

The role of natural gas storage in the changing European gas market landscape

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GSE represents the interests of:

- ✓ 33 Storage System Operators,
- ✓ with 110 storage sites in 16 countries in Europe,
- ✓ representing approximately 85% of Europe's technical storage capacity.

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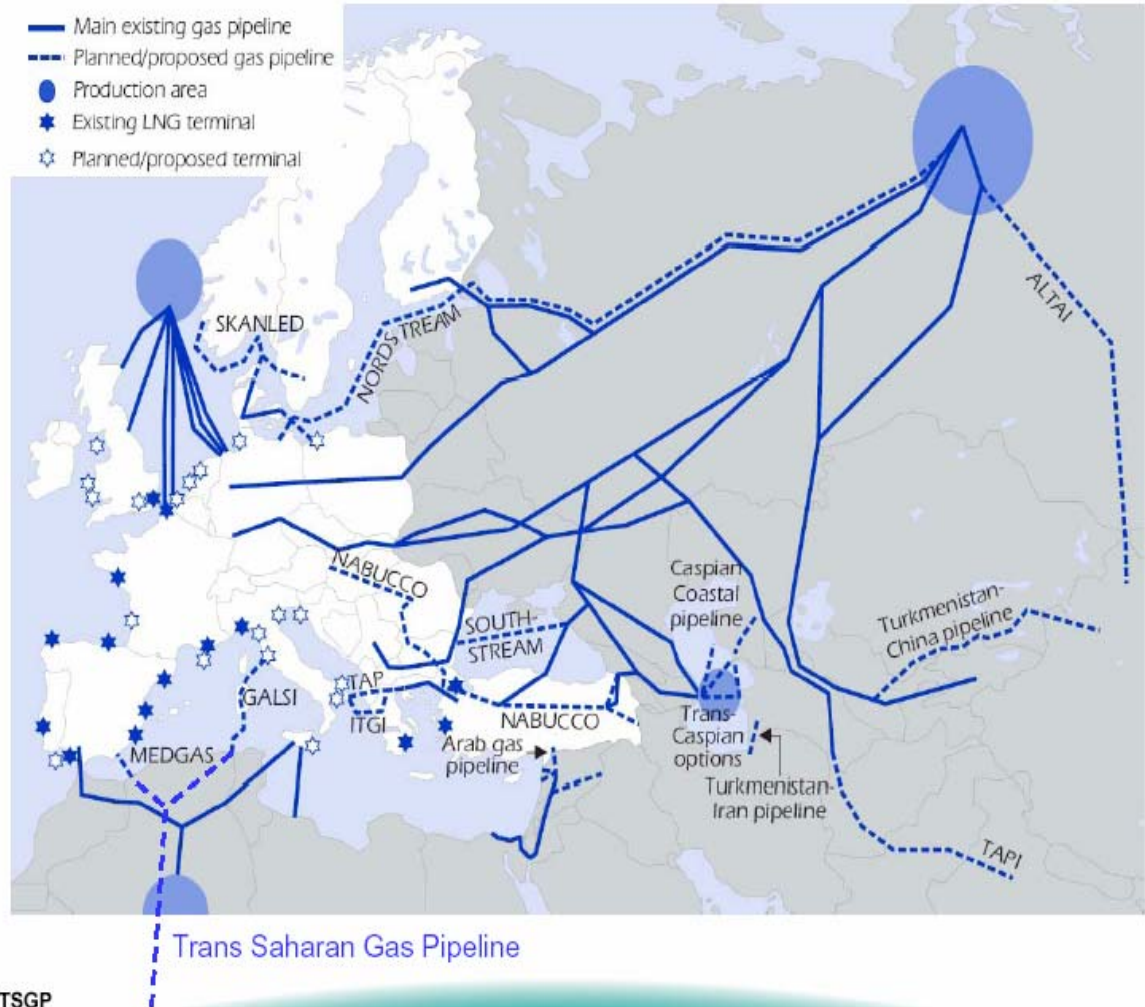


Agenda

- 1. European gas storage market – Overview**
- 2. Gas Storage development and opportunities**
- 3. European legislative framework**
- 4. European gas storage market : main issues**

1. European gas storage market - Overview

European Gas Supply Transmission system

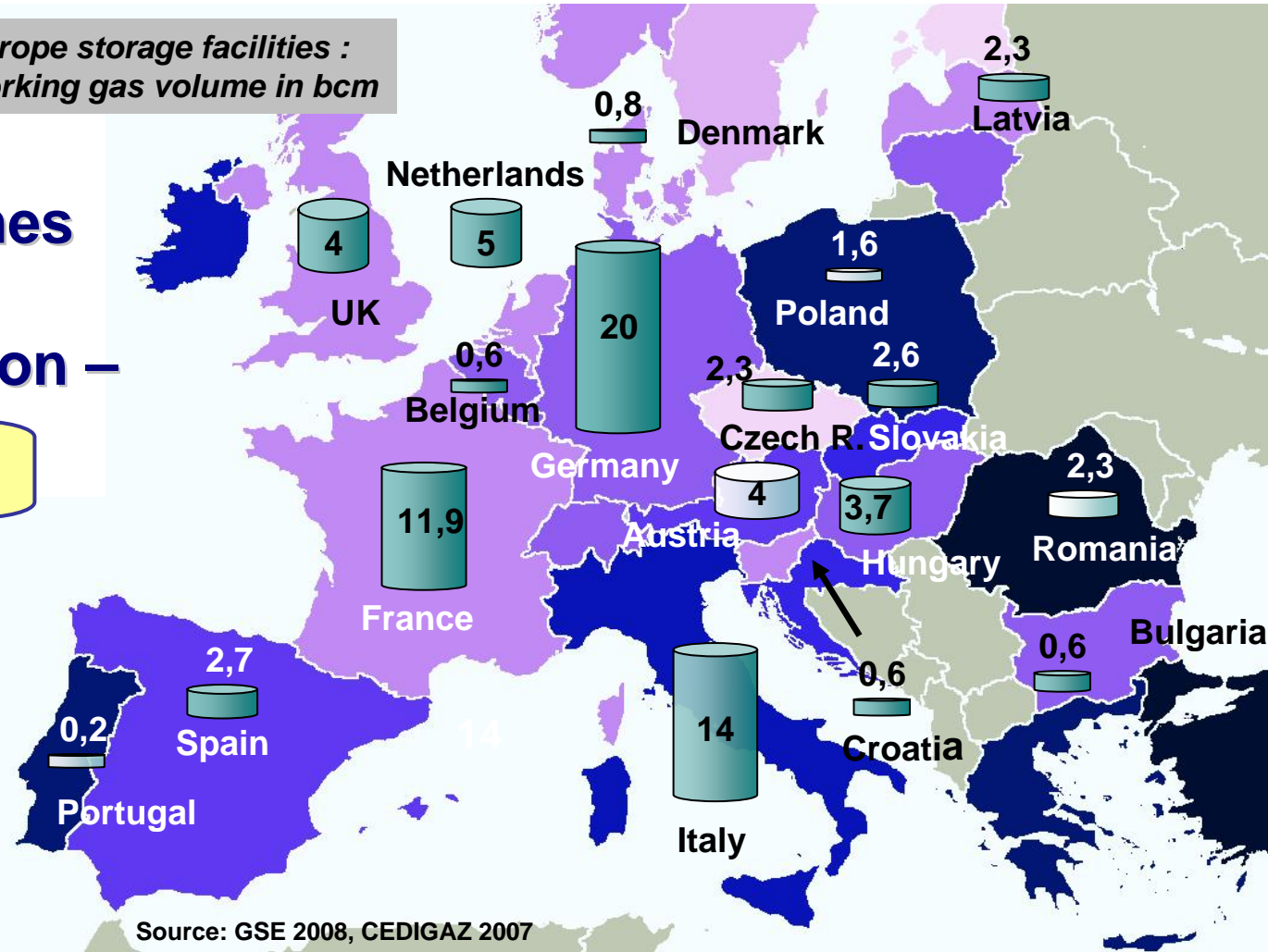


Sources : IEA / TSGP

**Storage volumes
in EU-27
– current situation –**

around 82 bcm

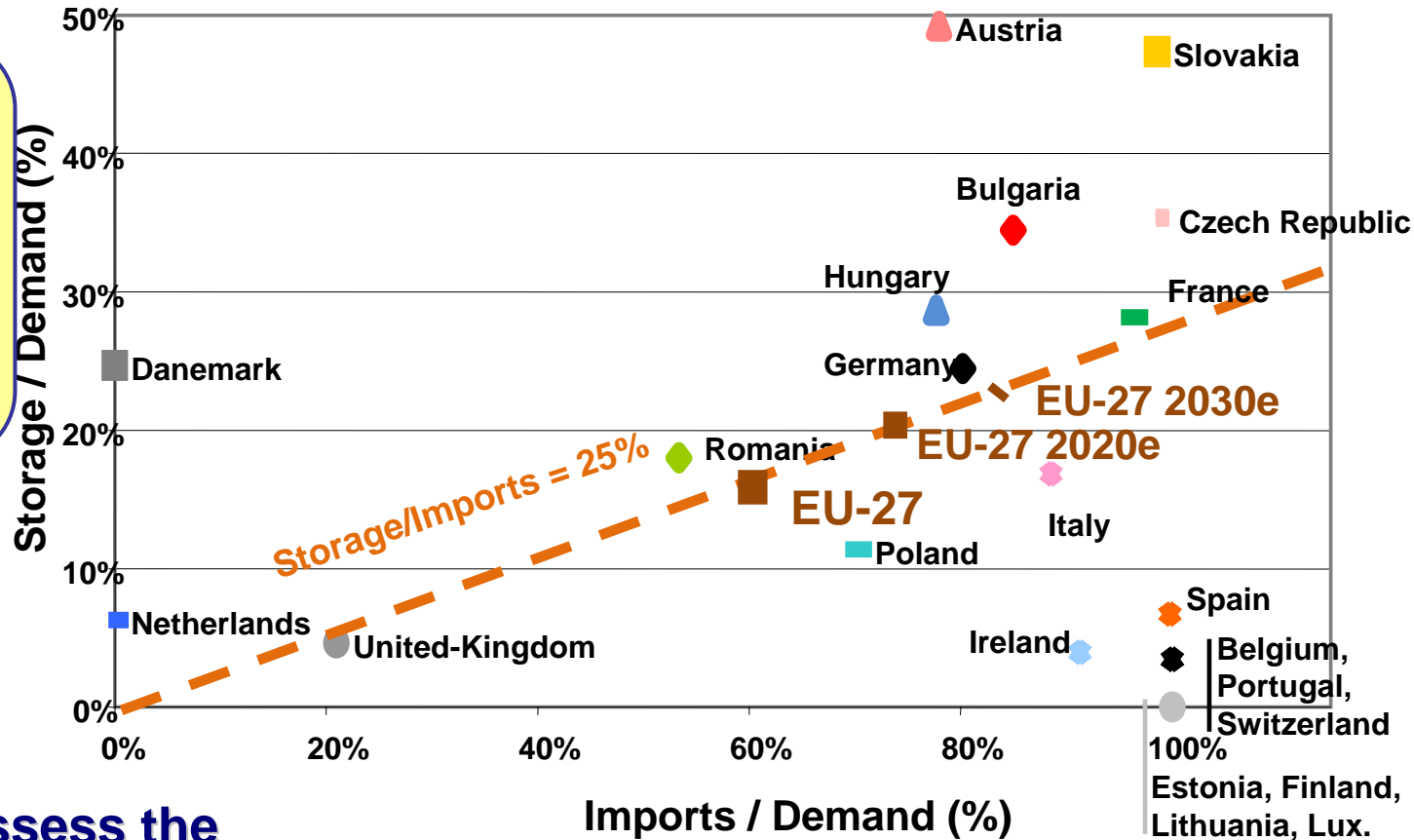
*Europe storage facilities :
working gas volume in bcm*



Source: GSE 2008, CEDIGAZ 2007

Another way to look at storage in Europe...

EU storage volumes need to be expanded by 50 bcm until 2025!



... and to assess the need for new storage

Source: SG Equity Research / Eurogas / GSE 2008

Some lessons from our experience

- Commercial storage play a key role in security of supply
- Strategic storage is not the appropriate solution
- The main issue for security of supply is diversification. Gas is paramount in this perspective
- Gas flexibility should be improved

2. Gas Storage development and opportunities

New uncertainties facing the European gas market



SUPPLY

- LNG is flexible
- Transit
- Unconventional gas in Europe

DEMAND

- Impact of crisis
- Role of 20/20 targets

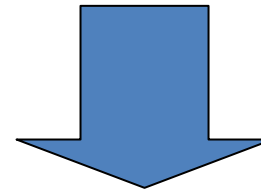
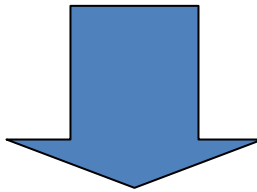
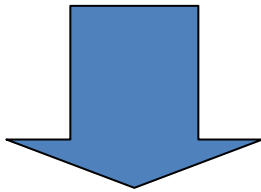
COMMERCIAL

- What price for investment economics?
- Where will costs settle?
- Availability of debt

... leading to opportunities in gas storage development

Source: Cambridge Energy Research Associates, 2009

Why are gas storage needs increasing in Europe?

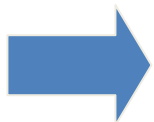


- ⇒ **Longer transportation routes**
- ⇒ **Decreasing EU gas production**
- ⇒ **Increase of gas imports**
- ⇒ **Increase of interruptible renewable power generation installed capacity**
- ⇒ **Increase of gas-fired power generation installed capacity**

Investment : Commercial Storage Operators are responding to market needs

Database of EU storage investment projects :

- Working gas capacity in projet = **63 bcm** (February 2009)
- Grand total of around **110 projects**
- **The increasing role of new players :**
25% of projects / 30% of planned new capacity (~19 bcm)



http://www.gie.eu.com/maps_data/database/index.html

3. European legislative framework

2 directives
for 2 objectives

- **European legal framework**
 - Security of supply (2004)
 - Internal market liberalisation (2009)
 - Ensures Third Party Access (TPA) to storage
 - Gives alternatives for Member states: Regulated / Negotiated

GSE believes that :

- the choice of access regime should be market oriented
- negotiated TPA should be the preferred choice wherever market conditions allow as this regime best facilitates investments and further development of the market

4. European gas storage market : main issues

→ Development : a challenge

developing as much over the next 20 years as over the last 60 years

→ Competition with other flexibility tools :

indigenous gas production swing, imported pipeline gas contract flexibility, peak shaving, spot markets, imported LNG, new transmission lines, interruptible gas, ...

→ Attracting funding : an other challenge

investing up to 50 billion euros over the next 20 years

→ A stable European Regulatory framework : a necessity
for encouraging new storage developments as well as the optimal use of existing storage facilities is essential.



**Europe's etymology :
“the far-seeing one”**

**Thank you for your
attention!**

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