy Charter Treaty (1994) transit provisions are founded on the non-discrimination principle of the GATT**
- **Draft Transit Protocol stipulates that transit tariffs shall be objective, reasonable, transparent and non-discriminatory**
  - ▶ Tariffs cover the costs of investment and financing, operating and maintaining the pipe and include an element of profit for the operator

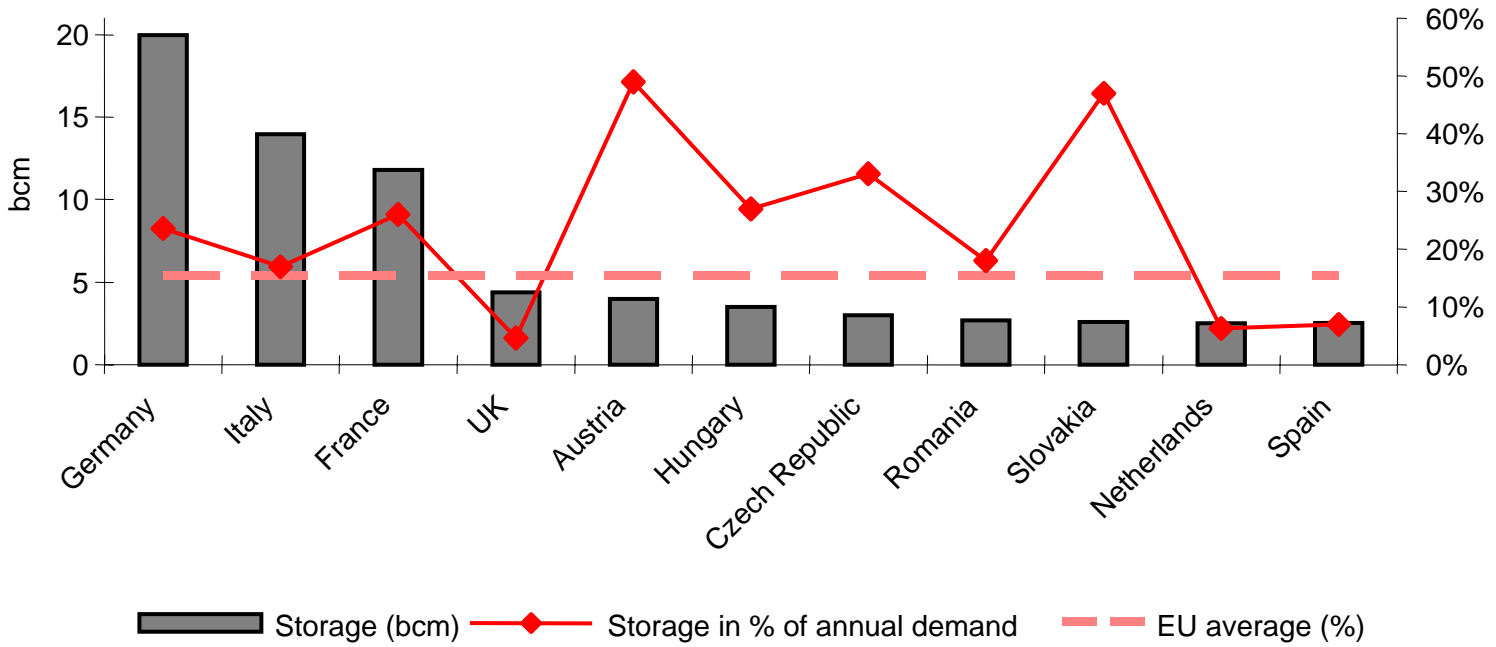
**Are Turkey and/or Ukraine respecting this rule?**

# Storage in Europe: 78bcm – 16% of annual demand



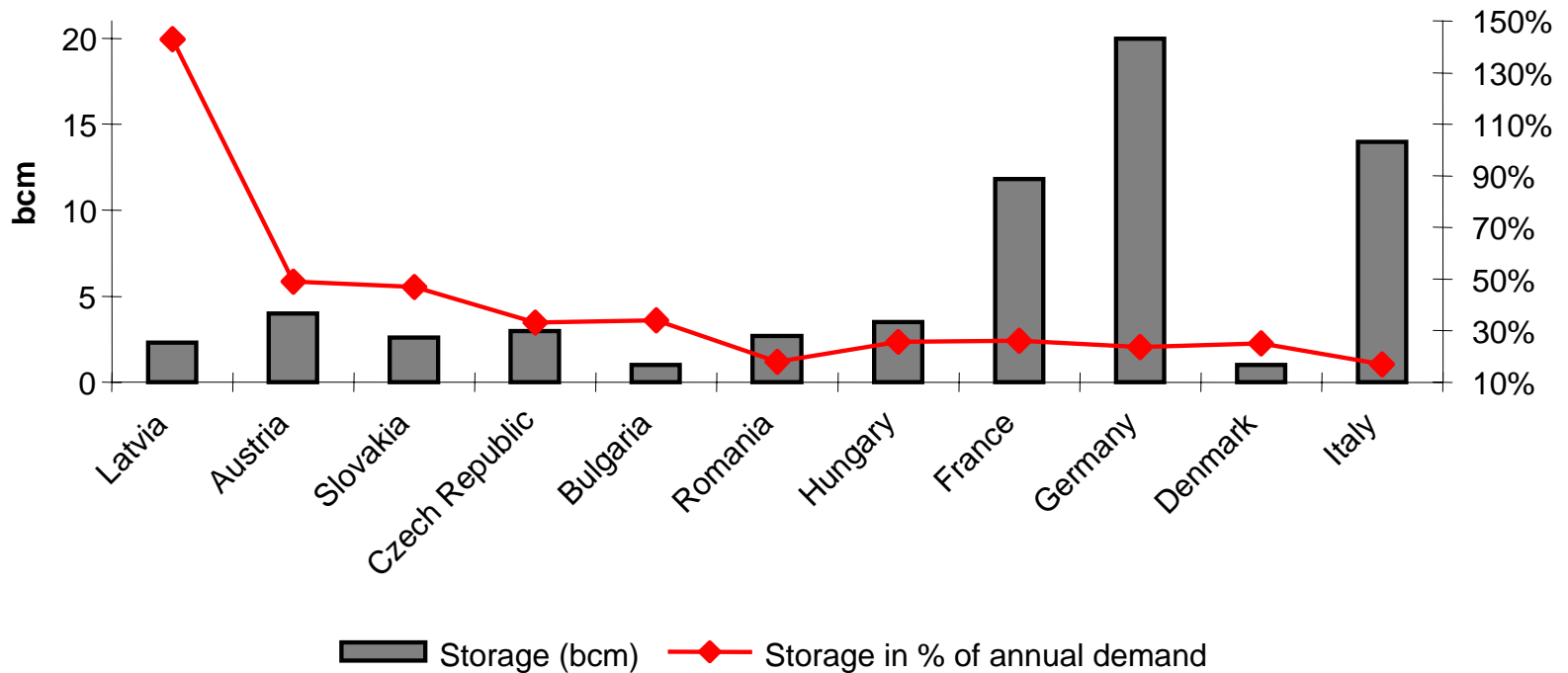


# Most capacity is in Germany, Italy and France



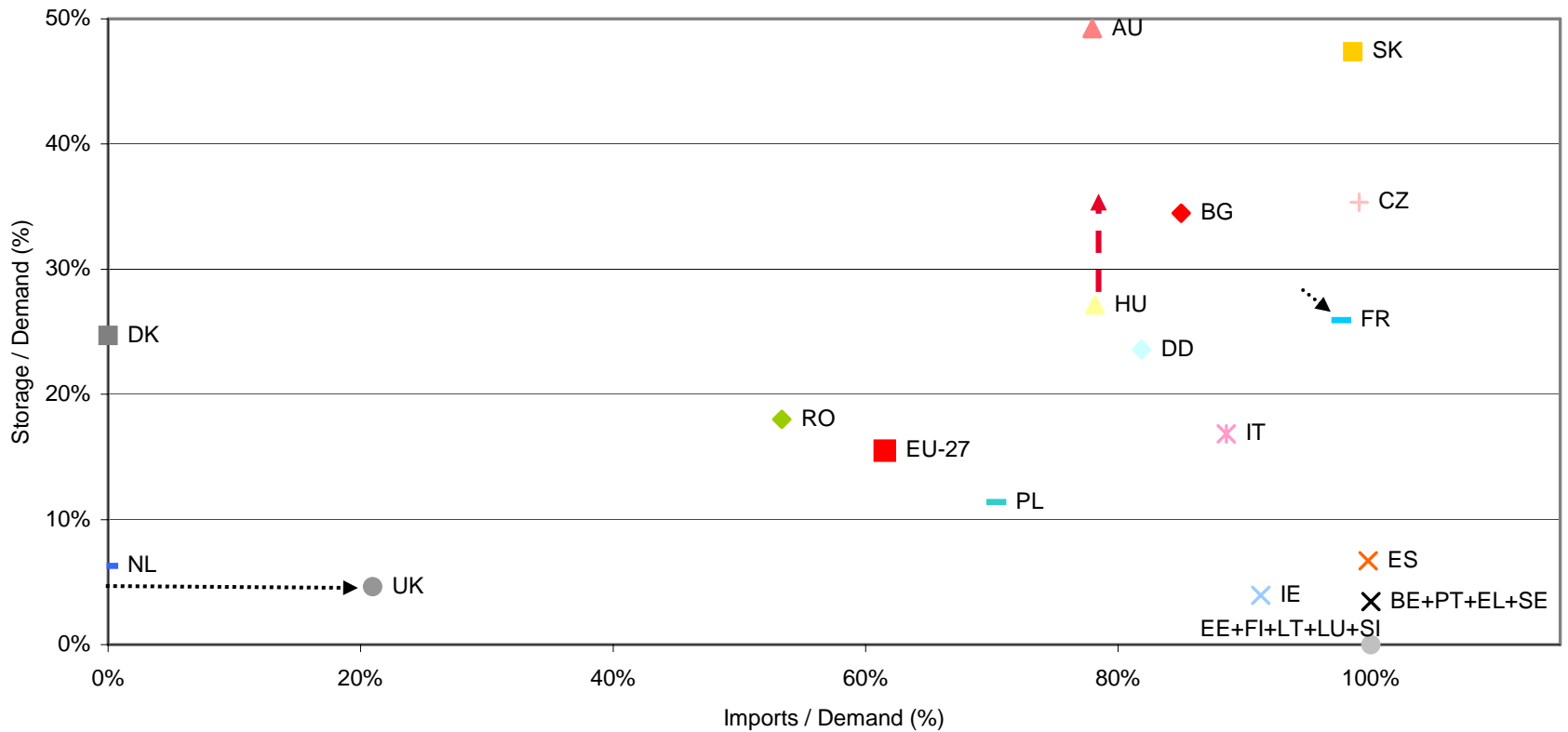


# Central European countries have plenty of storage

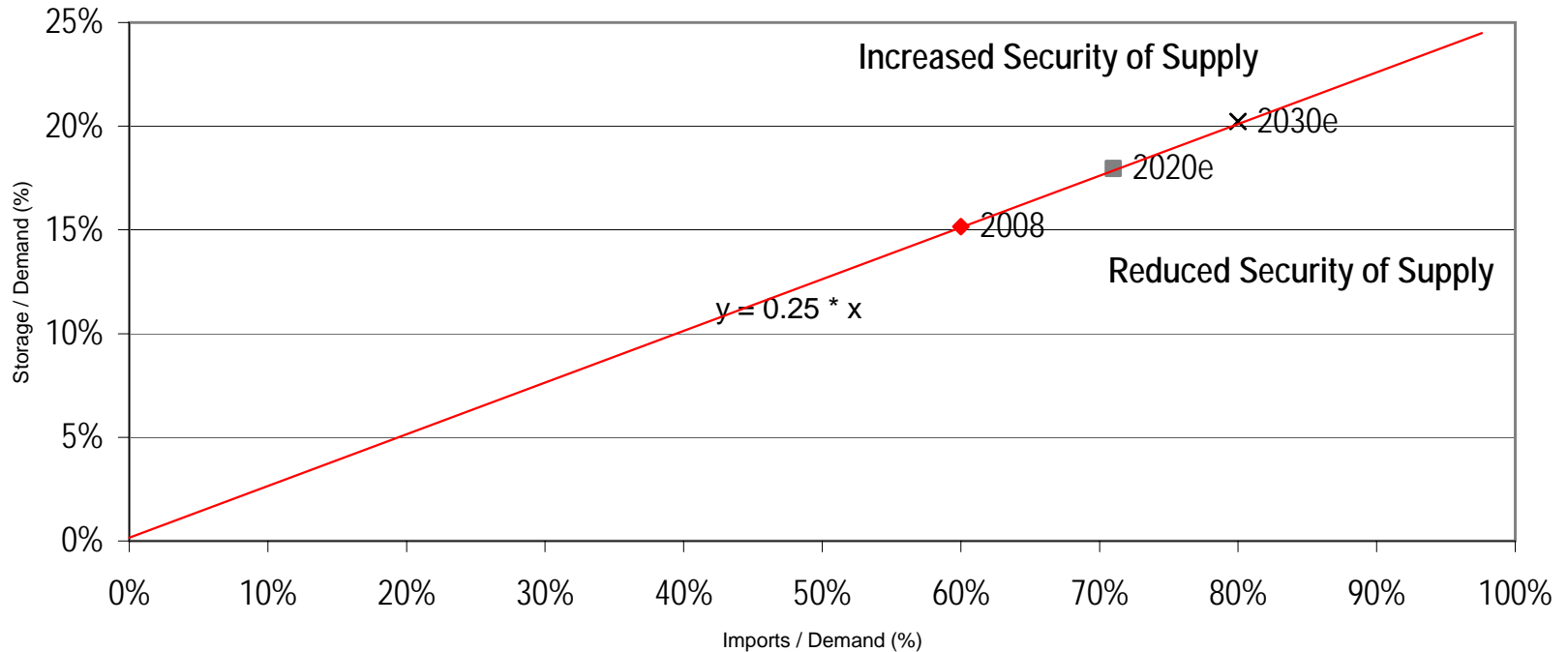




# A dynamic way to look at storage...



## ... and to assess the need for new storage

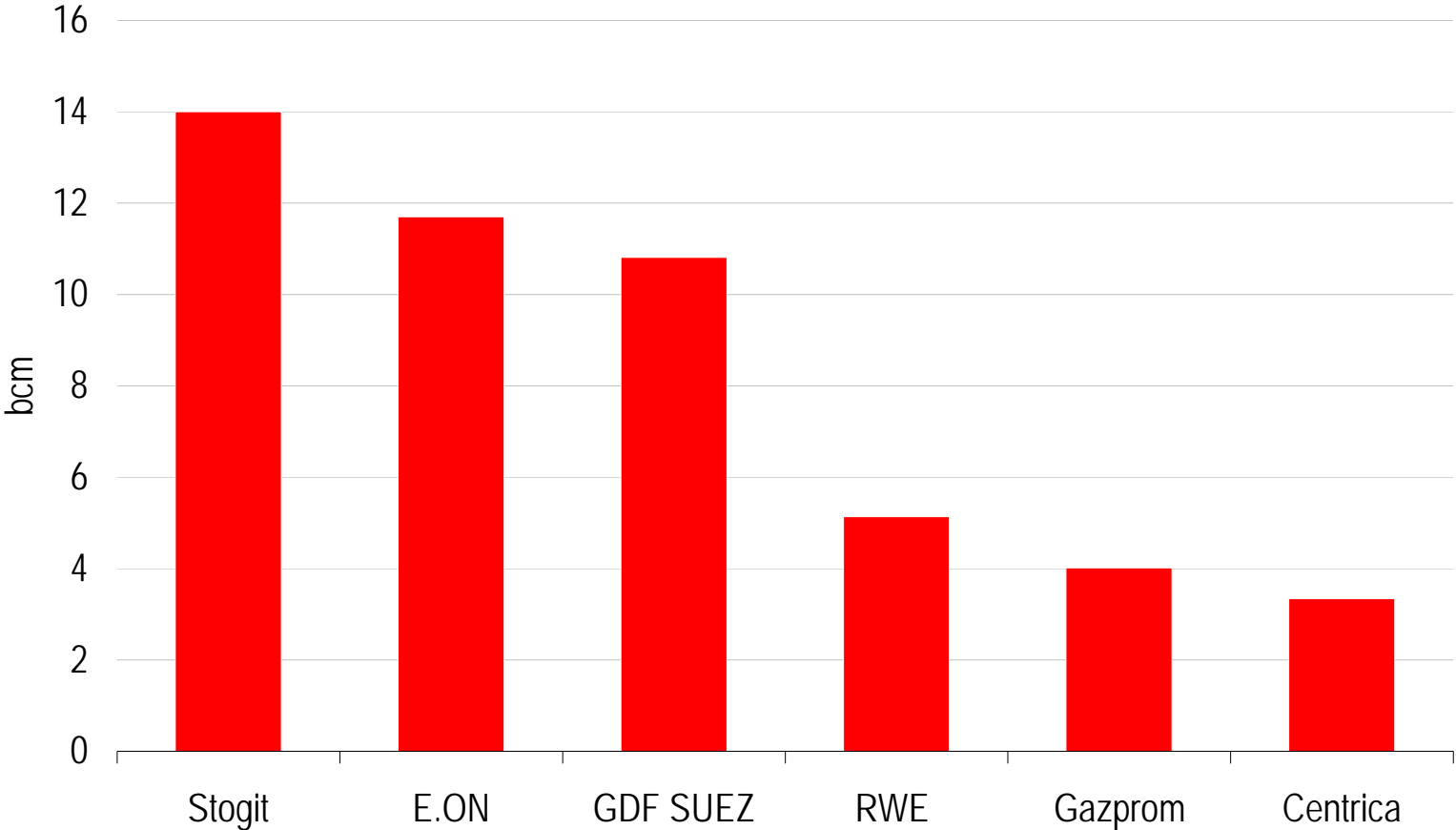


Source: SG Cross Asset Research / GSE / Eurogas

- Gas demand CAGR up to 2025: 1%
- Storage needs CAGR up to 2025: 2.2%
- ▶ 34bcm needed

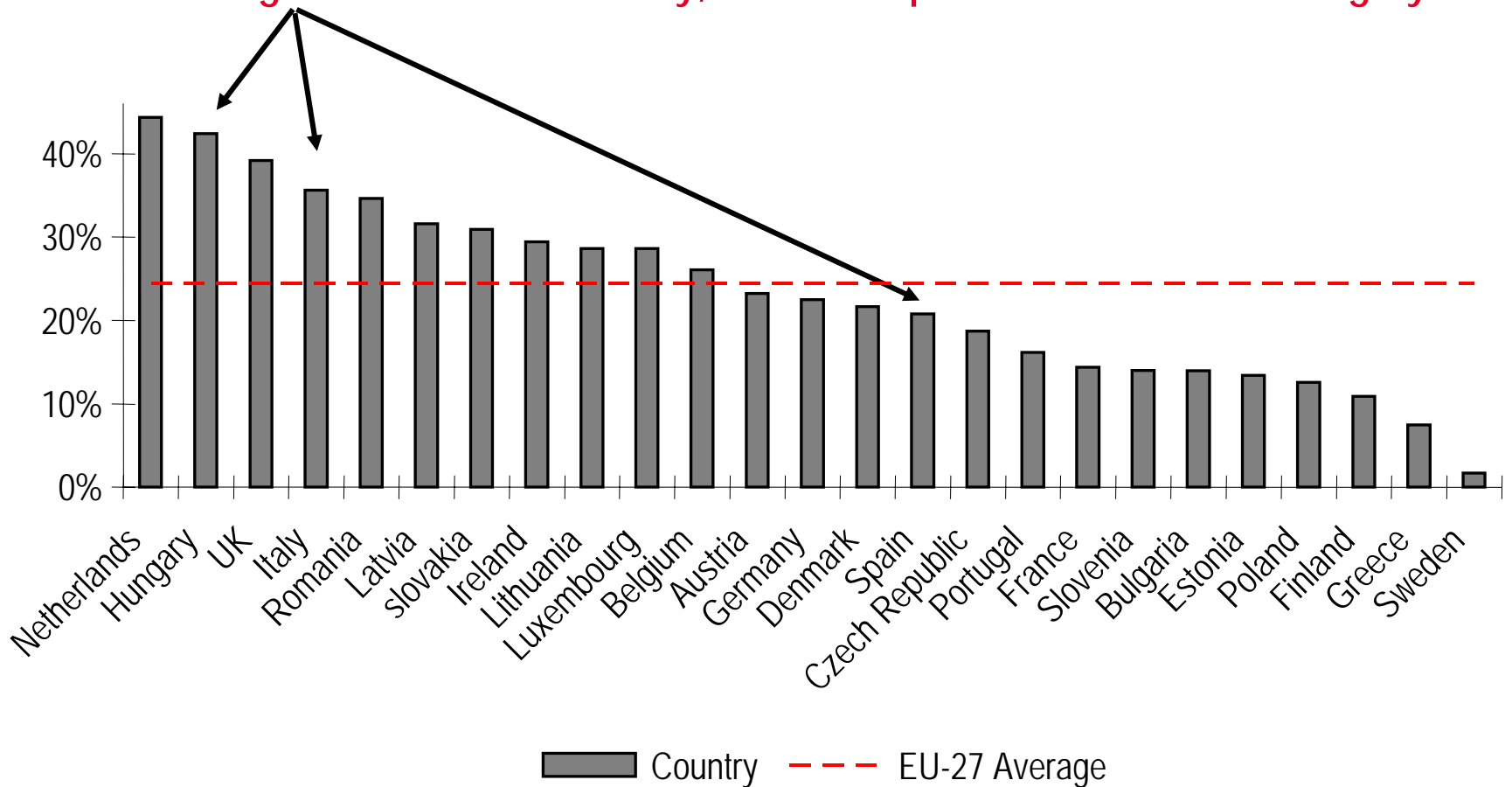


# Major companies in European underground gas storage



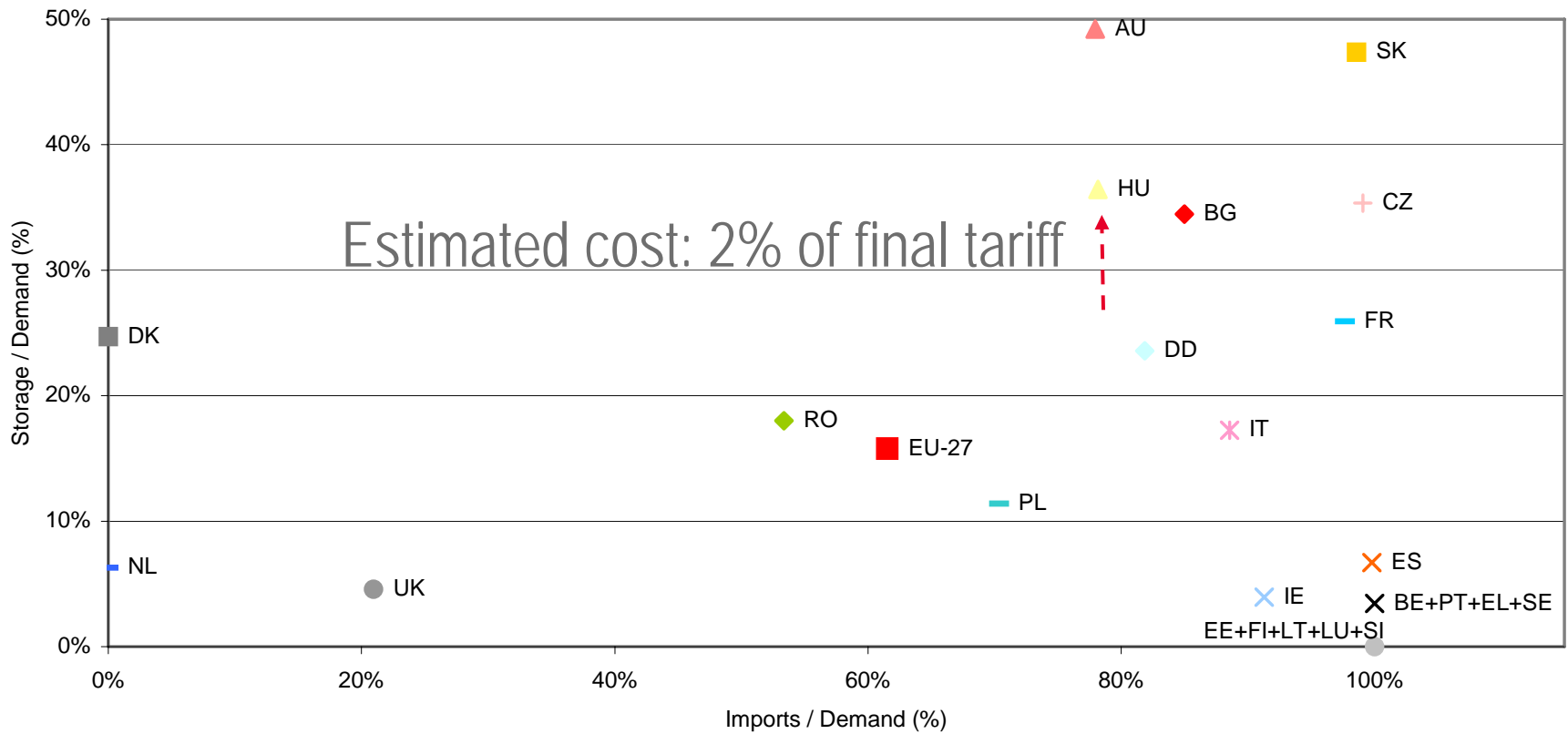
# Gas in EU primary energy mix

Strategic stocks: 5.1 bcm Italy, 1 bcm in Spain and 1.2 bcm in Hungary



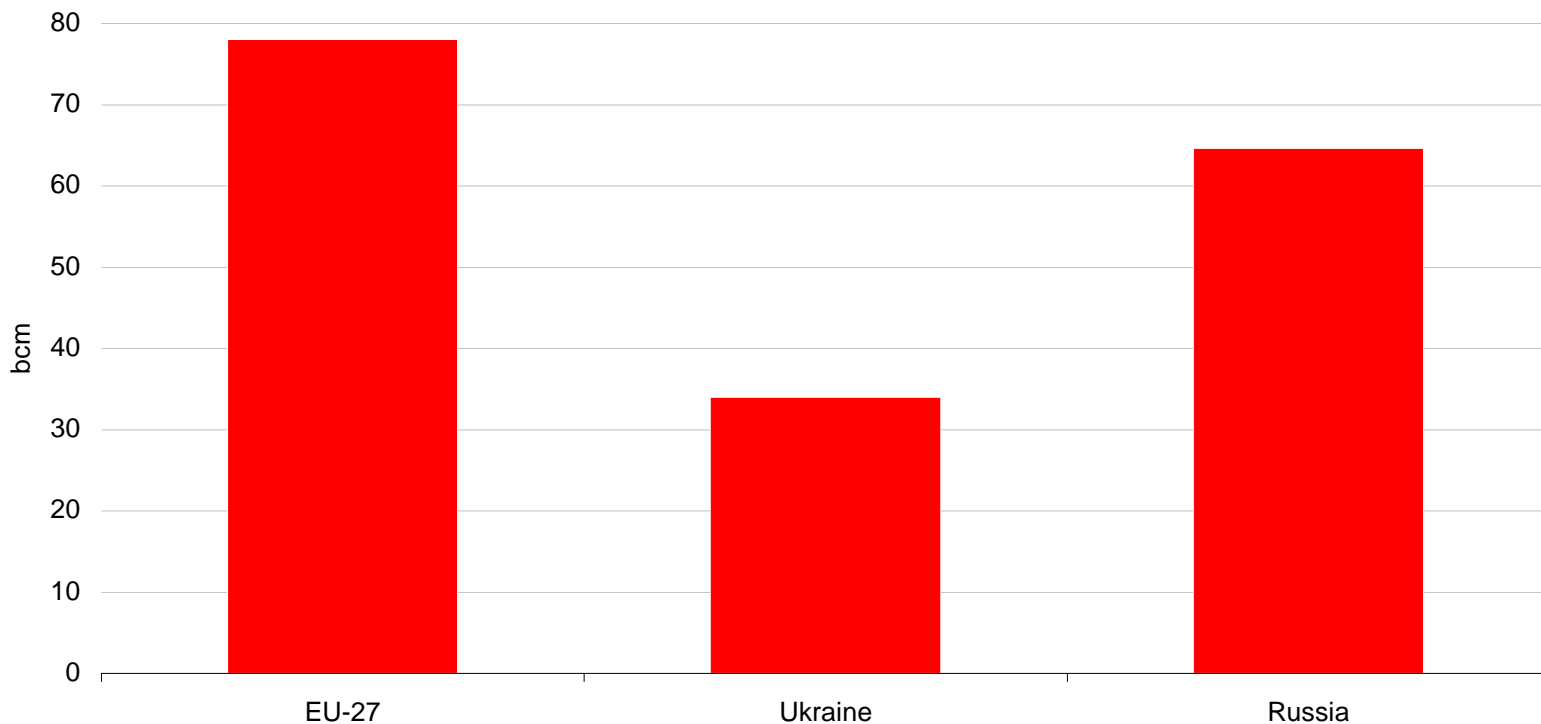


# Added security in Hungary from 2010e





# Storage capacity in and outside EU-27





### 3. Gas, a strategic commodity...



## Permanent sovereignty over natural resources

**UN General Assembly resolution 1803 (XVII) of 14 December 1962 declares that:**

- ▶ The right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development and of the well-being of the people of the State.
- ▶ Nationalization shall be based on grounds of public utility, security or the national interest which are recognized as overriding purely individual or private interests, both domestic and foreign.
- ▶ Violation of the rights of peoples and nations to sovereignty over their natural wealth and resources is contrary to the spirit and principles of the Charter of the United Nations.



## ... to take into account for market design

### Monopoly

- ▶ Secure
- ▶ Stable
- ▶ Reliable
- ▶ Long term
- ▶ National champions
- ▶ Bilateral negotiations

### Liberalised

- ▶ Efficient
- ▶ Long-run cost reflective
- ▶ Volatility
- ▶ Short term
- ▶ Numerous players
- ▶ Multilateral negotiations
- ▶ Market places
- ▶ OTC transactions

**Gas liberalisation started in the US in 1978...**

**... But infrastructure remains a natural monopoly**



# Paramount keys



**Vision**

**Business model?**

**Sanctity of contracts**

Price and investment

Sovereignty of States



Smart market design

**Long-term relations**

**Win-win situation**



# Main steps in European gas liberalisation



**1986**

UK - Privatisation of British Gas

**1996**

UK - Establishment of the Network Code (TPA) and NBP

**1998**

UK - Complete abolition of Centrica's marketing monopoly

UK / Continental Europe – Start-up of the Interconnector

Directive 98/30/EC concerning common rules for the internal market in natural gas

**1999**

Continental Europe - Establishment of the Zeebrugge Hub

**2003**

Directive 2003/55/EC concerning common rules for the internal market in natural gas and repealing directive 98/30/EC

**2007**

Full liberalisation of the gas market

**2009 (June)**

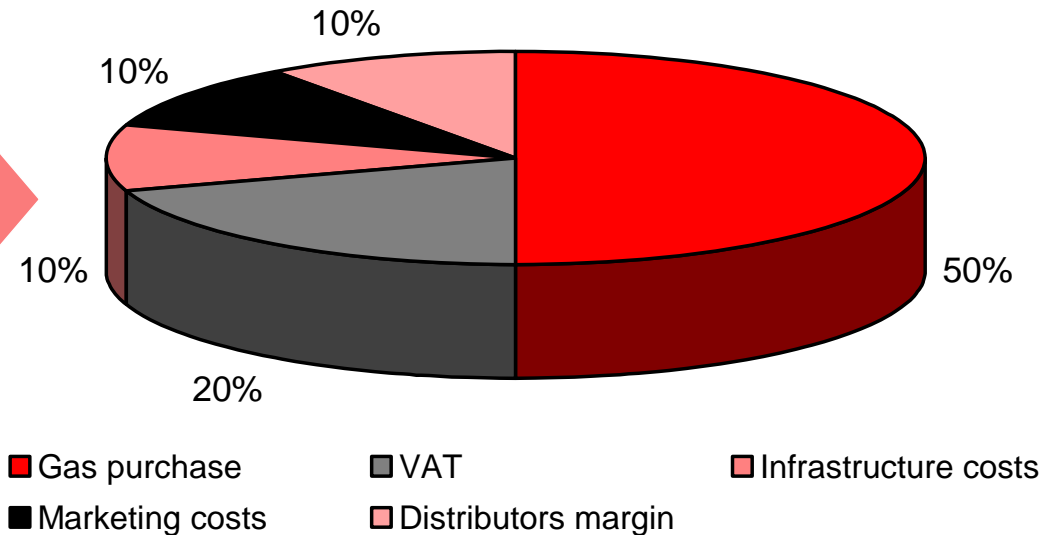
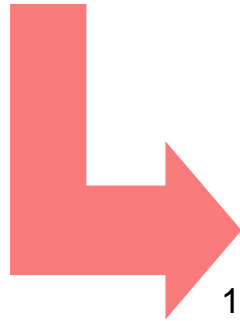
EU adopts new rules strengthening the internal energy market



# Cost of regulated activities: 10% of the retail price



**Infrastructure costs:  
10% of total bill**



**Carbon tax to be introduced  
in France in 2010e  
+ 7% bill increase**



# Consequences of the January crisis



**Gas as a reliable fuel**

**Russia's supplier reputation**

**Ukraine's transit reputation**

**Inability to mitigate a crisis**

**Energy Charter Treaty not used**



**Nuclear revival**

**More storage**

**Benefit of LNG**

**Transparency?**

**Diversification?**

**The crisis could be repeated**  
**Gas supplies could be cut off again**



# Transparency to be improved fast!



## Countries

## Gas Data Transparency

Austria



Belgium



Bulgaria



Cyprus

No gas

Czech Republic



Denmark



Estonia



Finland



France



Germany



Greece



Hungary



Ireland



Italy



## Countries

## Gas Data Transparency

Latvia



Lithuania



Luxembourg



Malta

No gas

Netherlands



Poland



Portugal



Romania



Slovakia



Slovenia



Spain



Sweden



UK / GB



Red = M-1 data available

White = M-4 to M-2 data available

Black = Eurostat data that may be up to 5mths old

Source: SG Cross Asset Research



# A smart answer to the unbundling issue



## Snam Rete Gas: a balanced business model

	Transmission	Regas	Storage	Distribution
Snam Rete Gas (Italy)	c. 100%	100%	97%	33%
National Grid (UK)	c. 100%	39%	0%	50%
Enagas (Spain)	c. 100%	66%	30%	0%
GDF SUEZ (France)	c. 80%	100%	80%	96%

Source: SG Cross Asset Research / Company data

**Meets the EU Commission requirements on unbundling**

**Snam Rete Gas is the first company since the break-up of monopolies to bring all regulated activities back together.**

**Synergies to come from operating pipes, storage and distribution**

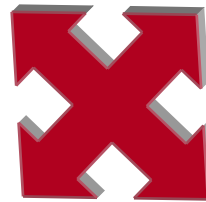


# Long-term solutions

**Ukraine: an issue for  
Gazprom AND the EU**

**More storage to be built in EU-27**

**Spain as an LNG gateway**



**Nord Stream is part of the solution**

- ▶ Priority energy EU & Gazprom project
- ▶ Investment €7.4bn
- ▶ Capacity 27.5 bcm/y (double to 55 bcm/y)

**Nabucco?**

**South Stream?**



# IMPORTANT DISCLOSURES



## IMPORTANT DISCLOSURES

E.ON	SG acted as Joint- manager in E.ON's senior bond issue (4.875% 28/01/14 EUR).
Enagas	SG acted as joint bookrunner in the issue of ENAGAS' senior bond (4.375 06/07/15 EUR).
Gazprom	SG acted as co-manager in the Gazprom's high grade bond issue (USD tranche).
Gazprom	SG acted as joint bookrunner in the Gazprom's high grade bond issue (EUR tranche).
GDF Suez	SG acted as exclusive advisor to GDF Suez in its bid for the privatisation of Izgaz
GDF Suez	SG acted as joint bookrunner in the GDF SUEZ's senior bond issue (TAP 6.25% 24/01/2014 EUR & TAP 6.875% 24/01/2019 EUR).
RWE	SG is one of the Mandated Lead Arranger in the acquisition financing of RWE's bid for Essent

## US THIRD PARTY FOREIGN AFFILIATE RESEARCH DISCLOSURES:

SG and its affiliates beneficially own 1% or more of any class of common equity of E.ON.  
SG and its affiliates beneficially own 1% or more of any class of common equity of GDF Suez.  
SG and its affiliates beneficially own 1% or more of any class of common equity of RWE.  
SG and its affiliates beneficially own 1% or more of any class of common equity of Total.  
SG or its affiliates act as market maker or liquidity provider in the equities securities of E.ON.  
SG or its affiliates act as market maker or liquidity provider in the equities securities of Enagas.  
SG or its affiliates act as market maker or liquidity provider in the equities securities of Gaz de France.  
SG or its affiliates act as market maker or liquidity provider in the equities securities of Royal Dutch Shell.  
SG or its affiliates act as market maker or liquidity provider in the equities securities of Snam Rete Gas.  
SG or its affiliates act as market maker or liquidity provider in the equities securities of Total.  
SG or its affiliates expect to receive or intend to seek compensation for investment banking services in the next 3 months from BP.  
SG or its affiliates expect to receive or intend to seek compensation for investment banking services in the next 3 months from E.ON.  
SG or its affiliates expect to receive or intend to seek compensation for investment banking services in the next 3 months from ExxonMobil.  
SG or its affiliates expect to receive or intend to seek compensation for investment banking services in the next 3 months from Gazprom.  
SG or its affiliates expect to receive or intend to seek compensation for investment banking services in the next 3 months from GDF Suez.  
SG or its affiliates expect to receive or intend to seek compensation for investment banking services in the next 3 months from Royal Dutch Shell.  
SG or its affiliates expect to receive or intend to seek compensation for investment banking services in the next 3 months from RWE.  
SG or its affiliates expect to receive or intend to seek compensation for investment banking services in the next 3 months from Total.  
SG or its affiliates have received compensation for investment banking services in the past 12 months from BG Group.  
SG or its affiliates have received compensation for investment banking services in the past 12 months from E.ON.  
SG or its affiliates have received compensation for investment banking services in the past 12 months from Enagas.  
SG or its affiliates have received compensation for investment banking services in the past 12 months from Gazprom.  
SG or its affiliates have received compensation for investment banking services in the past 12 months from GDF Suez.  
SG or its affiliates have received compensation for investment banking services in the past 12 months from National Grid.  
SG or its affiliates have received compensation for investment banking services in the past 12 months from RWE.  
SG or its affiliates have received compensation for investment banking services in the past 12 months from Total.  
SG or its affiliates managed or co-managed in the past 12 months a public offering of securities of BG Group.  
SG or its affiliates managed or co-managed in the past 12 months a public offering of securities of E.ON.  
SG or its affiliates managed or co-managed in the past 12 months a public offering of securities of Enagas.  
SG or its affiliates managed or co-managed in the past 12 months a public offering of securities of Gazprom.  
SG or its affiliates managed or co-managed in the past 12 months a public offering of securities of GDF Suez.  
SG or its affiliates managed or co-managed in the past 12 months a public offering of securities of National Grid.  
SG or its affiliates managed or co-managed in the past 12 months a public offering of securities of RWE.  
SG or its affiliates managed or co-managed in the past 12 months a public offering of securities of Total.



# IMPORTANT DISCLAIMER



**IMPORTANT DISCLAIMER:** The information herein is not intended to be an offer to buy or sell, or a solicitation of an offer to buy or sell, any securities and including any expression of opinion, has been obtained from or is based upon sources believed to be reliable but is not guaranteed as to accuracy or completeness although Société Générale ("SG") believe it to be clear, fair and not misleading. SG, and their affiliated companies in the SG Group, may from time to time deal in, profit from the trading of, hold or act as market-makers or act as advisers, brokers or bankers in relation to the securities, or derivatives thereof, of persons, firms or entities mentioned in this document or be represented on the board of such persons, firms or entities. Employees of SG, and their affiliated companies in the SG Group, or individuals connected to them, other than the authors of this report, may from time to time have a position in or be holding any of the investments or related investments mentioned in this document. Each author of this report is not permitted to trade in or hold any of the investments or related investments which are the subject of this document. SG and their affiliated companies in the SG Group are under no obligation to disclose or take account of this document when advising or dealing with or for their customers. The views of SG reflected in this document may change without notice. To the maximum extent possible at law, SG does not accept any liability whatsoever arising from the use of the material or information contained herein. This research document is not intended for use by or targeted at retail customers. Should a retail customer obtain a copy of this report they should not base their investment decisions solely on the basis of this document but must seek independent financial advice.

**Important notice:** The circumstances in which materials provided by SG Fixed & Forex Research, SG Commodity Research, SG Convertible Research, SG Technical Research and SG Equity Derivatives Research have been produced are such (for example because of reporting or remuneration structures or the physical location of the author of the material) that it is not appropriate to characterise it as independent investment research as referred to in European MIF directive and that it should be treated as a marketing material even if it contains a research recommendation (« recommandation d'investissement à caractère promotionnel »). However, it must be made clear that all publications issued by SG will be clear, fair, and not misleading.

**Analyst Certification:** Each author of this research report hereby certifies that (i) the views expressed in the research report accurately reflect his or her personal views about any and all of the subject securities or issuers and (ii) no part of his or her compensation was, is, or will be related, directly or indirectly, to the specific recommendations or views expressed in this report.

**Notice to French Investors:** This publication is issued in France by or through Société Générale ("SG") which is authorised by the CECEI and regulated by the AMF (Autorité des Marchés Financiers).

**Notice to UK investors:** This publication is issued in the United Kingdom by or through Société Générale ("SG") London Branch which is regulated by the Financial Services Authority ("FSA") for the conduct of its UK business.

**Notice To US Investors:** This report is intended only for major US institutional investors pursuant to SEC Rule 15a-6. Any US person wishing to discuss this report or effect transactions in any security discussed herein should do so with or through SG Americas Securities, LLC ("SGAS") 1221 Avenue of the Americas, New York, NY 10020. (212)-278-6000. THIS RESEARCH REPORT IS PRODUCED BY SOCIETE GENERALE AND NOT SGAS.

**Notice to Japanese Investors:** This report is distributed in Japan by Société Générale Securities (North Pacific) Ltd., Tokyo Branch, which is regulated by the Financial Services Agency of Japan. The products mentioned in this report may not be eligible for sale in Japan and they may not be suitable for all types of investors.

**Notice to Australian Investors:** Société Générale Australia Branch (ABN 71 092 516 286) (SG) takes responsibility for publishing this document. SG holds an AFSL no. 236651 issued under the Corporations Act 2001 (Cth) ("Act"). The information contained in this newsletter is only directed to recipients who are wholesale clients as defined under the Act.

**IMPORTANT DISCLOSURES:** Please refer to our website: <http://www.sgresearch.socgen.com>  
<http://www.sgcib.com>. Copyright: The Société Générale Group 2009. All rights reserved.

# SG leader in Global Cross Asset Research

## Strategy & Cross Asset

**EXTEL SURVEYS 2009**

IDENTIFYING EXCELLENCE

- #1 Global Strategy
- #1 Cross Asset Research
- #1 SRI Research

## Equity

**EXTEL SURVEYS 2009**

IDENTIFYING EXCELLENCE

- #1 Research on French Equity
- #1 Thematic Research
- 22 sector teams in the Top 10

## Fixed Income

**EUROMONEY**  
2009

- #1 Fixed Income Research House
- #1 in 11 out of 14 categories

## Economics

**EXTEL SURVEYS 2009**

IDENTIFYING EXCELLENCE

- #1 Global Economics
- #2 Pan-European Economics

## Commodities

**RISK COMMODITY RANKINGS 2009**

- #1 Research in Oil
- #2 Research in Metals
- #3 Research in Power and Gas

## Equity Derivatives

**EXTEL SURVEYS 2009**

IDENTIFYING EXCELLENCE

- Equity Derivatives Research
- #3 Flow Product
- #3 Structured Product