Global gas demand growth accelerates at 2.4%/y
More rapid than total energy demand growth

- Global gas demand increases by 510 bcm over 2010-16
- Europe all but stagnates, but is linked to growth centers by LNG
  - Limited growth due to weather adjustments as 2010 was exceptionally cold
OECD Europe: sluggish demand growth

- Aging population, improving efficiency in building stock
- Industry is barely recovering from the economic crisis
  - Loss of competitiveness in chemicals etc. to the “cheap gas regions” (US, Middle East)
- Sluggish power demand growth due to macro economic conditions
- Rapidly increasing renewables
- Gas is competing at the margin with relatively expensive coal
German nuclear moratorium: European scale effects

Where the replacement of German nuclear comes from?

- Gas currently plays a minor role in the replacement, compared to coal and (French) nuclear
Renewable energy: the Nº1 driver of the EU energy system

Growth of renewable electricity in OECD Europe, actual and IEA projections, TWh

BUT: Can a 50 billion euro/year investment drive be sustained in a financial crisis?

10% of 2010 EU gas demand burned in gas plants

German nuclear in 2010
Even with policy success, gas will be needed to deliver CO$_2$ reductions

German electricity mix with 10% demand reduction, no nuclear, 35% renewables and CO$_2$ at the target level
Supply 1: European production – decline even with shale gas
Why the shale gas revolution can not be copy-pasted from the US

- “Wrong rocks” - geology is more favorable in the US
- Higher population density, public skepticism about the industry – more New York than Texas
- Lack of an onshore industry tradition – skilled labor, service companies, equipment flown in from Houston etc.
- But: shale competes with oil indexed Russian gas at 3 times the Henry Hub price
Supply 2: CIS

- Russia: can and will increase supply, based on Yamal - on the basis of oil indexed contracts
- Southern corridor from the Caspian: the gas is there, the projects not
- Turkmenistan: Did Europe miss the boat?
- The game changer to watch: competition of domestic and import gas in China
Future LNG Production Capacity

- Six LNG projects FID since 2010 (5 in Australia, 1 in Indonesia)
  - Another FID taken end September 2011 for Wheatstone
- Second LNG Wave of 90 bcm expected over 2012-17
  - Mostly from the Pacific and targeting Asian markets
  - Will it be on time?
- Global LNG production capacity could reach up to 540 bcm by 2020
EU becomes more dependent on gas imports

European Union gas imports and as share of gas demand in the GAS Scenario, 2008-2035

As European gas demand import grows by 250 bcm, the dependence of EU on gas imports reaches 85% by 2035
Conclusions

- Gas demand will grow rapidly over the next five years, but hardly at all in Europe.

- Change in the composition of European demand

- With declining production and lackluster potential for shale gas, Europe’s need for gas imports will increase.

- Pipeline gas from Russia will likely benefit the most from this increased demand.

- Development of the Southern Corridor is still lagging; a key uncertainty is what happens with Turkmen gas.

- Fallback for Europe could be increased imports of LNG - but will be competing with buyers from Asia. Australian producers will have the biggest incremental supplies.