



# Storage and Security of Supply

25th Madrid Forum, 6-7 May 2014

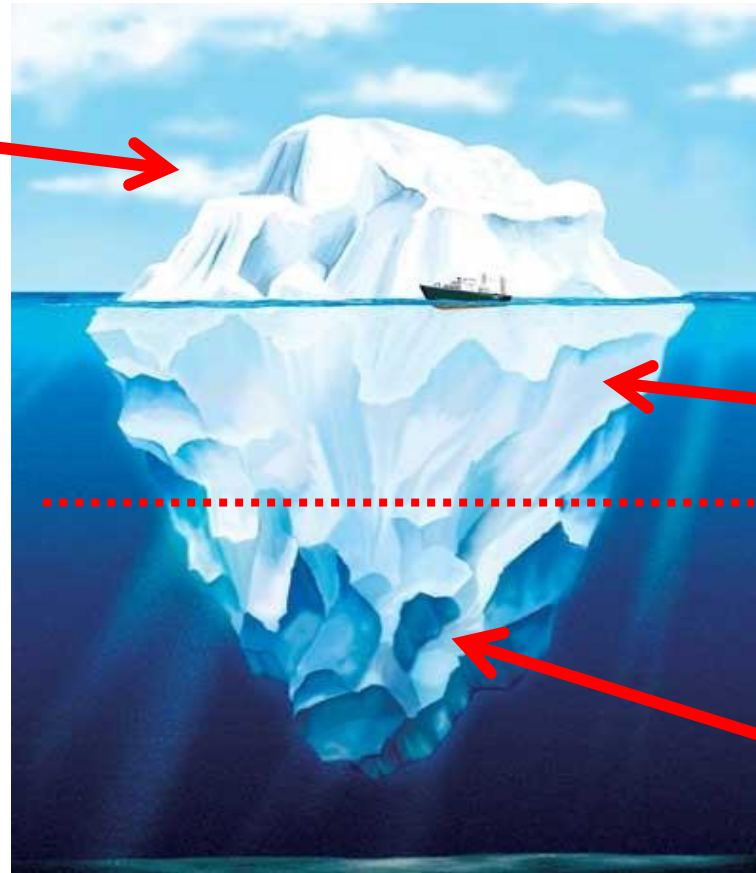
***Nicole Otterberg***  
*GSE President*

***Ryan McLaughlin***  
*CEER Storage Task Force Co-chair*

# Role of storage

Market value of storage

- Intrinsic value
- Extrinsic value



System value of storage

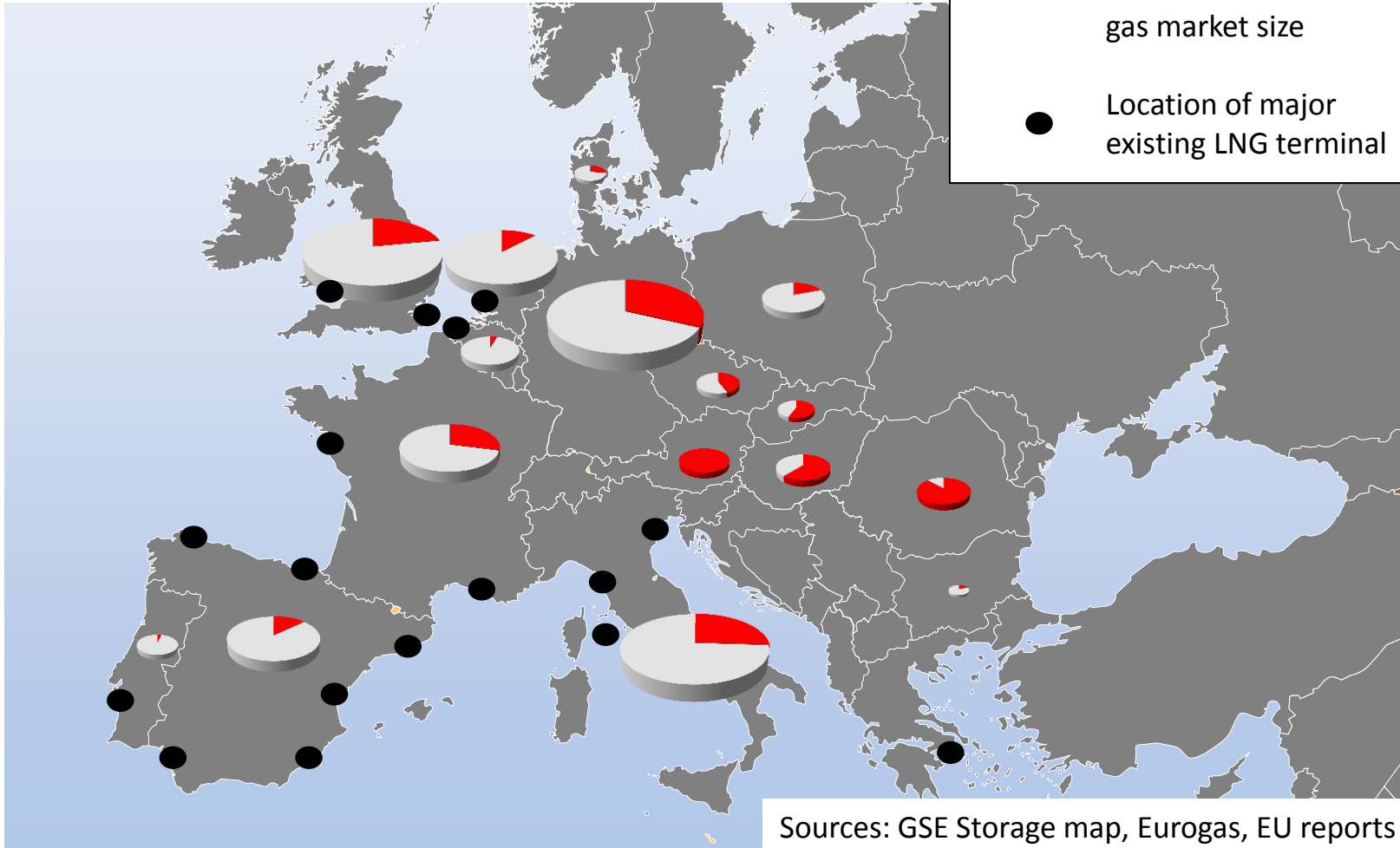
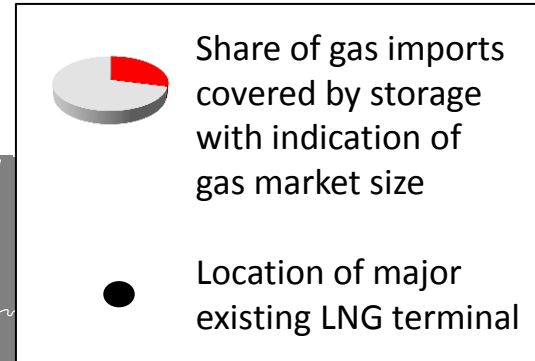
- Optimized production
- Efficient gas transport

Insurance value of storage

- Hedge against supply risk

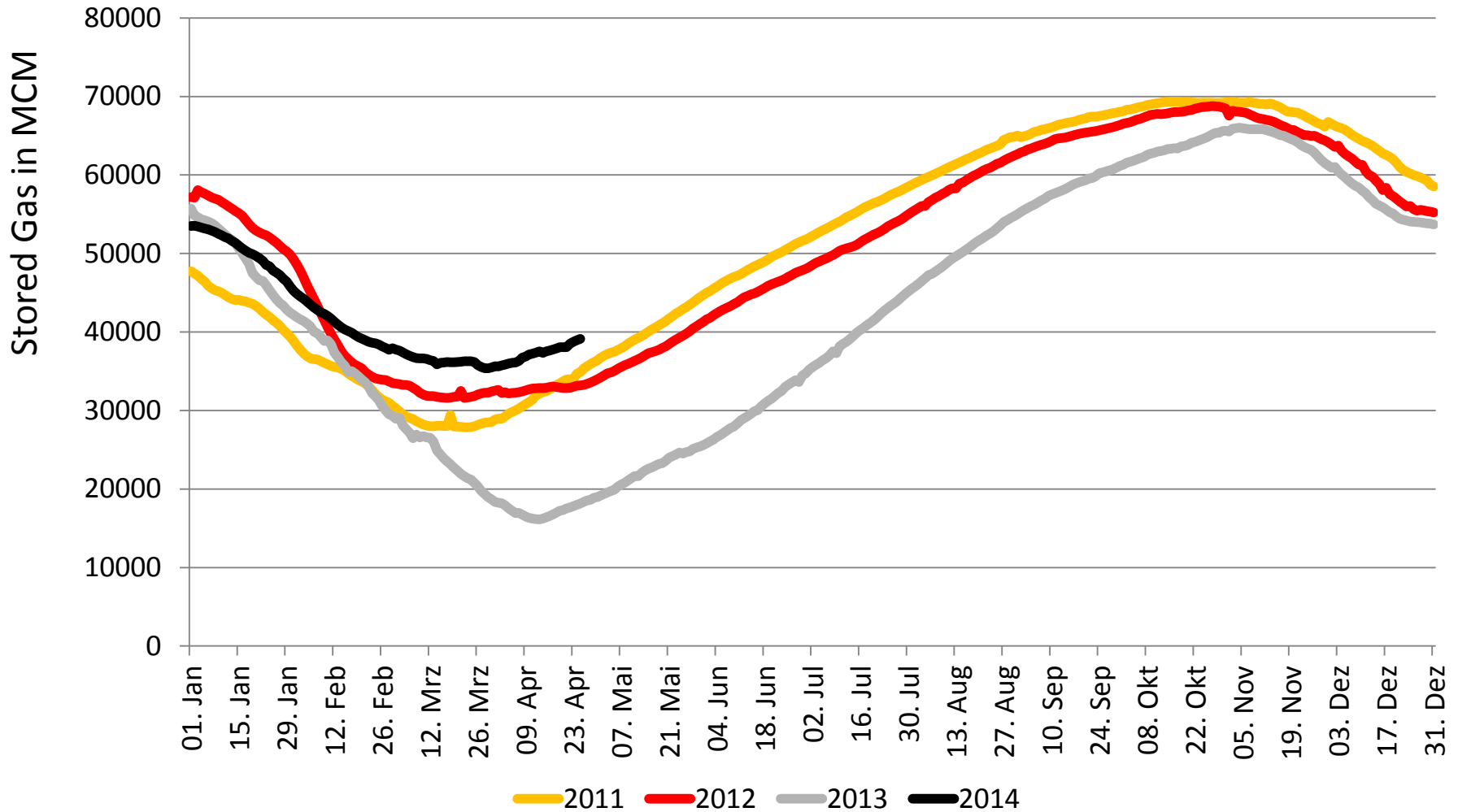


# Gas storage capacity in Europe



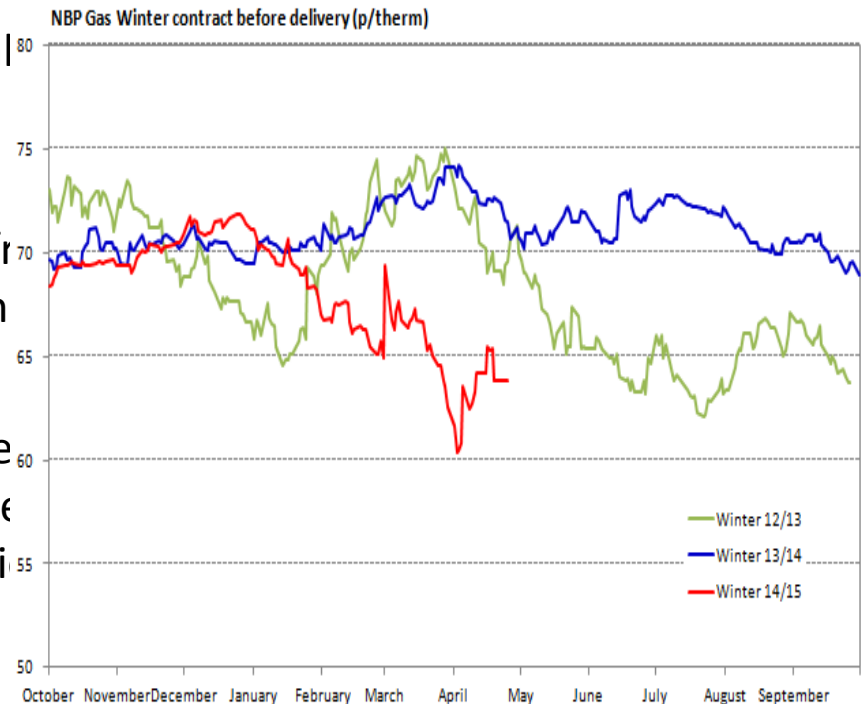
Sources: GSE Storage map, Eurogas, EU reports

# Current storage levels above previous years



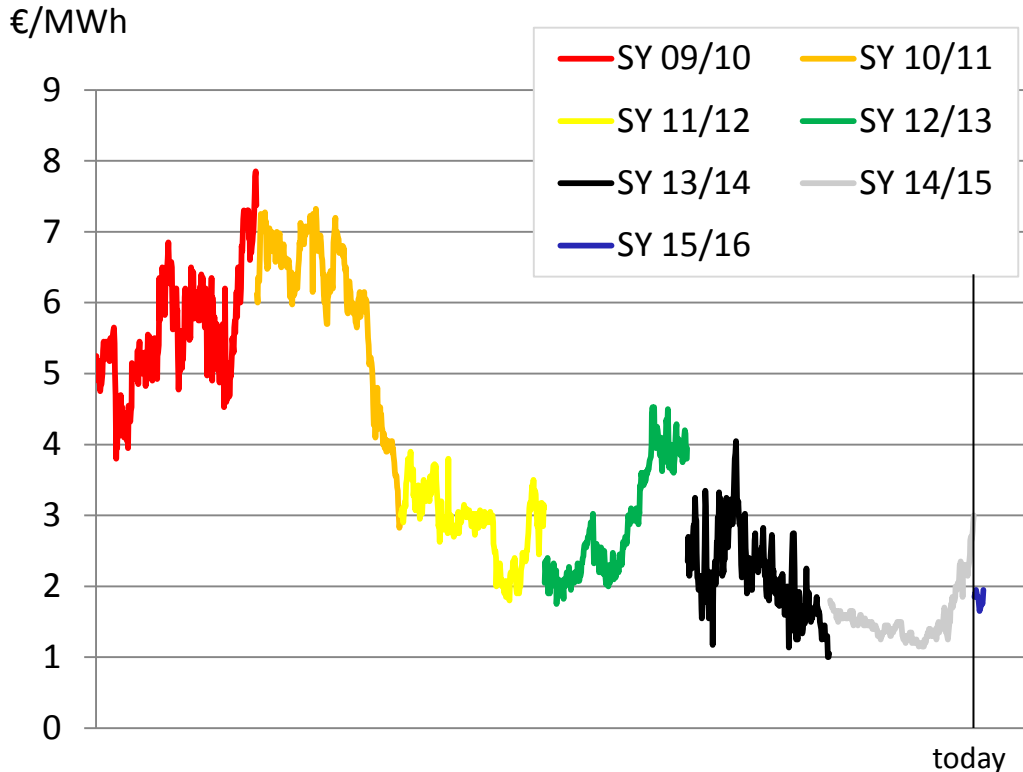
# Storage plays a key role in providing Security of Supply during this crisis

- The political situation in Ukraine since the beginning of the year has had no impact on delivery of Russian gas through the different import routes
- Due to the warm winter storage stocks across Europe remain high
- The Russia-Ukraine crisis created an initial shock in prices but this has dampened due to high stock levels
- There is sufficient spare import capacity from Russia into Europe to allow 67% of Ukrainian flows to the EU via alternative routes
- ENTSOG analysis shows that EU stock level could reach 90% by the end of the Summer even in the event of a one month disruption to Russian supplies<sup>1</sup>



# Going forward the outlook is unclear

Seasonal price spread at historical lows discouraging users from contracting storage, but the spreads...



...cannot predict exceptional events

...may be a vicious cycle as storage use influence them

...ignore short-term, extrinsic value

...disregard system efficiency

...reflect only part of the market (futures)

Evolution of forward seasonal spreads on TTF for the following storage year

# Sustained low spreads may ultimately lead to facility closures...

SSOs may be  
unable to recover  
their costs

Mothballing?  
De-commissioning?

Both measures are  
expensive and even  
sale of recoverable  
cushion gas destroys  
value

Decommissioned capacity may be missing in the future when  
demand picks up  
But it takes 5-8 years to construct storage

During this cycle, Security of Supply is gradually reduced

...which is irreversible, costly and short-sighted

# But is this likely to happen?

Demand	Supply
<p data-bbox="266 586 782 625"><b>Scenario 1: demand recovers</b></p> <ul data-bbox="117 689 846 829" style="list-style-type: none"><li data-bbox="117 689 846 728">▪ Economic downturn could be reversed</li><li data-bbox="117 739 846 778">▪ Gas power plant as back up RES</li><li data-bbox="117 789 846 829">▪ Gas favorable generation fuel</li></ul>	<ul data-bbox="987 615 1792 1162" style="list-style-type: none"><li data-bbox="987 615 1792 753">▪ Loss of flexible indigenous gas fields may not be coped with by other tools</li><li data-bbox="987 765 1792 858">▪ Import dependency rises and need to store gas close to market</li><li data-bbox="987 869 1792 1162">▪ Competitiveness of storage facilities compared to other flexibility tools<ul data-bbox="1083 1022 1792 1162" style="list-style-type: none"><li data-bbox="1083 1022 1792 1061">• Summer/ winter spread</li><li data-bbox="1083 1072 1792 1110">• Level playing field</li><li data-bbox="1083 1122 1792 1162">• Regulatory framework fit for purpose</li></ul></li></ul>
<p data-bbox="233 905 815 943"><b>Scenario 2: demand remains low</b></p> <ul data-bbox="117 1005 915 1145" style="list-style-type: none"><li data-bbox="117 1005 915 1043">▪ More efficiency measures/ district heating</li><li data-bbox="117 1055 915 1093">▪ Mild temperatures and climate</li><li data-bbox="117 1105 915 1145">▪ New technologies for power generation</li></ul>	



# How to realise the full value of storage?

Benefits to the market and system	Possible regulatory arrangements
<ul style="list-style-type: none"> <li>• exploiting price differentials in the market</li> <li>• meeting flexibility requirements</li> <li>• optimising use of transmission systems</li> </ul>	<ul style="list-style-type: none"> <li>• a level playing field for storage in the flexibility market</li> <li>• regulatory framework conducive to commercial innovation</li> <li>• transmission fees that reflect potential storage benefits for end-users</li> <li>• non-discrimination between network users</li> </ul>
Security of Supply benefits	Possible out of market interventions
<ul style="list-style-type: none"> <li>• response to demand peaks</li> <li>• insulation against supply interruptions</li> <li>• a value for security of supply?</li> </ul>	<ul style="list-style-type: none"> <li>• non-discriminatory rules for storage users in system emergency</li> <li>• supply obligations</li> <li>• strategic storage</li> </ul>

## CEER and GSE Vision

CEER published “Changing storage usage and effects on security of supply” in November 2013, its initial conclusions were:

- Storage competes in a wider flexibility market
- A shift to short term booking is (likely) to take place
- Storage is available in the short term
- Longer term capacities less, clear

GSE published “Gas Storage Value” in 2013. It concluded that storage provides value in the following ways:

- Market value
- System value
- Insurance value



Changing storage usage and effects on security of supply  
CEER interim report

Ref: C13-GWG-102-03  
20-November-2013

Council of European Energy Regulators asbl  
Cours Saint-Michel 20A, Box F – 1140 Brussels, Belgium  
Arrondissement judiciaire de Bruxelles – RPM 0811.035.445



Gas Storage Value

**Next Steps: joint stakeholder workshop is planned for May to develop a joint CEER and GSE vision**



Gas Storage Europe

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# Thank you for your attention!



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