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The EU Gas Market in Transition

Risks and Opportunities for Gas Producers

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Agenda



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- Status of the EU gas market
 - Security of Supply from the EU perspective
 - Gas producers role

Status of the EU gas market



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- Coal prices remain below \$50 per metric ton and oil prices around \$50.
 - Economic growth in Eurozone expected at 1.5%
 - European power demand is showing some modest growth.
 - Gap between coal and gas in dispatch has narrowed significantly
 - Energy Union concept will establish an EU wide gas market – but slowly

How about EU gas demand ?



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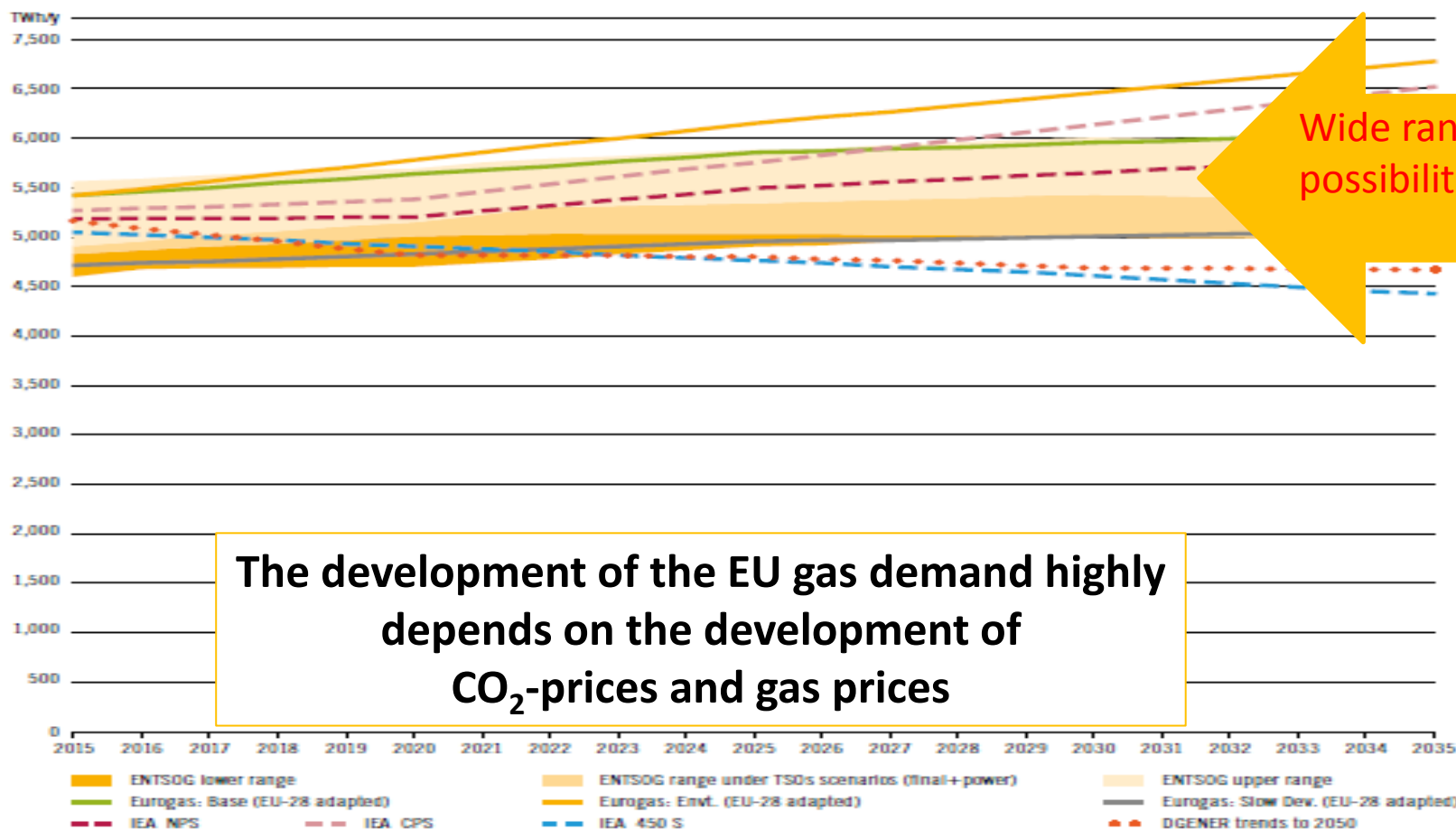


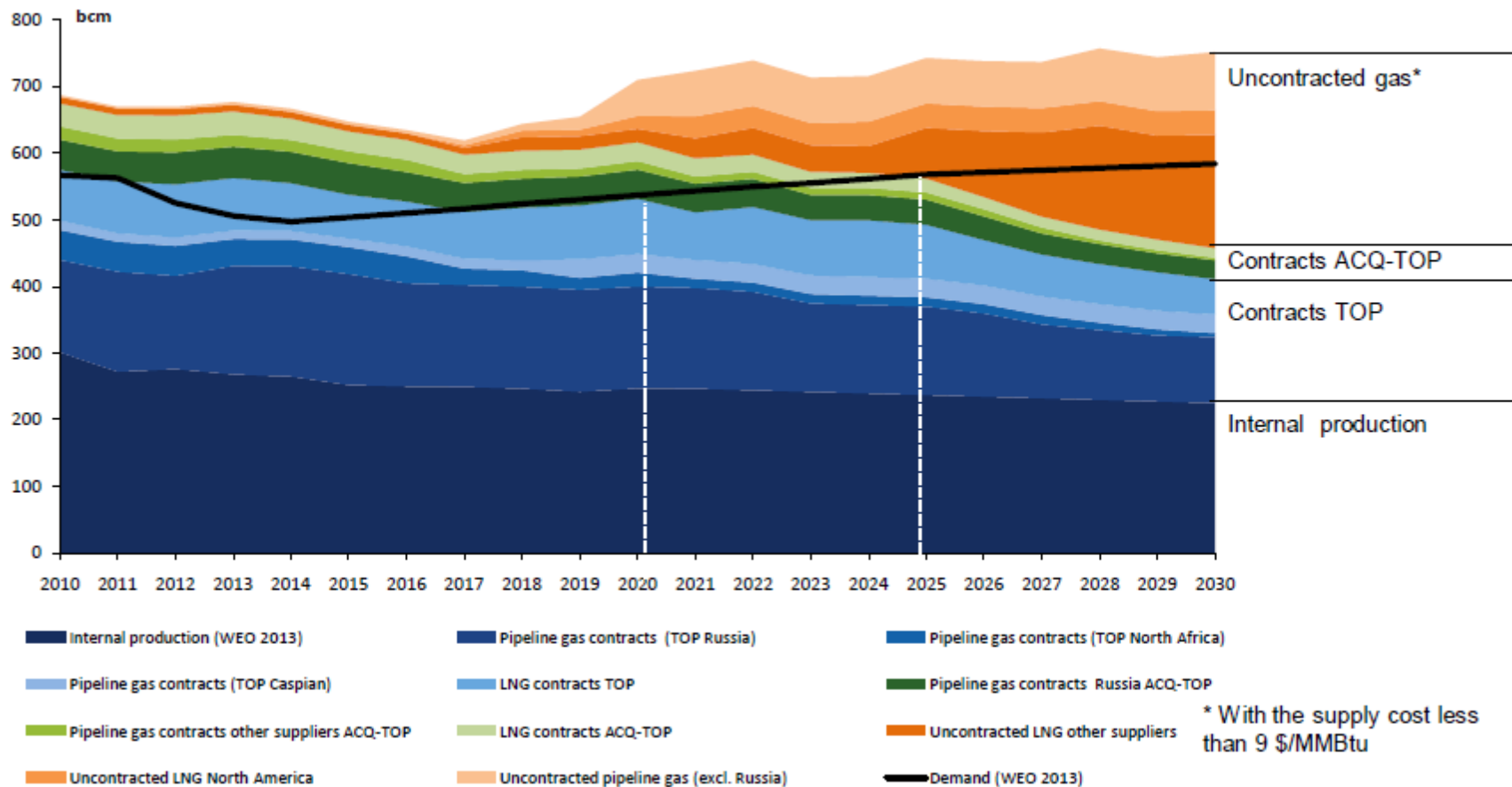
Figure 3: Comparison of gas demand outlooks

Expiring LTCs opens the door for new suppliers



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European gas balance 2010-2030



Source: IEA; Cedigaz; VYGON Consulting

Source: Russia energy outlook: an analysis of gas market in 2015; Maria Belova, VYGON, Presentation at the 4th Annual European Gas Price Structuring and Market Liquidity Forum , 5-6 February 2015 Berlin

Development of competition: Wholesale market functioning



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Large western European gas markets

- **Gas on gas competition will become the standard**
- **Stepwise integration of (smaller) markets**
- **Liquidity and competition will harmonize and drive down prices**
- **Demand growth will only happen if prices stay competitive**

Central and Eastern Europe

- **Small, intransparent and fragmented markets**
- **Often high concentration on the supply side**
- **Potential competition only in some Central European member states**
- **Often reliance on largest supplier, i.e. Gazprom**
- **A long way towards competitive markets**

Diversification of gas supplies is a key EU policy for improving Security of Supply

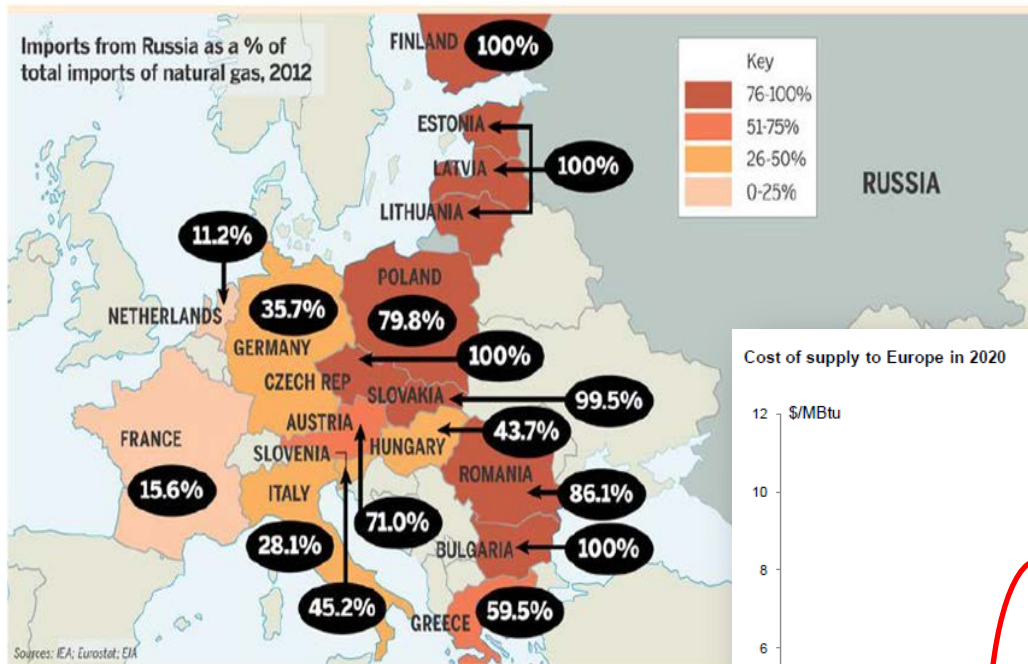


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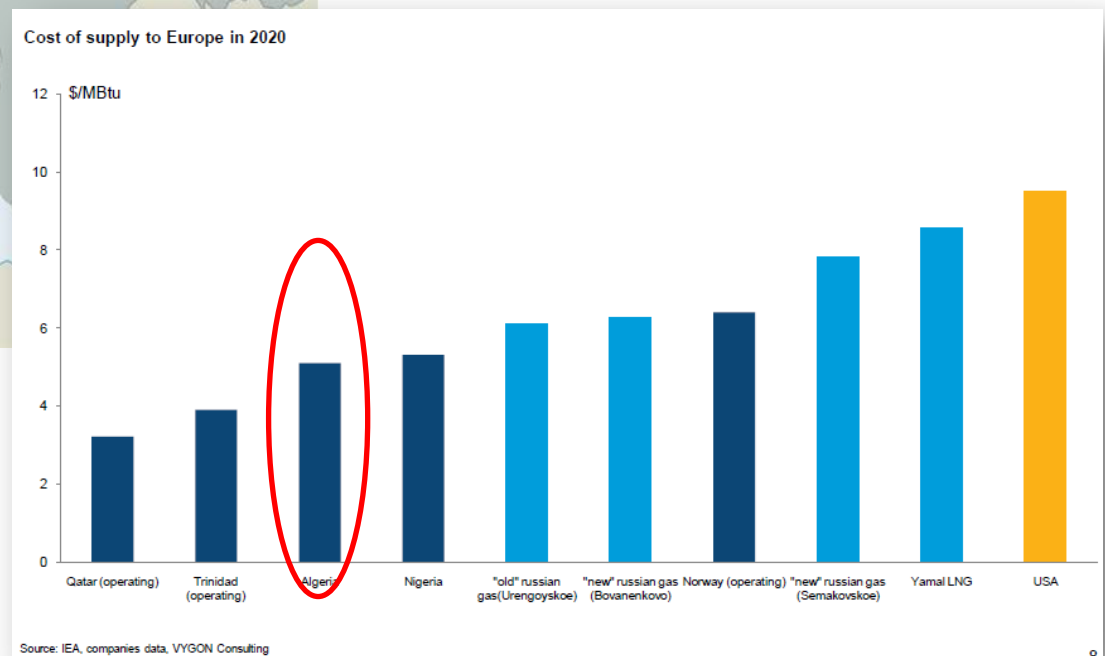
How to
increase
diversification?

- Increase of the conventional production in Europe?
- Shale Gas production in Europe?
- **Additional supplies from existing trading partners?**
- **Expansion of LNG Trading?**
- Access to new supply sources?

Competitive gas supplies to Russian gas are sought



Eastern Europe highly depends on one supply source



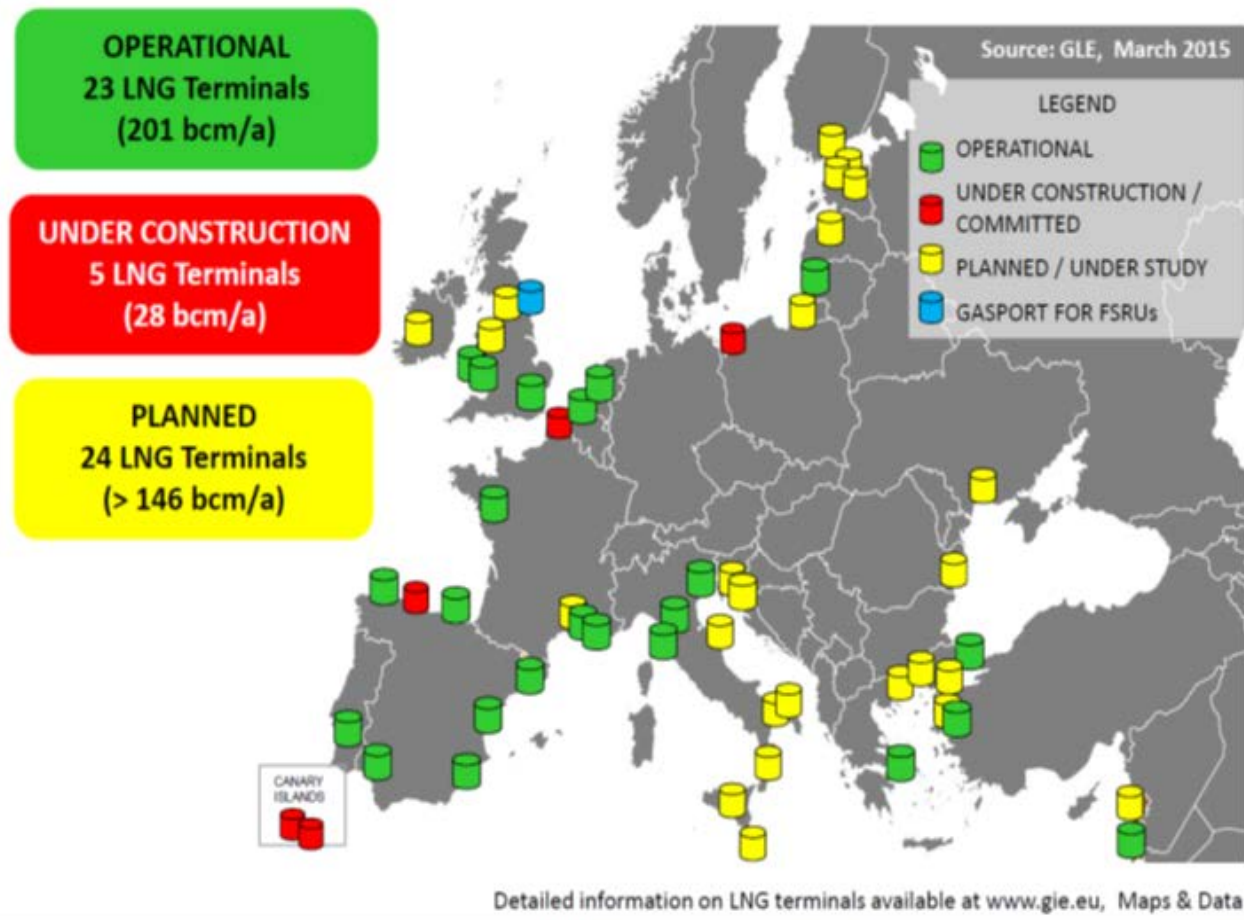
Source: Russia energy outlook: an analysis of gas market in 2015; Maria Belova, VYGON, Presentation at the 4th Annual European Gas Price Structuring and Market Liquidity Forum , 5-6 February 2015 Berlin

Sufficient LNG capacity in Western Europe – low utilization rate



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- LNG import capacity 201 bcm/a
 - Mostly in Spain, Portugal, France, UK, Belgium, Italy
- In 2013 utilization rate of 24%



How have gas producers react to the increasingly competitive market in Europe?



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Gazprom: asset focussed, entering enduser market

- At the beginning in opposition, afterwards reluctant to changes in LTC, but then forced to do
- Investing in pipelines to supply Europe (North Stream, Turkish stream)
- Using and investing in storages in Europe to secure long term supplies

Statoil: Focus on trading

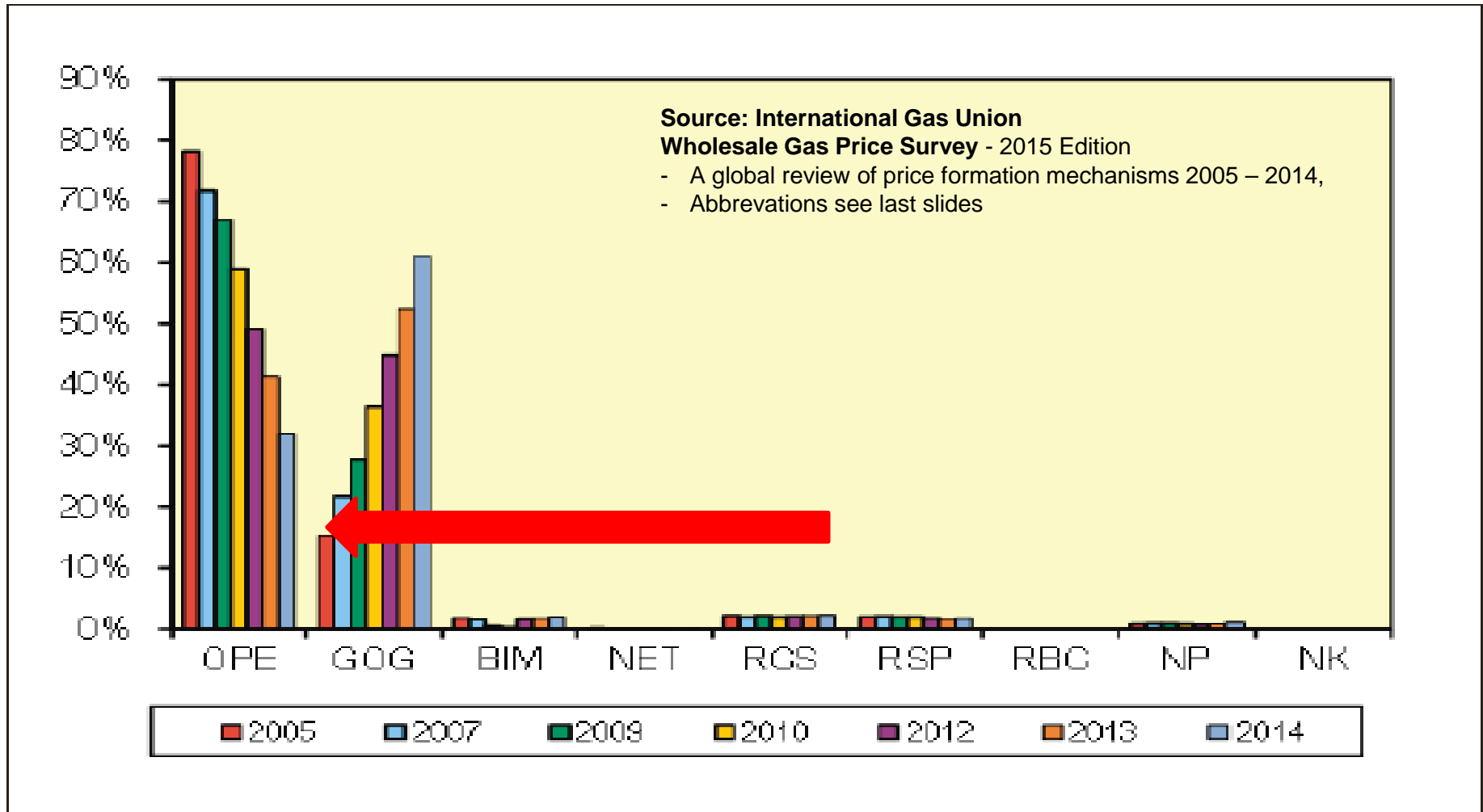
- Proactive on changes in LTC Supplying wholesalers and end costumers like power plants
- Active player on hubs

Sonatrach: ??



Oil price indexation is history!

Figure 4.8. Europe Price Formation 2005 to 2014

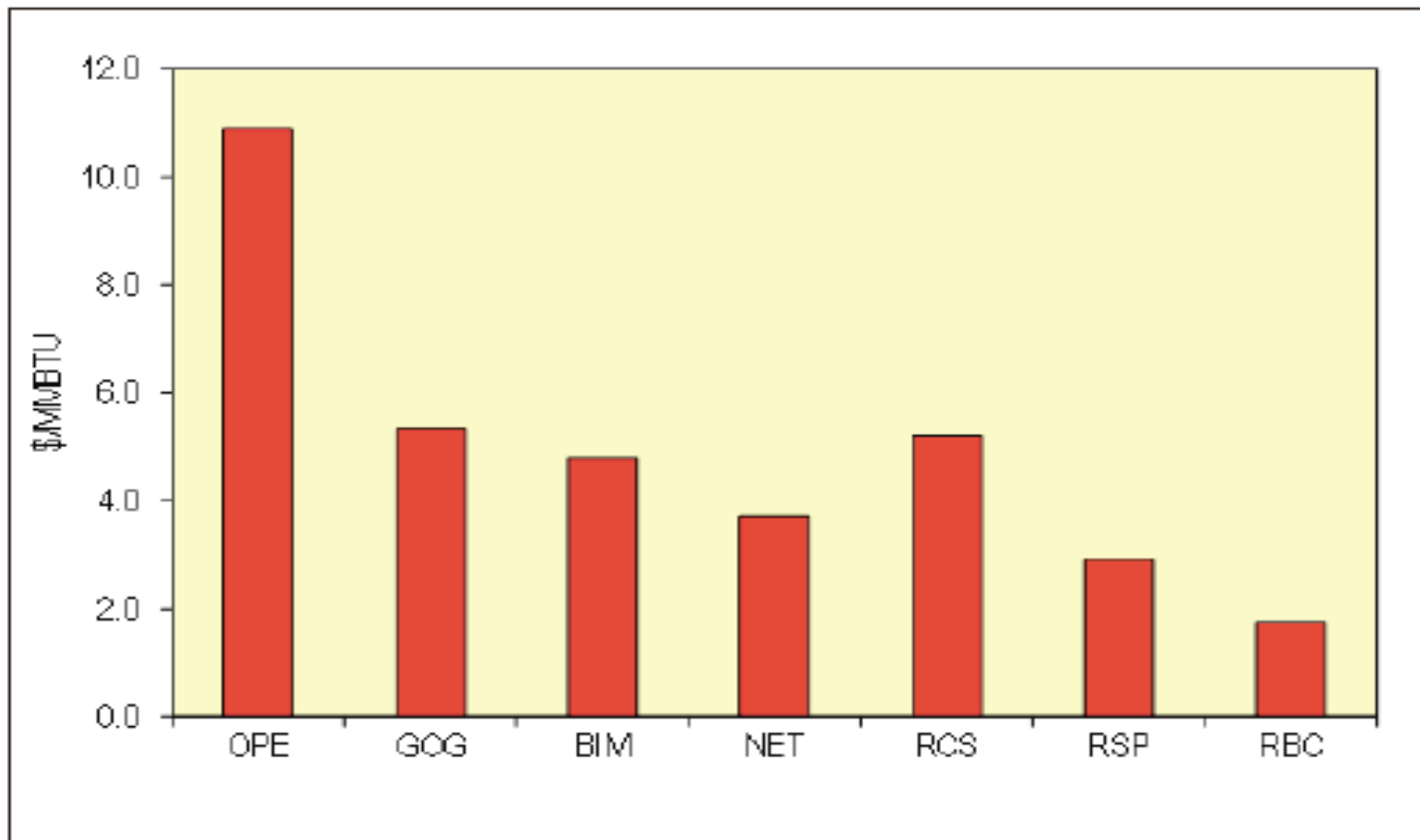


Oil Indexation led to high wholesale prices in 2014



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Figure 3.14. Wholesale Prices in 2014 by Price Formation Mechanism



**Source: International Gas Union
Wholesale Gas Price Survey - 2015 Edition**
- A global review of price formation mechanisms 2005 - 2014



Abbreviations to slide 14 and 15

TYPES OF PRICE FORMATION MECHANISMS	
Oil Price Escalation (OPE)	The price is linked, usually through a base price and an escalation clause, to competing fuels, typically crude oil, gas oil and/or fuel oil. In some cases coal prices can be used as can electricity prices.
Gas-on-Gas Competition (GOG)	The price is determined by the interplay of supply and demand – gas-on-gas competition – and is traded over a variety of different periods (daily, monthly, annually or other periods). Trading takes place at physical hubs (e.g. Henry Hub) or notional hubs (e.g. NBP in the UK). There are likely to be developed futures markets (NYMEX or ICE). Not all gas is bought and sold on a short term fixed price basis and there will be longer term contracts but these will use gas price indices to determine the monthly price, for example, rather than competing fuel indices. Also included in this category is spot LNG, any pricing which is linked to hub or spot prices and also bilateral agreements in markets where there are multiple buyers and sellers.
Bilateral Monopoly (BIM)	The price is determined by bilateral discussions and agreements between a large seller and a large buyer, with the price being fixed for a period of time – typically this would be one year. There may be a written contract in place but often the arrangement is at the Government or state-owned company level. Typically there would be a single dominant buyer or seller on at least one side of the transaction, to distinguish this category from GOG, where there would be multiple buyers and sellers.
Netback from Final Product (NET)	The price received by the gas supplier is a function of the price received by the buyer for the final product the buyer produces. This may occur where the gas is used as a feedstock in chemical plants, such as ammonia or methanol, and is the major variable cost in producing the product.
Regulation: Cost of Service (RCS)	The price is determined, or approved, by a regulatory authority, or possibly a Ministry, but the level is set to cover the “cost of service”, including the recovery of investment and a reasonable rate of return.
Regulation: Social and Political (RSP)	The price is set, on an irregular basis, probably by a Ministry, on a political/social basis, in response to the need to cover increasing costs, or possibly as a revenue raising exercise – a hybrid between RCS and RBC.
Regulation: Below Cost (RBC)	The price is <i>knowingly</i> set below the average cost of producing and transporting the gas often as a form of state subsidy to the population.
No Price (NP)	The gas produced is either provided free to the population and industry, possibly as a feedstock for chemical and fertilizer plants, or in refinery processes and enhanced oil recovery. The gas produced maybe associated with oil and/or liquids and treated as a by-product.
Not Known (NK)	No data or evidence.



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