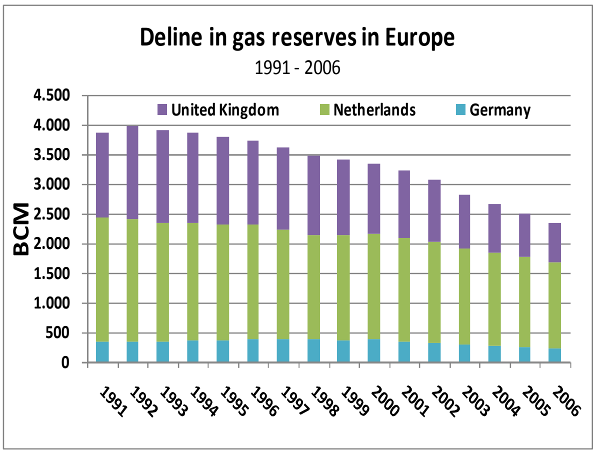
National Energy Forum 2008

LNG from a European Context

Stuart Edwards – Commercial Director, 4Gas BV
Amsterdam 27th November 2008

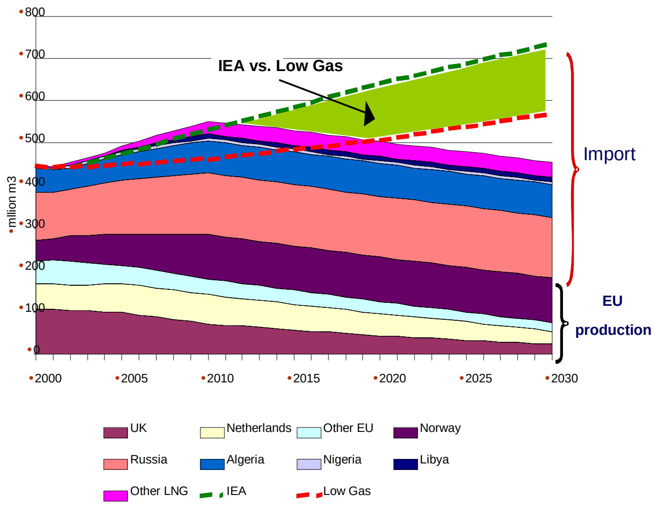
European gas supply demand in context

- Europe has a deep solid and politically stable gas market.
- Demand is steadily increasing but at the same time European indigenous production is in decline.
- This leads to increased imports dependency.



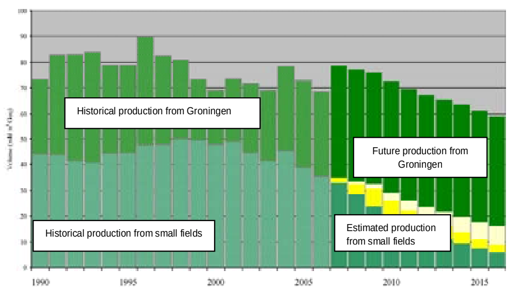
The following are important in order for the EU to attract gas supplies

- Good relationships with the major gas-export countries
- An investment climate for gas infrastructure to encourage enhancement of import, transit and interconnection facilities
- Removal of blockages or limitations on energy purchase options
- Diversification of EU imports to promote security of supply for Europe



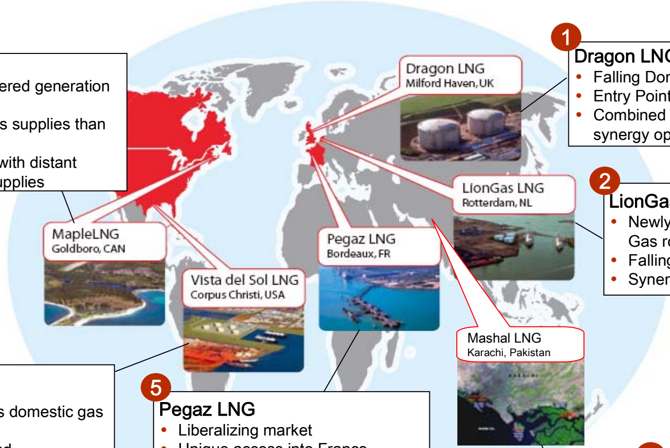
The Netherlands also has to make choices

- The Netherlands is one of the largest producers in Europe
- Remaining life of the Groningen field (1000 BCM estimated end 2007) is more than 20 years but reserves preservation is important
- The chart shows an estimate prepared buy the group responsible for monitoring all the production in The Netherlands for oil and gas on behalf of the government.
- Clearly reserves depletion is an issue shared by all EU members



4Gas currently has six terminals under development

Regasification terminal projects and rationale



1 Dragon LNG
- Falling Domestic Supply
- Entry Point to Europe
- Combined infrastructure synergy options

2 LionGas LNG
- Newly developed hub – Gas roundabout
- Falling domestic supply
- Synergy options

3 MapleLNG
- Growing gas-powered generation demand
- Closer to overseas supplies than Gulf of Mexico
- LNG competitive with distant domestic piped supplies

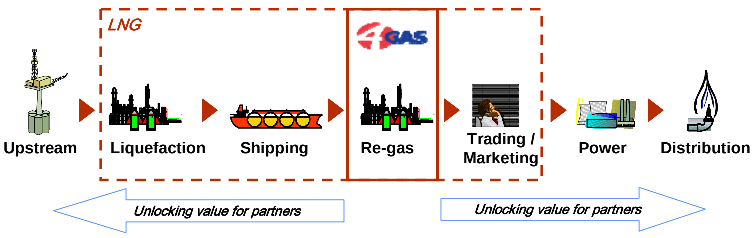
4 Vista del Sol LNG
- Reduced economics domestic gas production
- Growing gas demand
- Very large gas market

5 Pegaz LNG
- Liberalizing market
- Unique access into France
- High local demand region with a good gas infrastructure

6 Mashal LNG
- Mature gas economy with reduced gas supply
- Willing to pay global LNG prices

4Gas plays in an attractive part of the natural gas value chain

Gas and LNG value chain – 4Gas focus



- 4Gas' core business is to operate LNG import, storage and regasification terminals on a global scale – which is an attractive position in the chain
  - Lowest cost part of chain
  - Terminals do not naturally operate at full capacity, which is not the operator's risk
- Through these terminals 4Gas unlocks value for its partners in the gas value chain
  - Synergies with power plants
  - LNG price arbitrage, power-gas arbitrage and storage
- 4Gas is uniquely positioned in the sector and builds on excellent relationships with LNG producing countries and off-takers

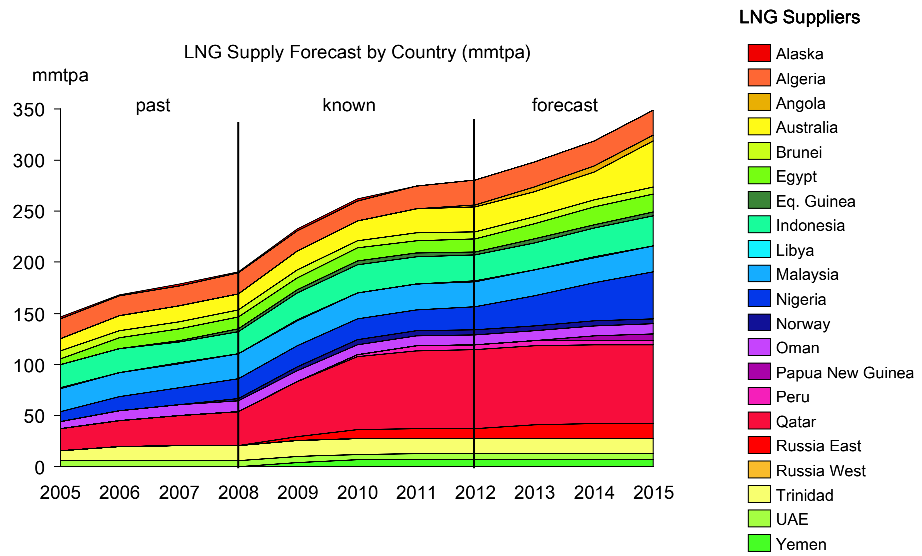
Is LNG important for the EU – Yes because……..

- LNG provides a new route to gas
- Multiple global LNG supply purchase opportunities also help to broaden the competitive environment
- LNG provides an arbitrage value to the extent that the buyer can participate in arbitrage plays (i.e. buyer can replace gas on pipe or was intending to sell gas via hubs)
- Even without long term LNG "in the bag" the fact that a buyer could buy LNG (via its regas positions) provides leverage in the negotiation of pipeline import gas purchases and contract renewals.
- LNG increases diversity not only via access to new gas resources but also because problems with any particular LNG source (which are rare) can be mitigated via access to other LNG sources. In other words LNG regas positions and LNG Vessels can access all suppliers worldwide whereas a pipeline will always have two end points !

The broad impact of LNG in the EU

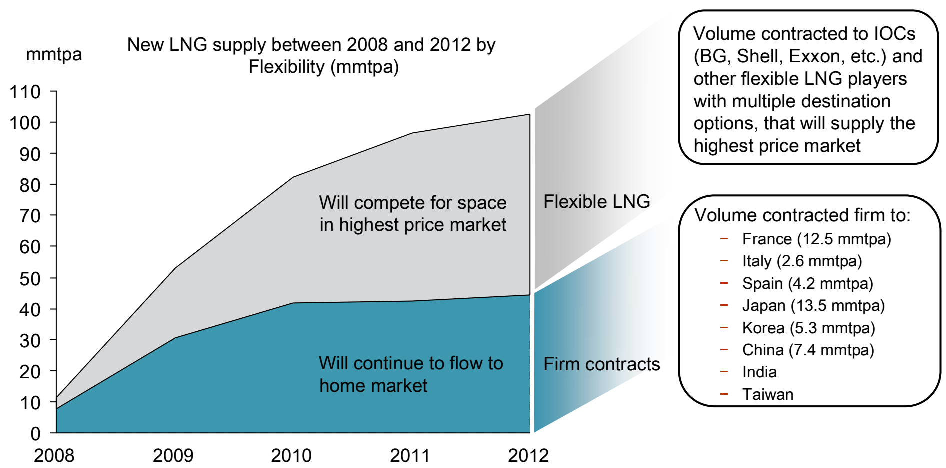
For buyers	For suppliers
Gives buyers access to a more diversified range of gas sourcing options. In some countries LNG is base-load (e.g. Spain and France)	Provides a solid credit worthy market for gas – i.e. monetization of reserves
Can play a part in pipeline deals via increased leverage for the buyer in gas supplier discussions	Gives access to liquid gas trading hubs.
Decreases volume risk (you can always buy LNG its just a question of price)	Decreases volume risk (you can always sell LNG via a traded hub its just a question of price)
Promotes new gas into the growing EU hubs and in general increases liquidity	Can add another index (diversity) to the portfolio of LNG price indexation
Increases send out and storage optionality via the inherent flexibility in the regas terminal (seasonal, daily and within day effective storage)	Promotes closer trade agreements at government level (energy is all about politics)
Scope for diversion (arbitrage) economic upsides.	Scope for diversion (arbitrage) economic upsides.

Current worldwide LNG supply is 180 mmtpa and will increase to 280 mmtpa in 2012 (all under construction)



Source: Woodmackenzie

By 2012 the majority of the new LNG supply (60 mmtpa) will be flexible contracted LNG, and will go the highest priced market



Source: Woodmackenzie

What of LNG supply – is it really a tight market ? A quick reality check…..

- Qatar is currently building 6 trains each over 10 BMCA – all hitting the markets by 2012. Add to this Sakhalin 2, Yemen, Tangguh, Angola, Skikda rebuild & Peru.
  - That's 140 BMCA of new additions in the next 4 years (all under construction)
  - In fact there is more LNG afloat today than there has ever been and new liquefaction in construction is at its highest level ever
- New proposed liquefaction is also at high levels although progress is currently cautions
  - construction cost are still high but arguably have leveled out
  - finance concerns (new given current financial crisis)
  - NOC preference to supply domestic before export
  - Current liquefaction log-jams will clear – its just a question of time
- LNG until only 2 or 3 years ago was denoted as "east" or "west" of Suez. However, today we have a real global LNG market. Supply can come from anywhere and importantly the shipping fleet is there to make it happen.
  - More markets can access more supply, thinking is now global

Reality check continued…..

- So where is all the new LNG going ?
  - Mostly liquefaction in construction was sanctioned on the basis of Atlantic markets but some has been diverted long term to Asia (e.g. Qatar deals 2007/8).
- Can Asia continue to take spot and long term LNG at prices close to 20 $/mmBtu. No – not as we see it….
  - Japan, Korea and Taiwan demand growth is relatively flat
  - India – new Krishna Godavari gas will dampen LNG appetite
  - China – ability to maintain pricing subsidies in the long term is debatable
  - Current spot activity is based on high oil pricing and nuclear power outages.
  - The current shift of Atlantic produced LNG to Asia has never happened before. The spot trade drivers towards Asia in 2007/8 are short term factors and do not denote a systemic shift towards Asia
- For new deals – indexation and diversion flexibility are key
  - LNG for Europe is available but suppliers need to be convinced about new hub pricing
  - Regulatory uncertainty can also hinder interconnection infrastructure and new regas facilities
  - Suppliers are now looking for index diversity – i.e. its good to have your LNG sales linked to a number of pricing measures
- <u>In short it's a cyclical business</u>

A quick word about financing

- No doubt the impact of the current financial crisis is having and effect but….
  - There is still appetite for long term, low risk deals supported by strong balance sheets,
  - The interest rates are slightly higher,
  - The debt service coverage ratios for deals are slightly higher, in other words a project company would need to generate more cash in comparison to its debt service obligations
  - There may also be an impact on the debt/equity ratio but high leverage is still workable (80/20),
- Right now is arguably not a good time to raise finance but the situation changes from day to day.

Summary

- Europe remains a strong market for gas, the long term fundamentals are good
- But – with indigenous supply in decline we have to increase imports
- Import options via pipelines will remain an important part of the supply mix but optionality and diversity are keys for future success
- LNG is important as part of the supply mix for Europe as it adds a global supply dynamic to what would otherwise be a local market balance
- LNG supply is available but the current spot activity focus towards Asia has somewhat confused the picture.
  - Today is definitely not tomorrow !
- LNG supplies into new markets in Europe will come. However,
  - Suppliers are playing to an extent a “wait and see” strategy
  - Suppliers need to get comfortable with new hubs and pricing and importantly how the hubs will change in the future

4GAS

Dedicated to LNG