

29/10/2012

# OIL & GAS MODELLING

## Can we model European Gas Prices?

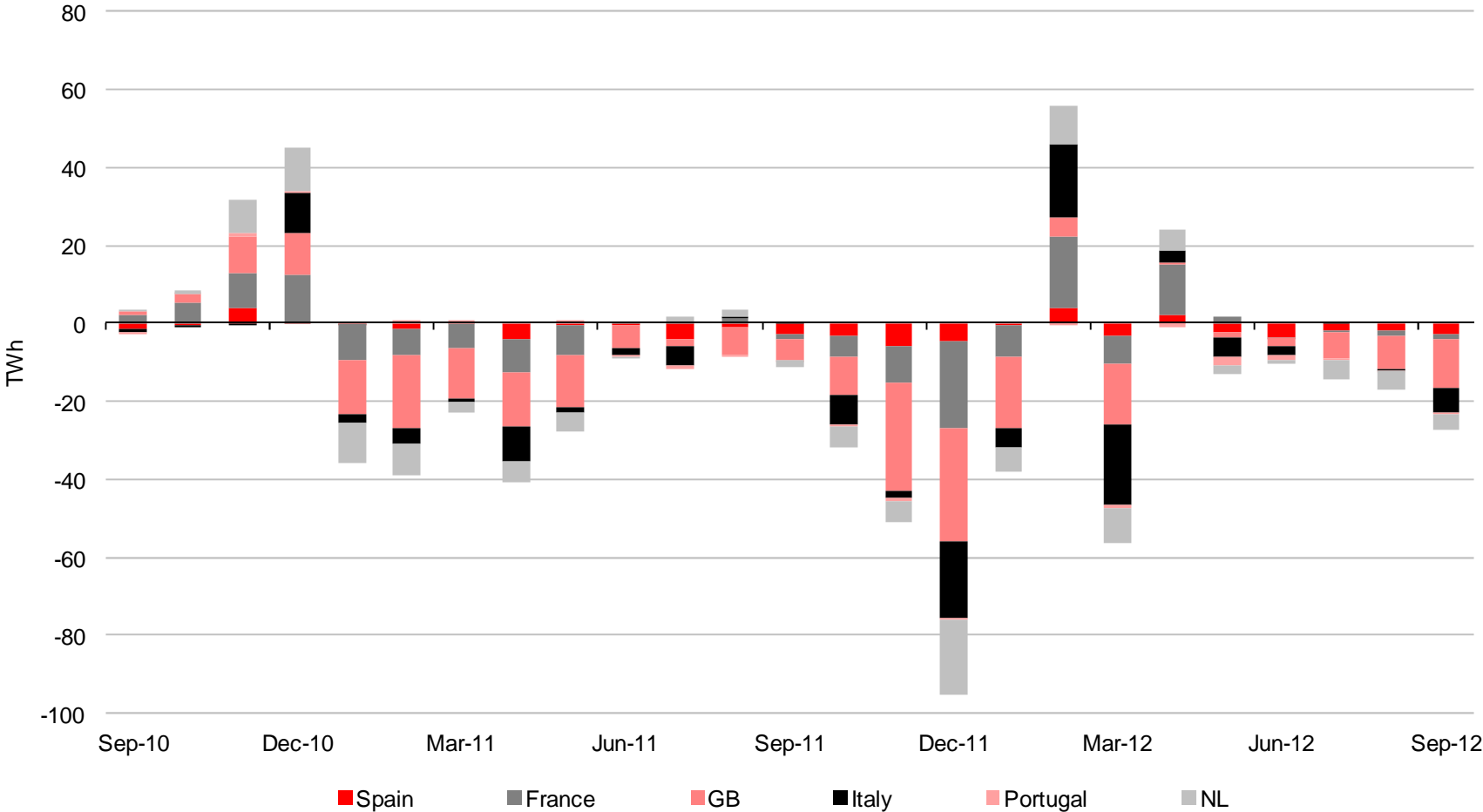
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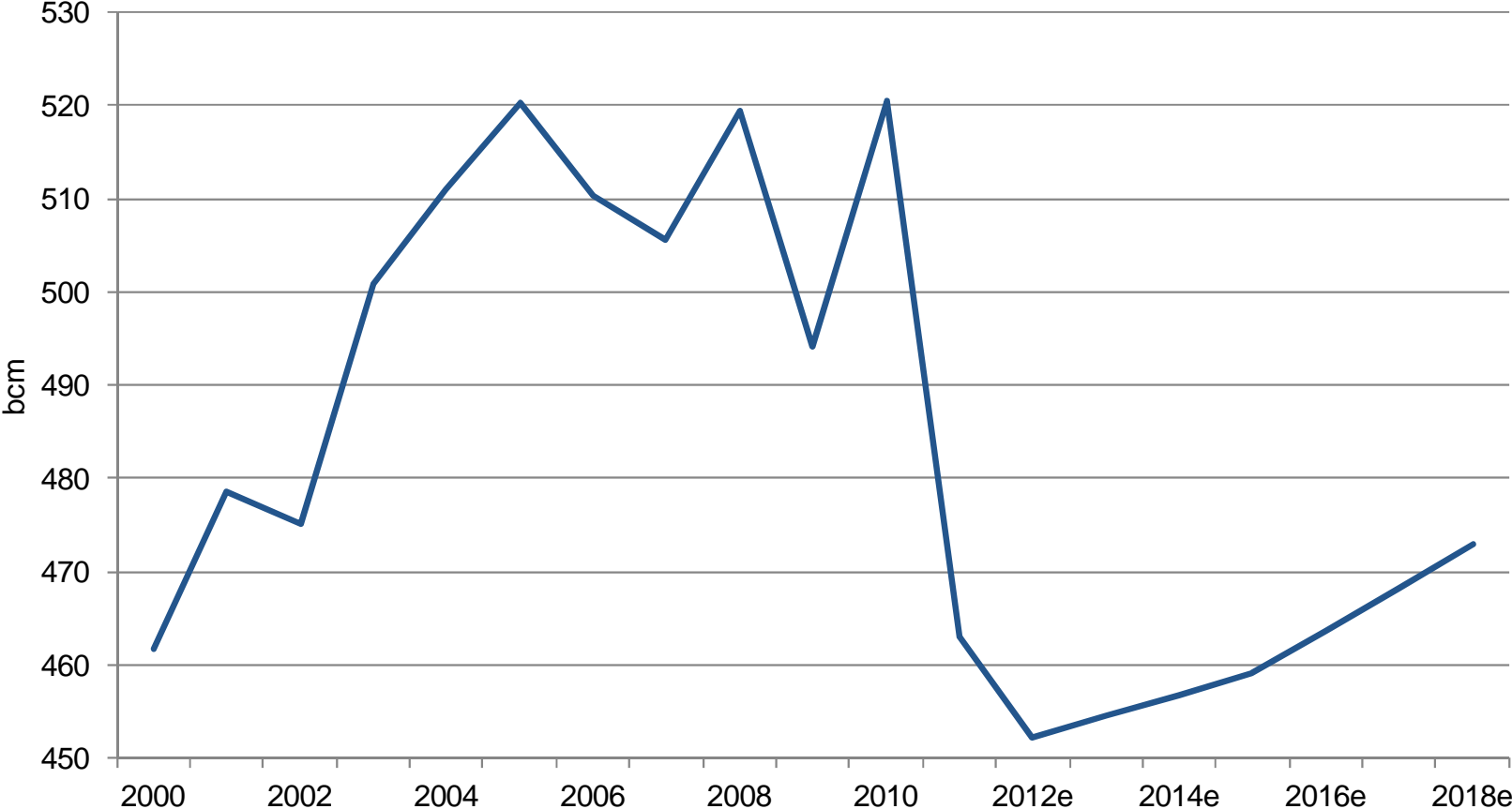
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# SG GAS PULSE: -4.4% IN JAN-SEP 2012 VS JAN-SEP 2011



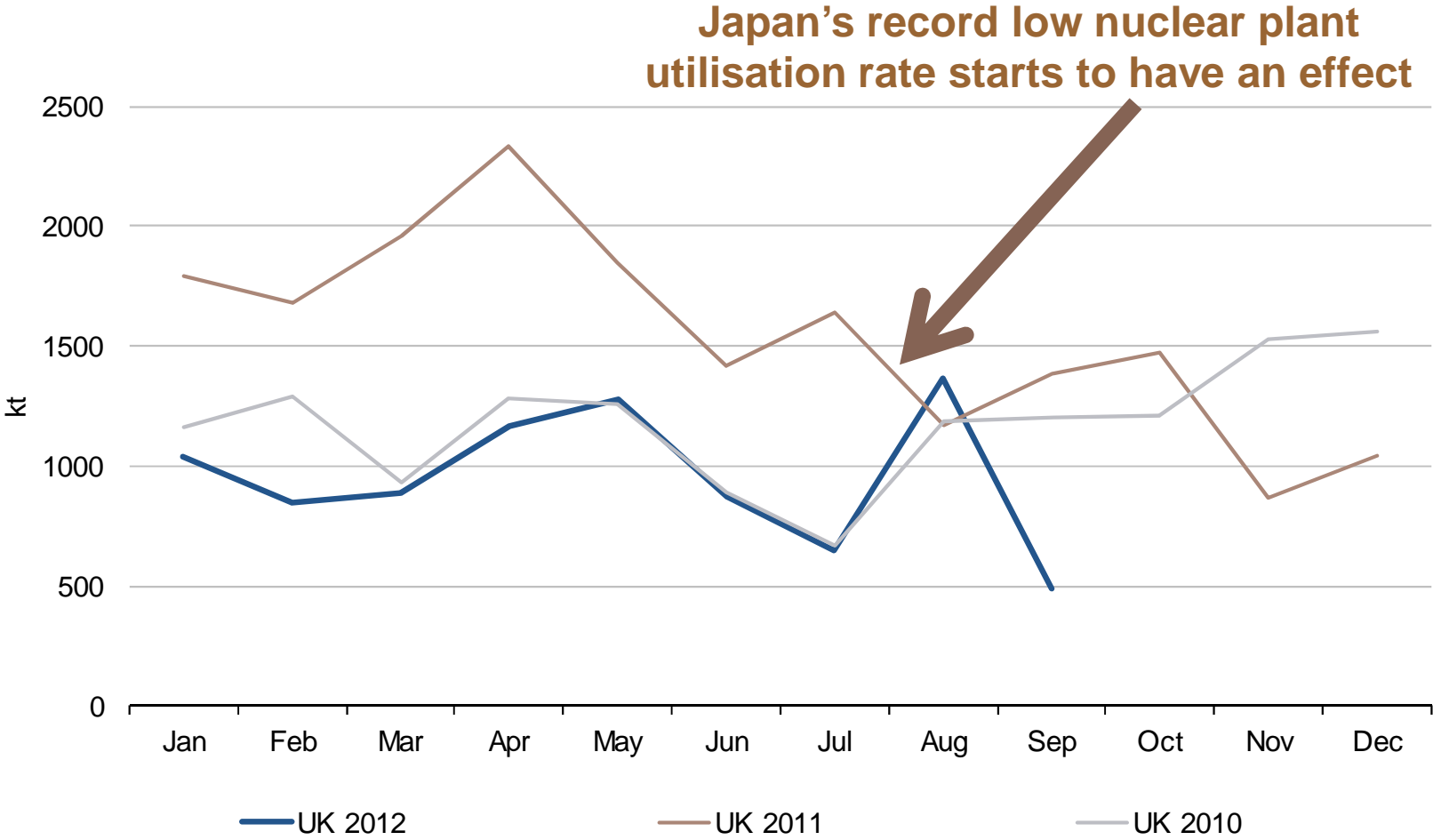
Source: SG Cross Asset Research, GRT Gaz, TIGF, National Grid, Enagas, REN, Snam, GTS Netherlands

# TEPID EUROPEAN GAS DEMAND



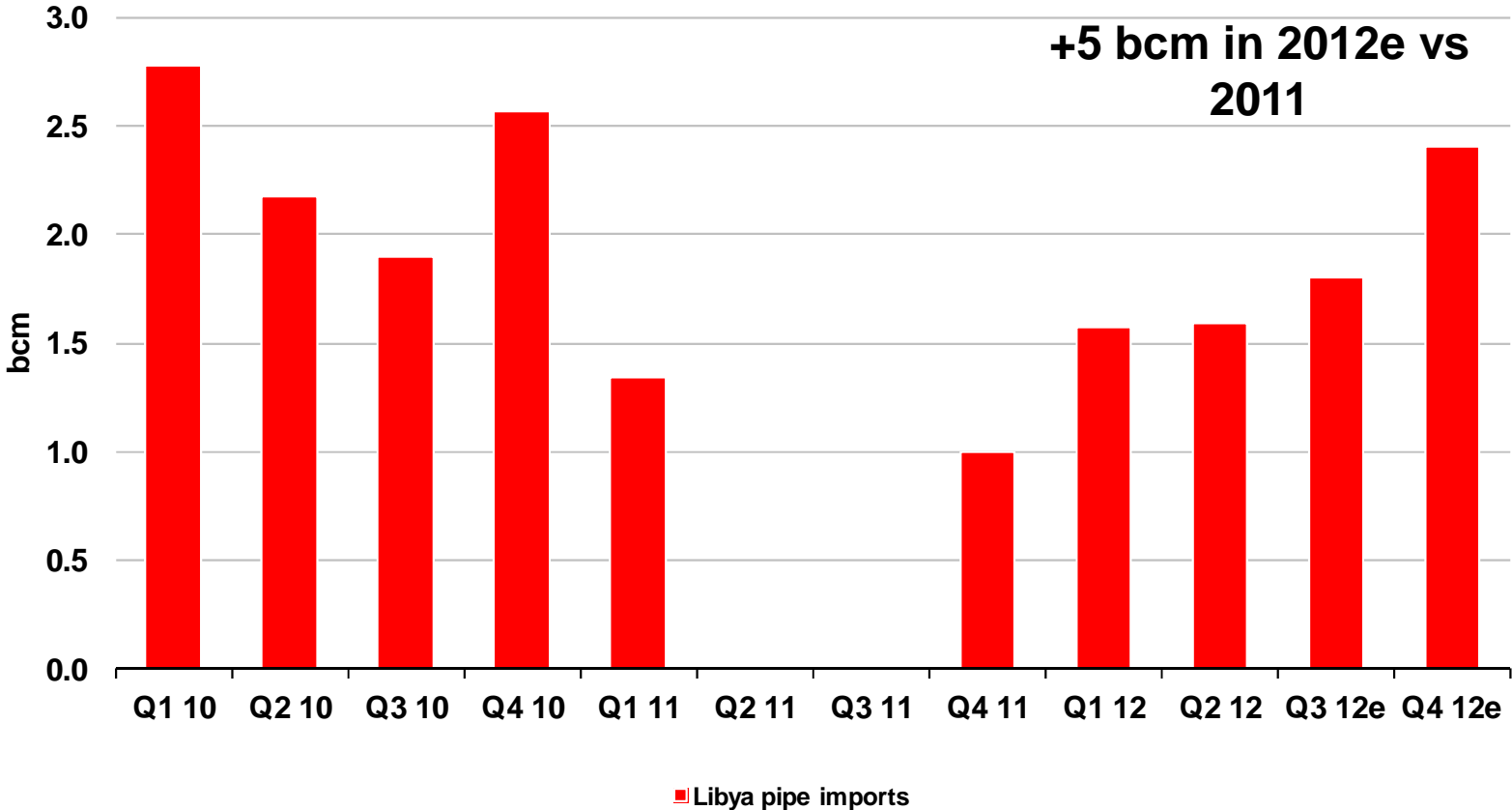
Source: IEA for historical data, SG Cross Asset Research estimates

# UK LNG IMPORTS



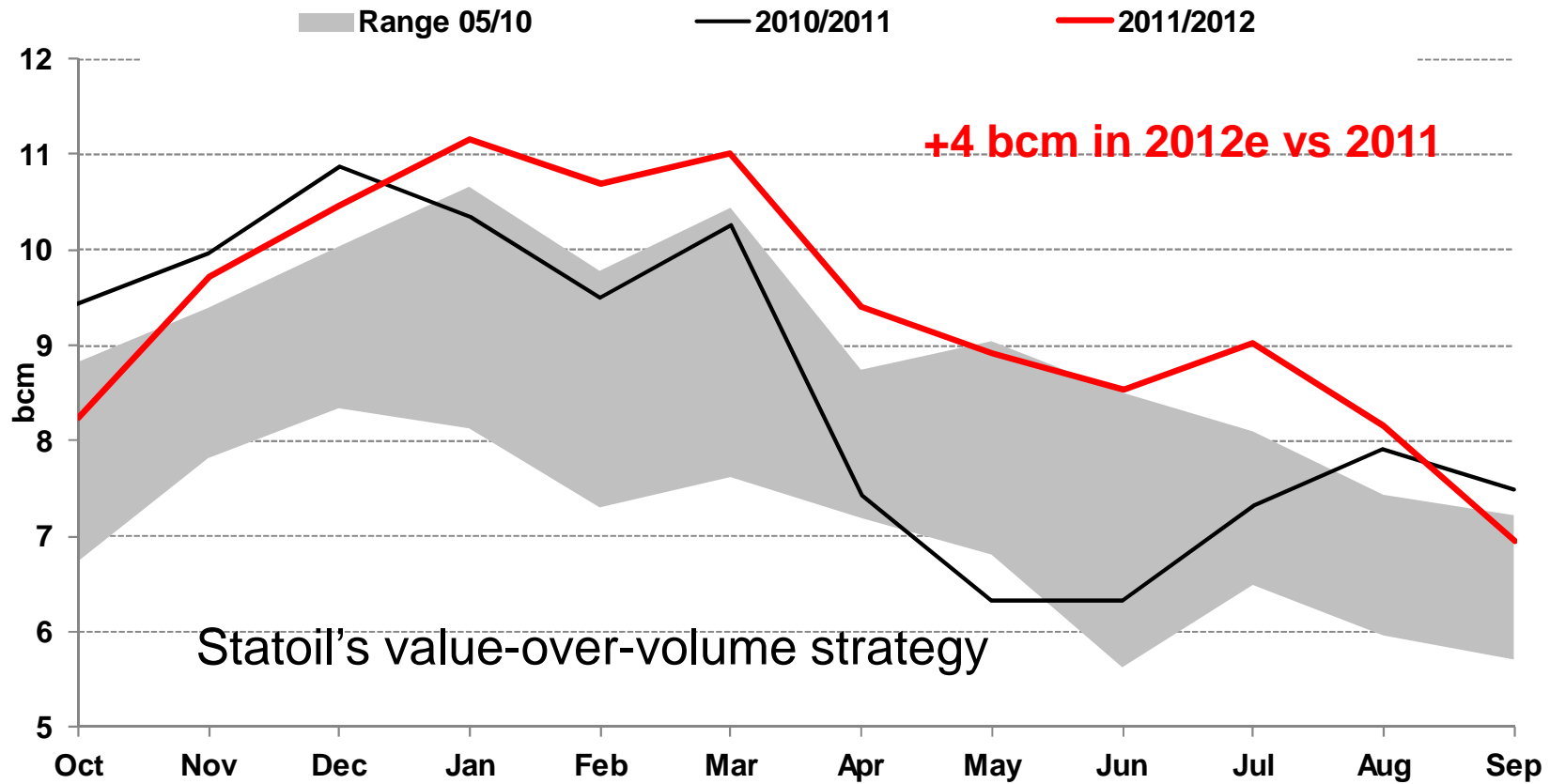
Source: SG Cross Asset Research, Waterborne

# GREENSTREAM FLOWS



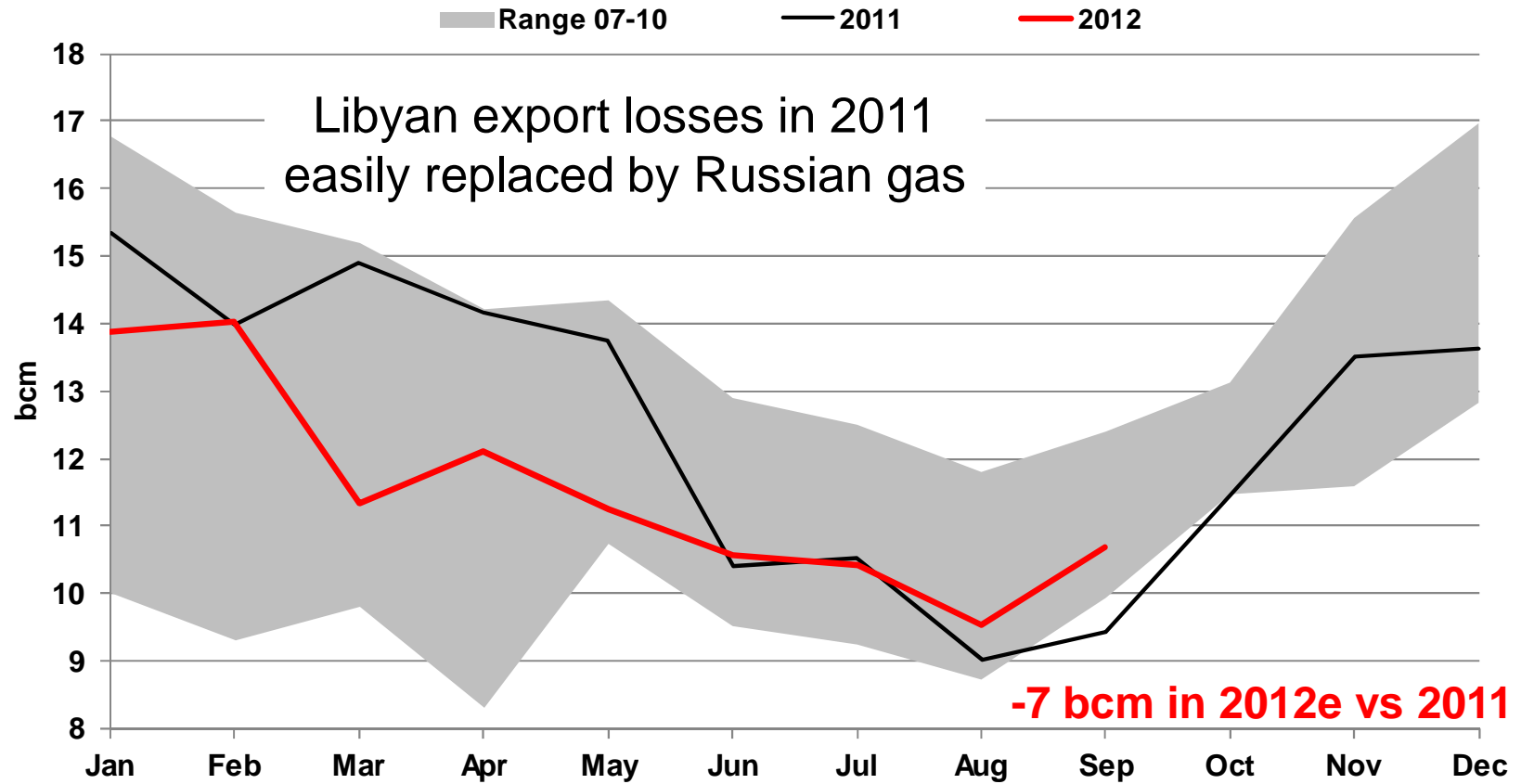
Source: SG Cross Asset Research, Snam Rete Gas

# NORWAY MONTHLY PRODUCTION



Source: Norwegian Petroleum Directorate, SG Cross Asset Research

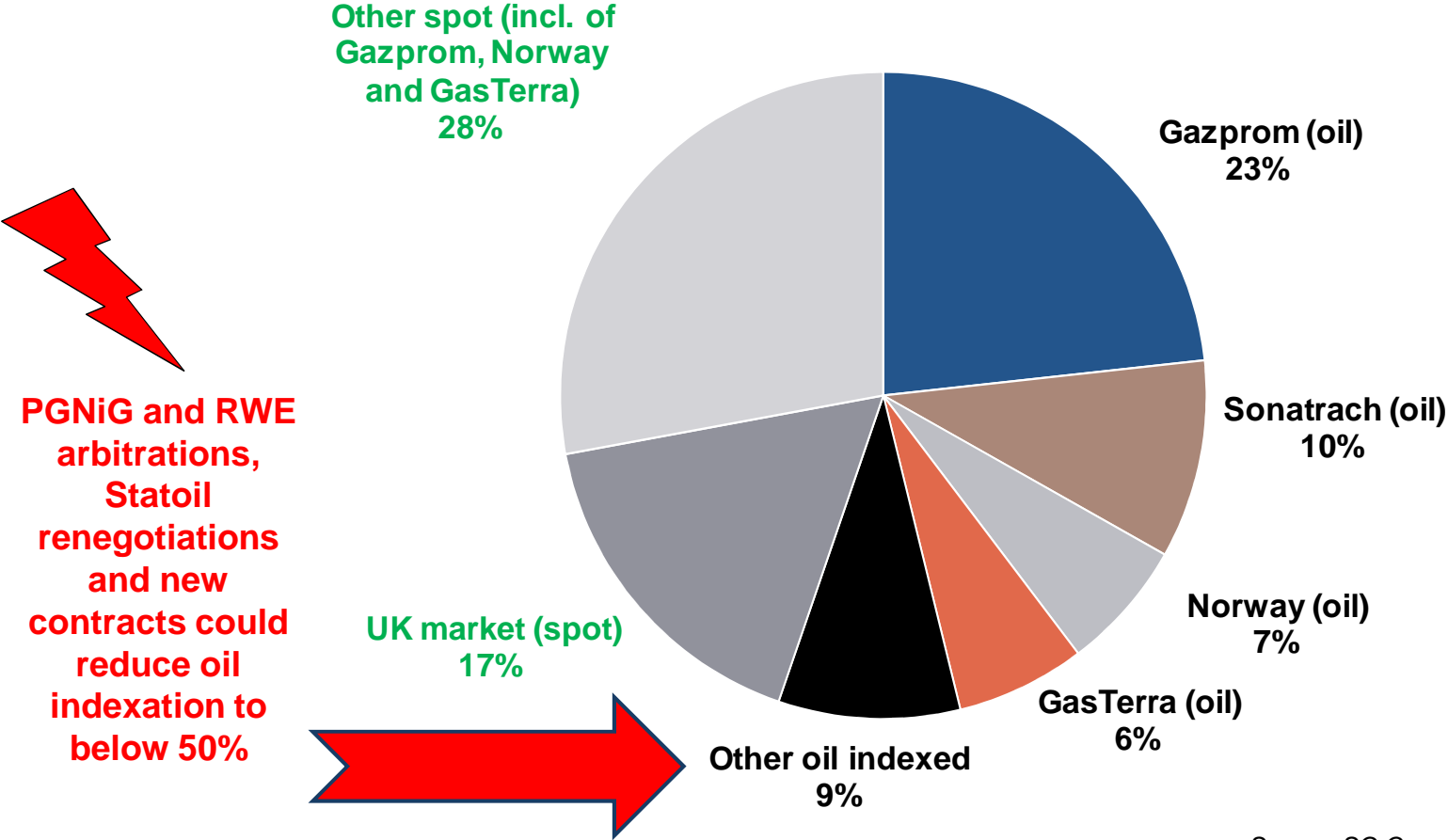
# GAZPROM EXPORTS TO WESTERN EUROPE



Source: SG Cross Asset Research

# EUROPEAN SUPPLY: ON THE VERGE OF BEING MOSTLY SPOT-INDEXED

Split of European gas supply in 2012e  
**55% oil-indexed**

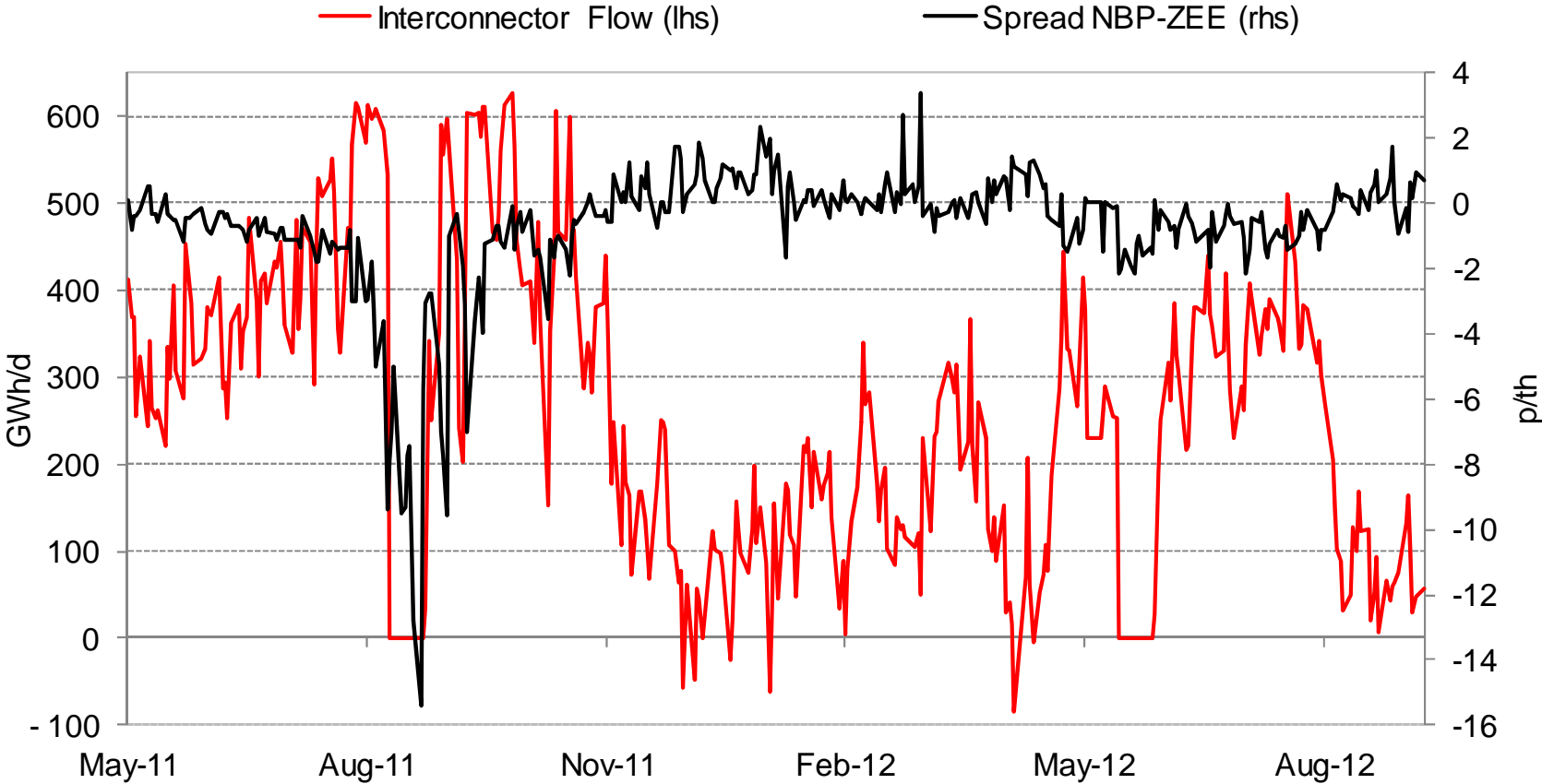


Source: SG Cross Asset Research



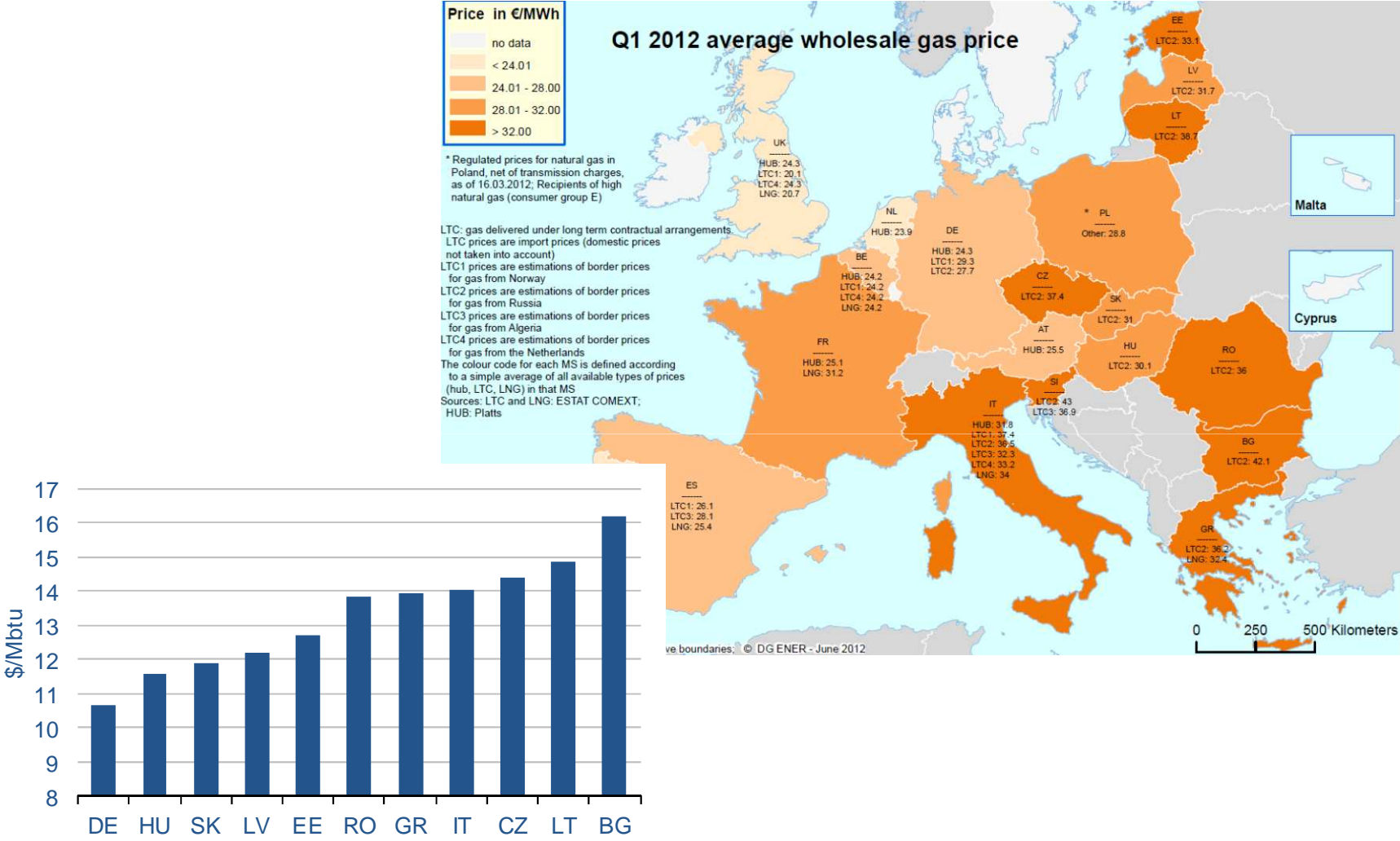
# HUB PRICING ALREADY HIGHLY CORRELATED

**Low demand → Infrastructure flexibility →  
Increased correlation between European hubs  
Spot spreads are linked to short-term supply issues**



Source: Reuters / SG Cross Asset Research

# BUT MANY CONTRACTUAL PRICES...



Source: European Commission / Quarterly Report on European Gas Markets / SG Cross Asset Research

## CAN WE MODEL EUROPEAN GAS PRICES?

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- In Europe, analysts need to look at government and company strategies, traders' psychology, etc.
  
- Today, prices vary from one region to another: oil-indexed prices, hubs
  
- Tomorrow, will prices differ based on final use?
  - Long-Term Take or Pay contracts
    - ▶ Some degree of oil indexation for residential customers where utilities have the ability to pass on increases to customers
  - Poor liquidity & Foreign National Oil Companies control c.50% of European supply
    - ▶ Some spot pricing for industrial uses - One major European index hub
  - Fuel switching
    - ▶ Emergence of an electricity-linked gas price to boost gas as a fuel for power generation – CCGT to operate on a tolling basis

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