

Vattenfall Capital Markets Day 2009

Presentation by:

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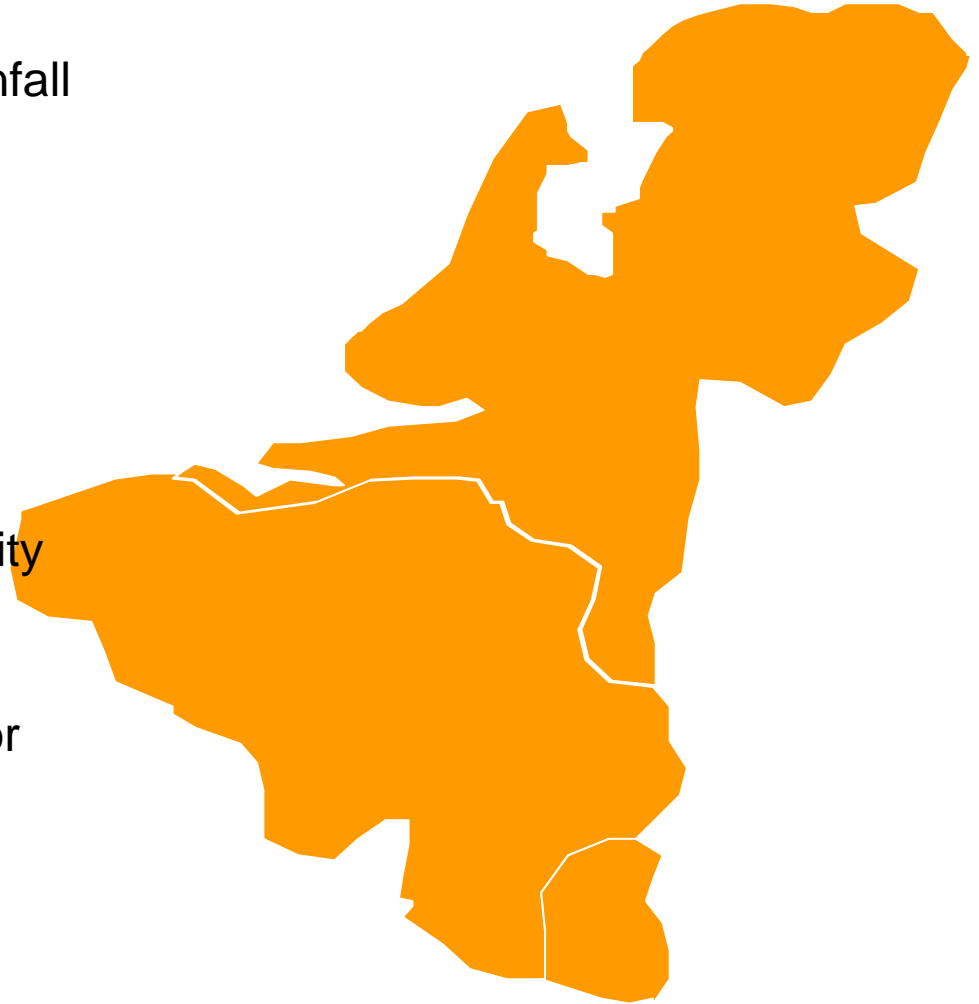
Amsterdam, 23 September 2009

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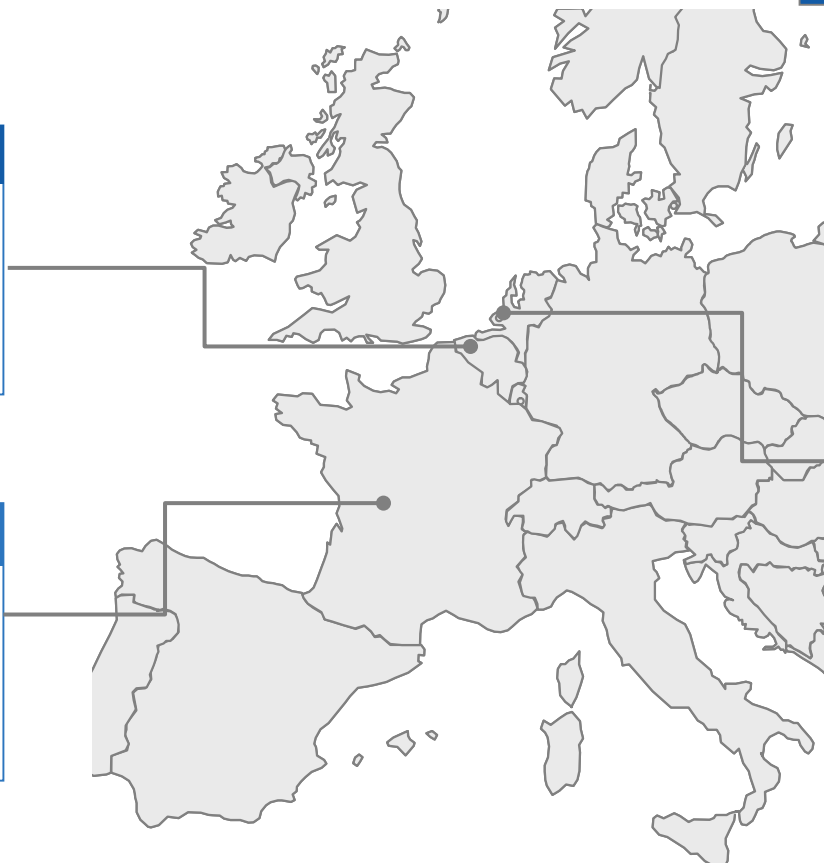
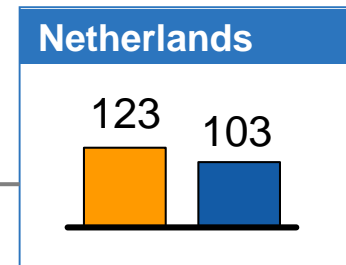
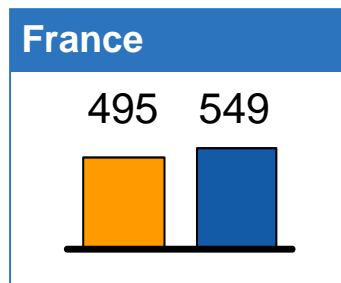
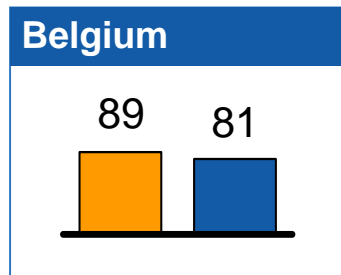
Key elements Benelux market

- Well connected to existing Vattenfall markets
- Great CO₂ reduction and renewables opportunities
- Emerging as a biomass hub
- Benelux power production capacity needs renewal
- Strengthening its role as a hub for European gas



Supply and demand fundamental, electricity

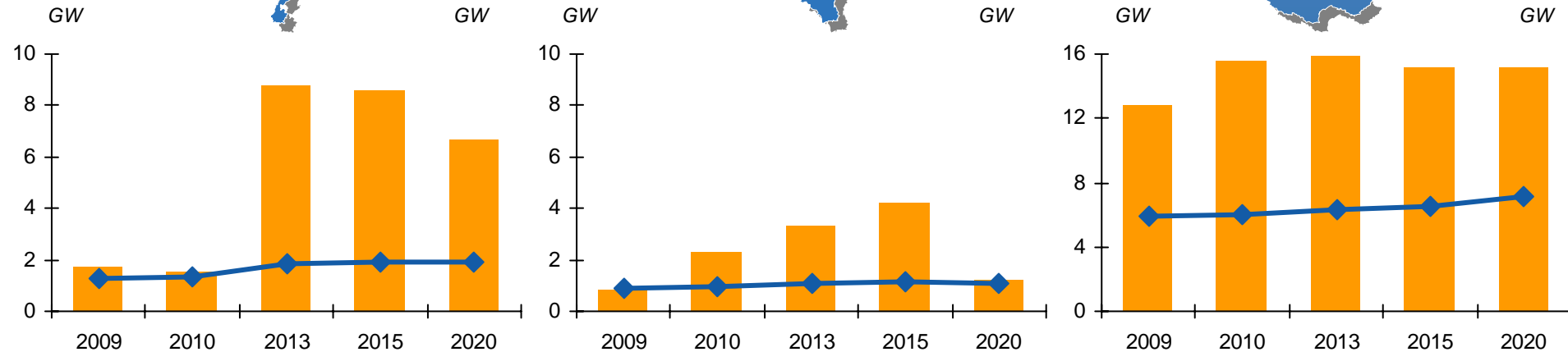
- Electricity demand, 2008 (TWh)
- Electricity generation, 2008 (TWh)



Source: Eurelectric

Generation capacity situation Benelux

Remaining capacity*
Security level



- Large increase of capacity until 2015 results in sufficient remaining capacity
- However, if announced projects are not executed, security of supply is easily in danger, especially in Belgium
- Depending on e.g., execution of nuclear phase out in Belgium (today 55% of the generation), longer term reserves decline

Note: *Remaining capacity is defined as Net generation capacity – unavailable capacity – consumption

Source: UCTE

Benelux electricity market: highly interconnected, as well as strongly connected to neighbouring markets

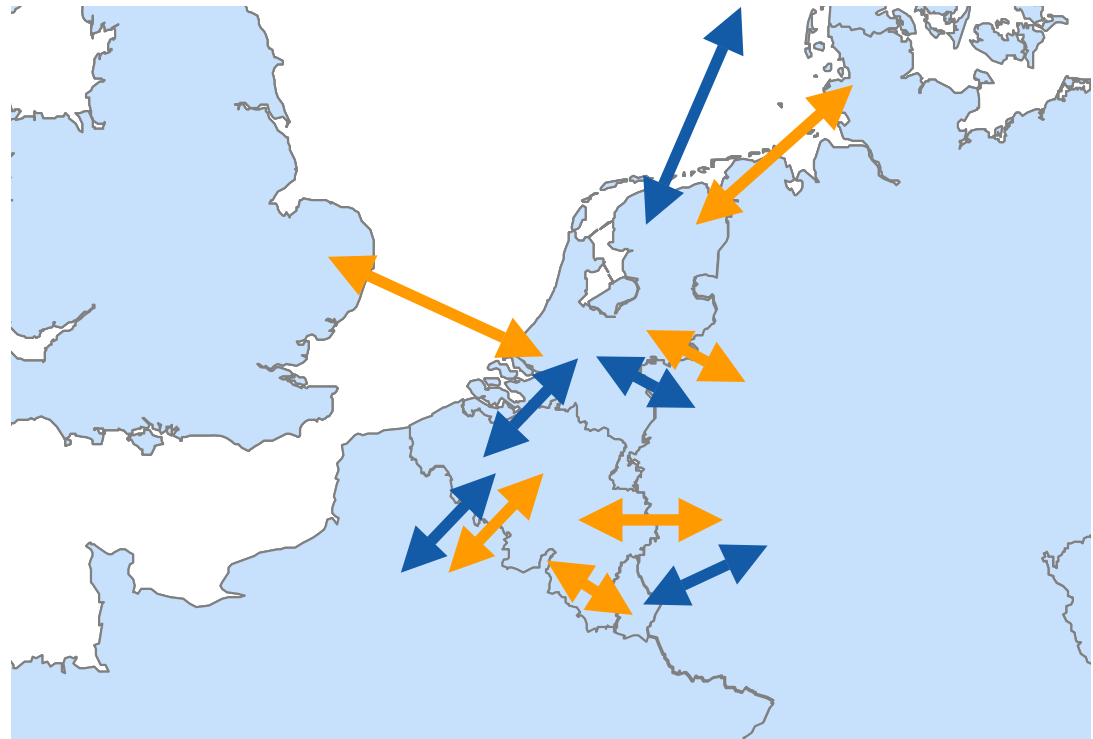
Current capacity:

- NL <> BE: 2200 MW
- NL <> GE: 3900 MW
- NL <> NO: 700 MW
- BE > FR: 1100 MW
- FR > BE: 2700 MW
- GE > LUX: 980 MW



Planned capacity additions:

- NL-UK: 1320 MW (2011)
- NL-DK: 600 – 700 MW (2016)
- FR-BE: 500 MW (2010)
- DE-NL: tbd (2013)
- LUX-BE: tbd (2012)
- BE-GE: tbd

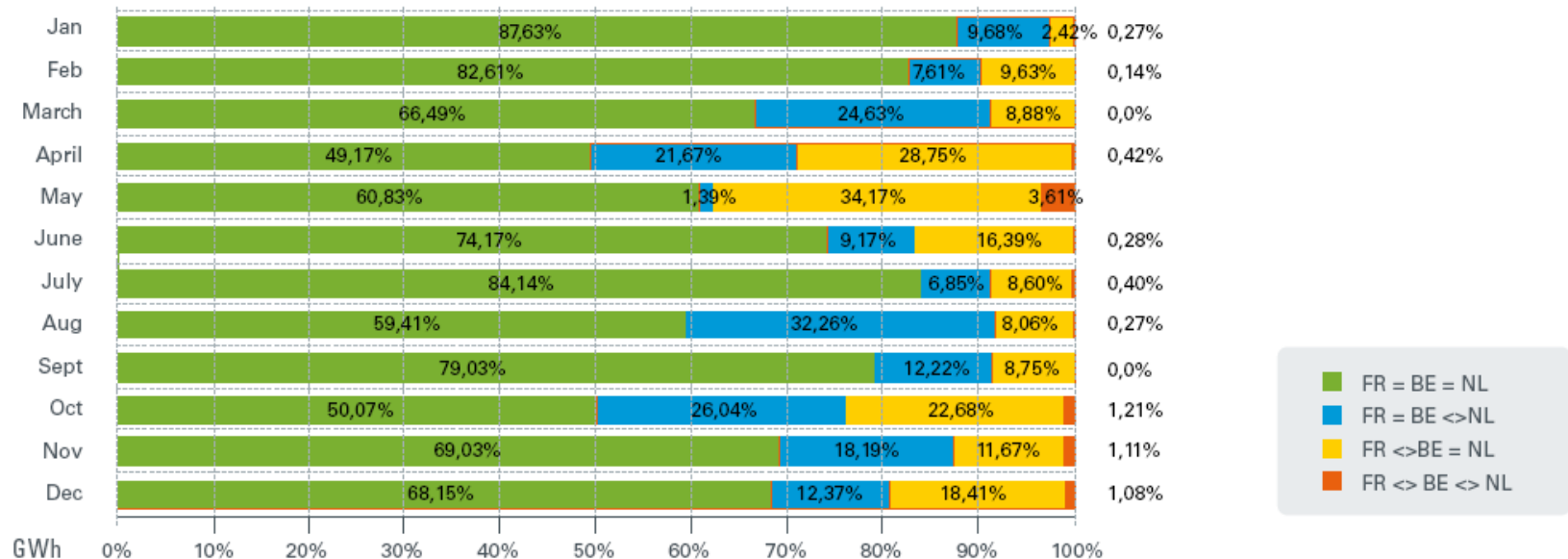


Interconnectivity of BG Benelux core markets: In 2008, the NL exported 8,1 TWh to Belgium. 3 TWh were exported from Belgium to the Netherlands (total 2008 NL production 107 TWh).

Sources: Datamonitor 2009, Elia, UCTE, ENTSO-E, EnergieNed, Tennet

The Benelux market in general, and the Belgian market in particular, is well connected to the French market...

Price convergence with energy exchanges in neighboring countries

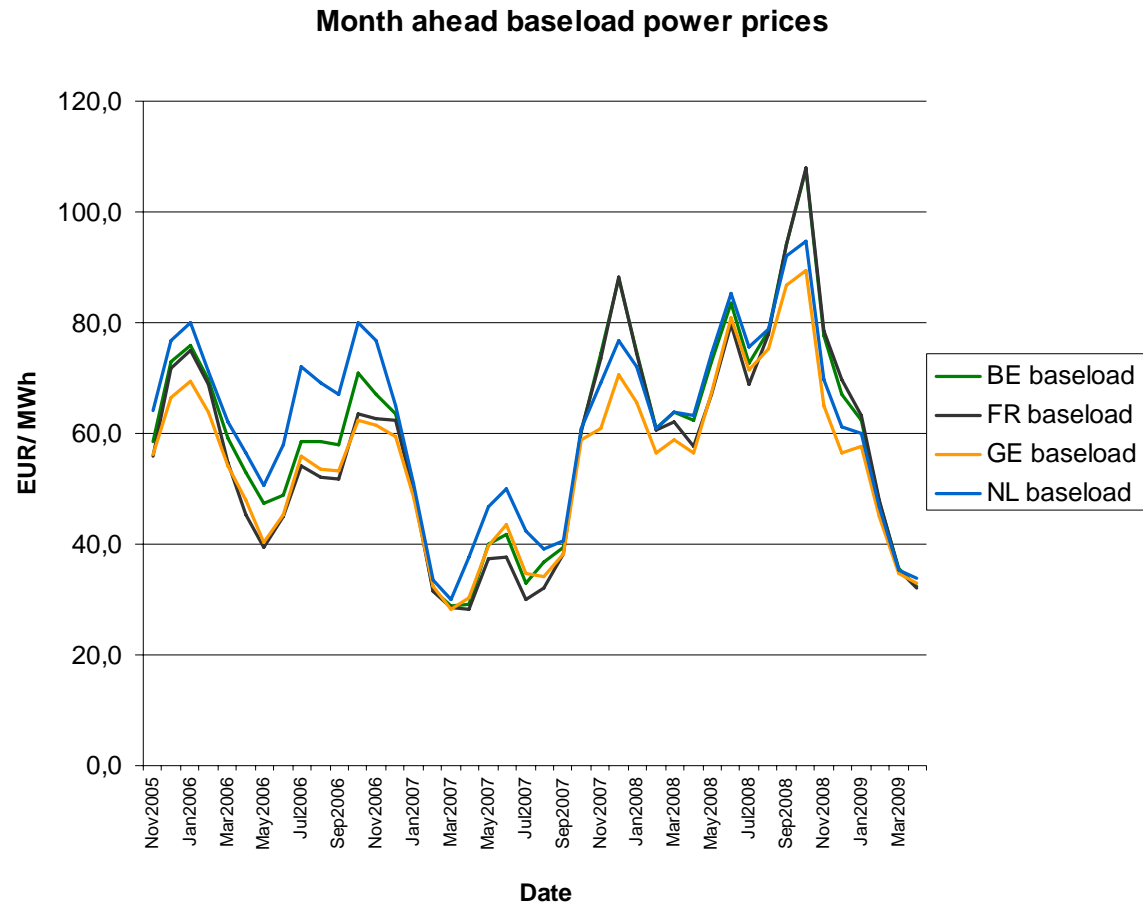


In 2008, the price on the Belpex day-ahead market was the same as on the power exchange in the Netherlands and France in 69.1 % of the time. In other words, the markets were coupled at the time. For 15.4 % of the time, Belgium was only coupled with France, and for 14.7 % of the time only with the Netherlands. Only for 0.8% of the time was Belgium not coupled to one of its neighbors.

Source: www.elia.be, System and Market overview 2008

...as well as to the German market

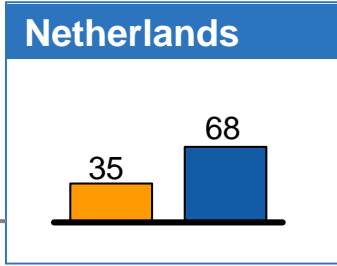
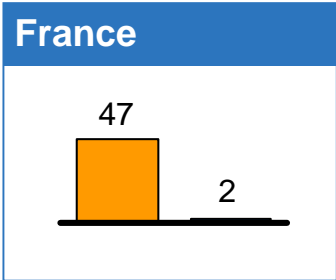
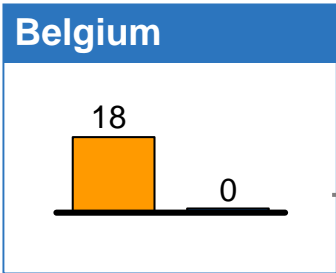
- Given the different asset bases in the northwestern European countries, structural price differences still exist.
- However, prices are increasingly converging



Source: Datamonitor Monthly Wholesale Power Price Dataset 03 Aug 2009

Supply and demand fundamentals – Gas

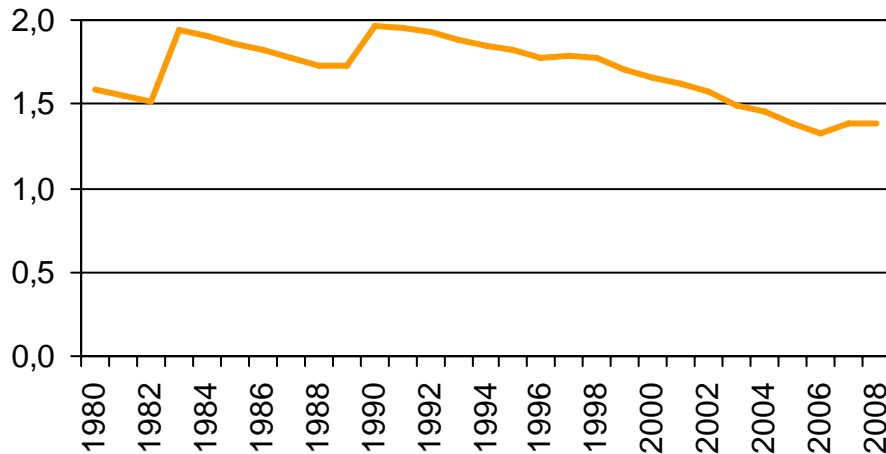
■ Gas demand, 2008 (bcm)
■ Gas production, 2008 (bcm)



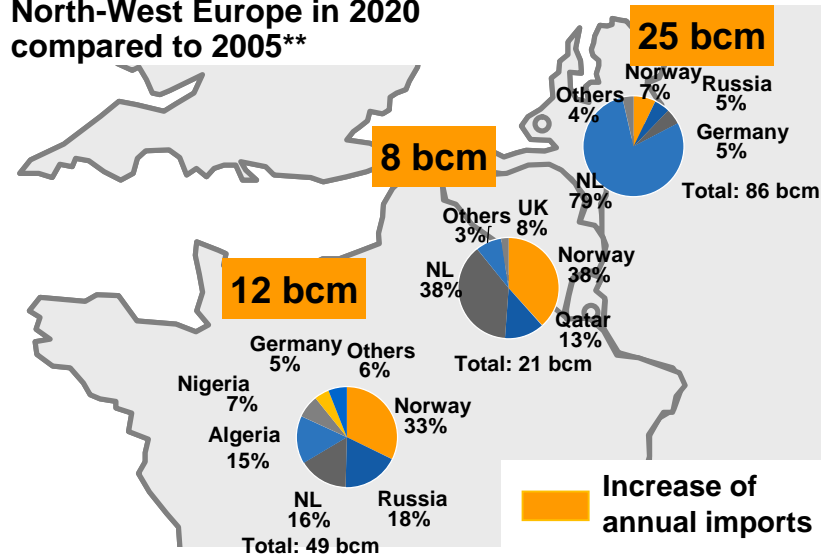
Source: eurogas, all data 2008 and BP Statistical Review of World Energy June 2009

North West Europe will increase its dependency on gas imports

Natural gas proven reserves in the NL
(Trillion cubic meters)



Increase of annual imports to North-West Europe in 2020 compared to 2005**



- The Netherlands is experiencing a decrease of production
- The policy of the Dutch government is designed to guarantee the long term availability of sufficient gas and to promote diversification of gas supply
- France and Belgium already depend on imports. Both countries enjoy a well diversified sourcing portfolio (LNG, Netherlands, Norway, etc)

Source: * BP Statistical Review of World Energy June 2009

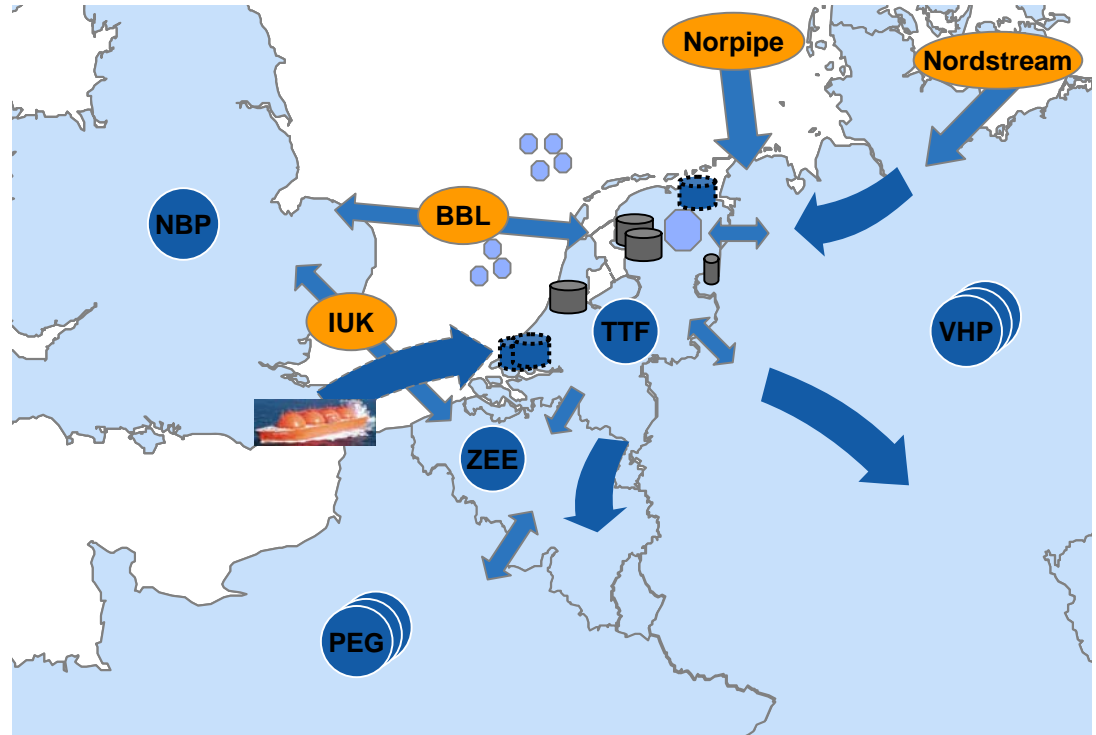
** Wood Mackenzie 2009 and CERA 2008

As a “gas country”, the Netherlands has an important role in distributing gas flows across Europe



Central role in European gas market

- 36% of total energy use in NL is gas, equal to 39 bcm per year¹
- 26% of total energy use in NWE is gas, equal to 300 bcm per year¹
- Continued Groningen gas export to Belgium, France, and Germany
- New transit role of mainly Russian gas to UK
- Development of LNG position to domestic and surrounding markets (e.g., Germany)
- Strong flexibility position due to high quality gas fields for storage and production swing of Groningen field



1) 2008 figures; relatively low because of drop in gas demand due to financial crisis and high temperatures

SOURCE: Global Insight

Regulatory trends/issues in BG Benelux



Current key trends

- Focus on removing market barriers to stimulate new entrants
- Implementation new G & E law and third package
- Congestion management
- No new nuclear plants, replacement has not been ruled out
- Further regulation heat supply

- Increasing Public Service Obligation
- Availability of future cross-border gas capacity remains uncertain
- Firm exit capacity for gas supply
- Debate around the nuclear phase out law
- Development Energy Clearing House in 2012

- Focus on changing tariffs for certain segments to reflect market price (Champseur report)
- Work to introduce an “Eco tax”
- Second and third rounds to attribute new licence to operate to be built nuclear plants
- Free up of hydro concessions

Emissions

- Further attention on NO_x and SO₂ emissions
- Implementation IPCC and EU-ETS
- Developments around CCS
- CO₂ reduction of 20%

- Stricter legislation within the context of climate policy (CO₂, RES)

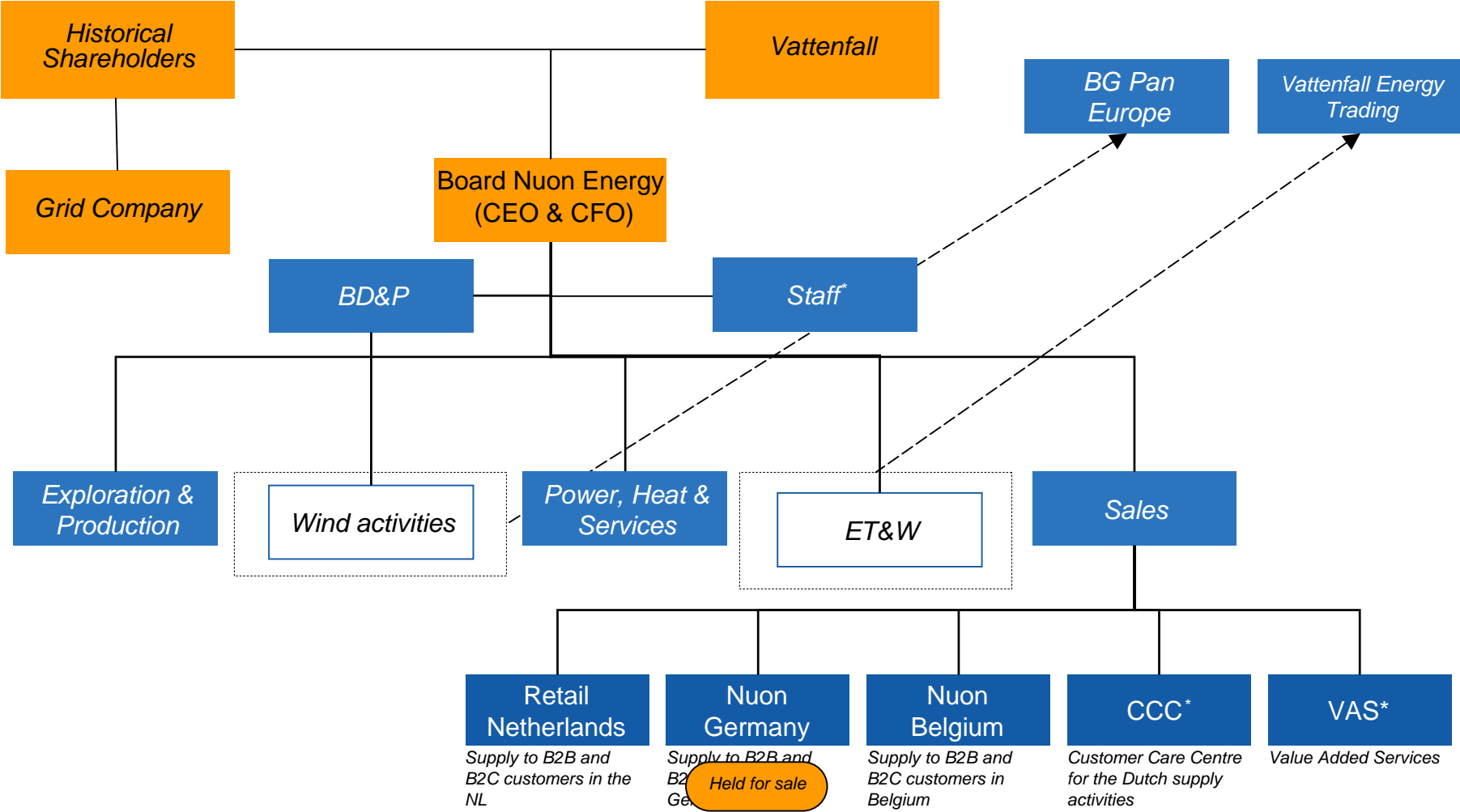
Renewables/energy saving

- 14% final energy consumption from renewable energy sources in 2020, translated in a ~30% renewable electricity target
- Savings today 1% per year, must reach 2% in 2011-2020
- Aiming to save 500 PJ

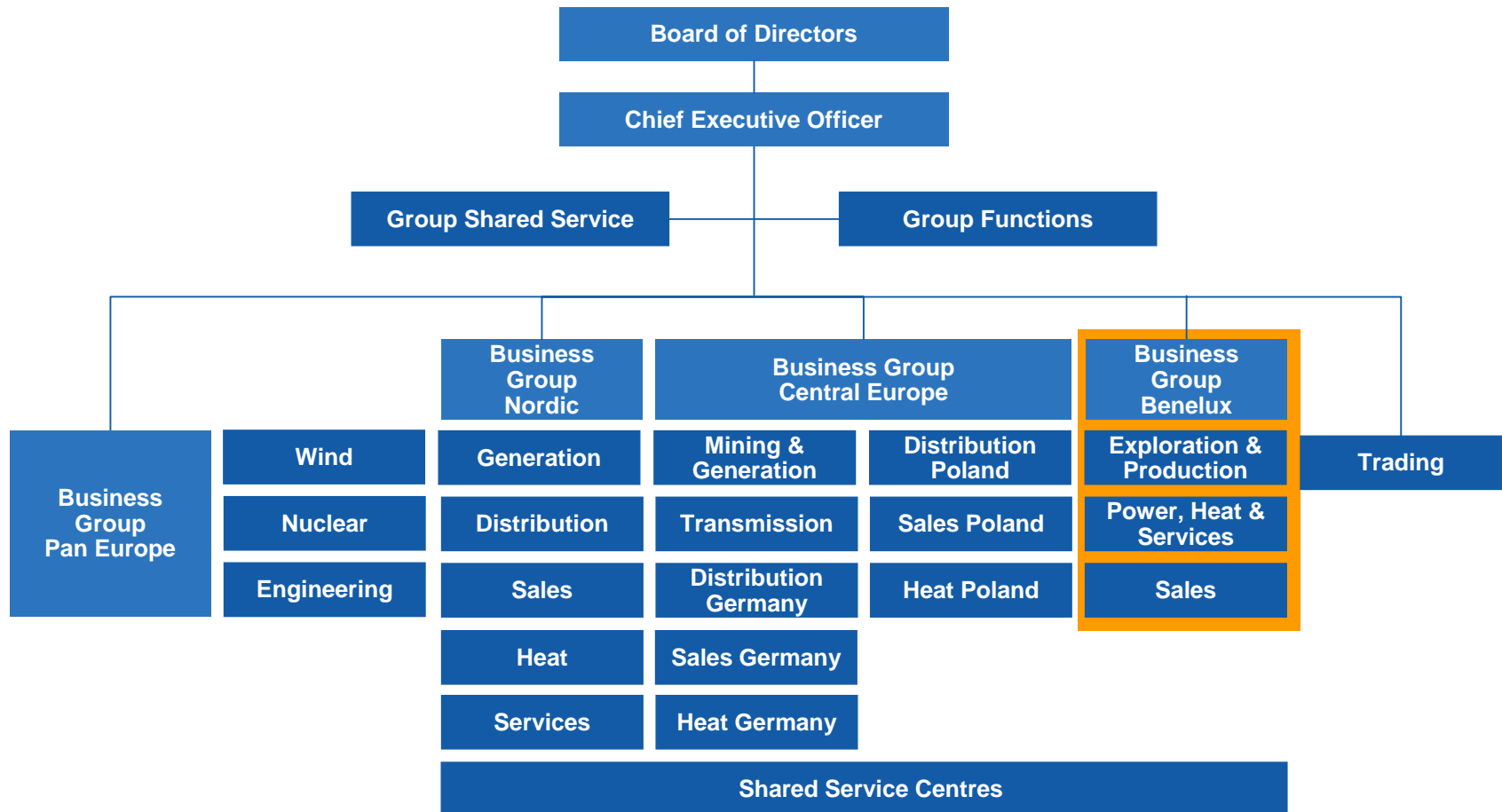
- 13% final energy consumption from renewable energy sources in 2020
- Regional system of green and CHP certificates to promote use and development of renewable production

- Further support on renewables production through subsidies
- System for white labels to stimulate energy savings

NV Nuon Energy: Inclusion in the Vattenfall Group

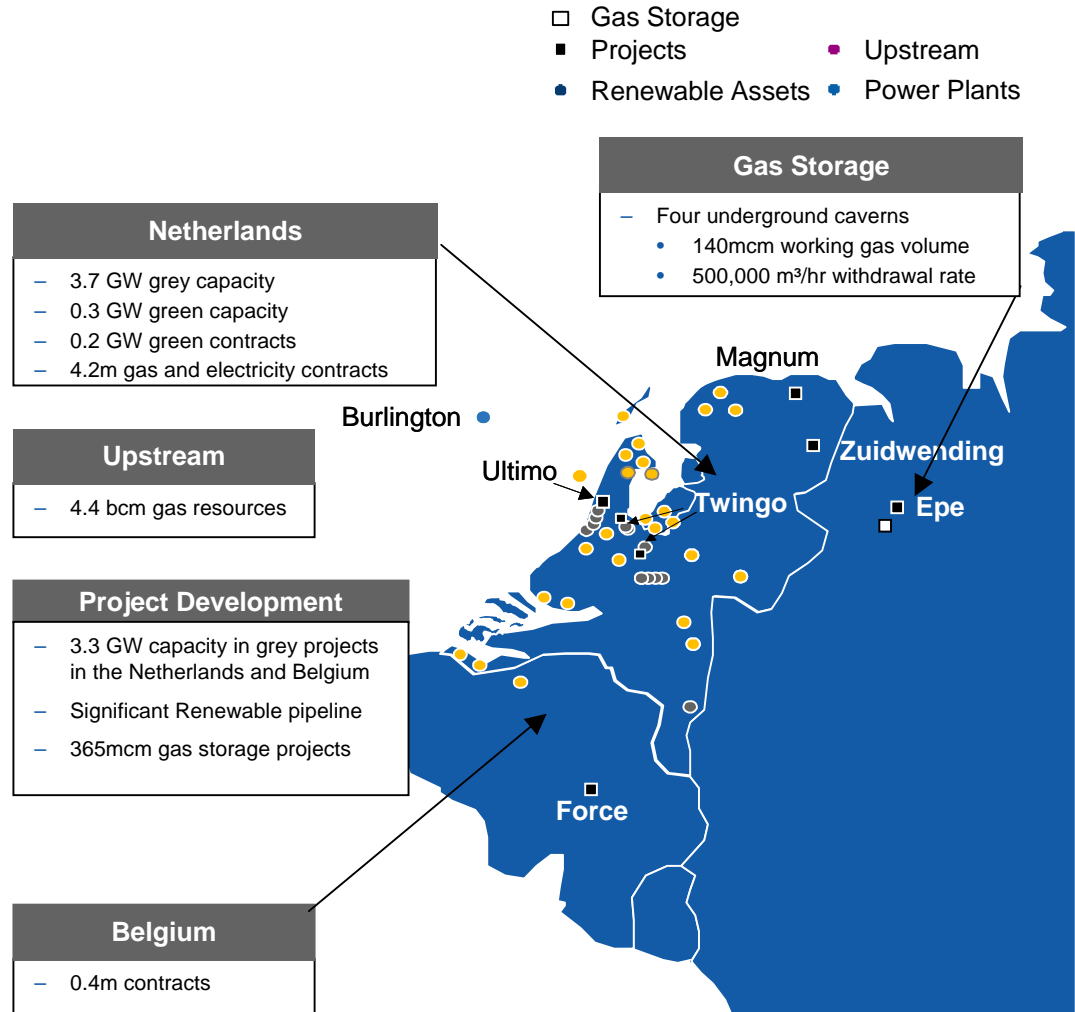


Overview Business Group Benelux



BG Benelux strongly believes in vertically integrated market presence

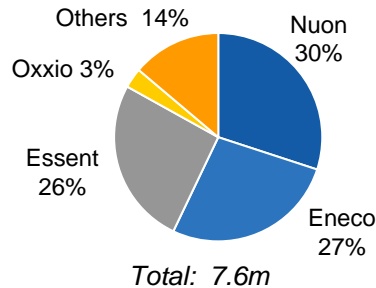
- The Netherlands is one of the most attractive energy markets in Europe:
 - Interconnectivity
 - Central in gas hubs and power market coupling
 - Proximity of North Sea gas fields
 - Port infrastructure
 - Numerous depleted fields for gas and CO₂ storage
 - Rising energy demand
- #3 player in Belgian retail market



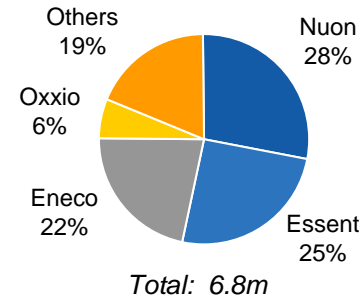
Leading energy player in the Netherlands...

The #1 player in retail electricity and gas supply in the Netherlands

NL Retail Electricity Supply by Number of Customers¹

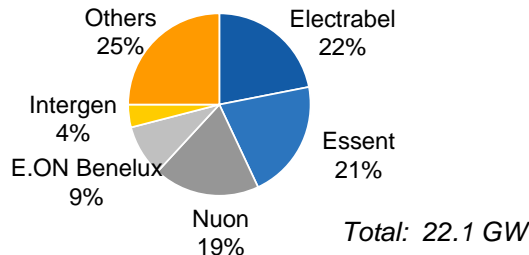


NL Retail Gas Supply by Number of Customers¹

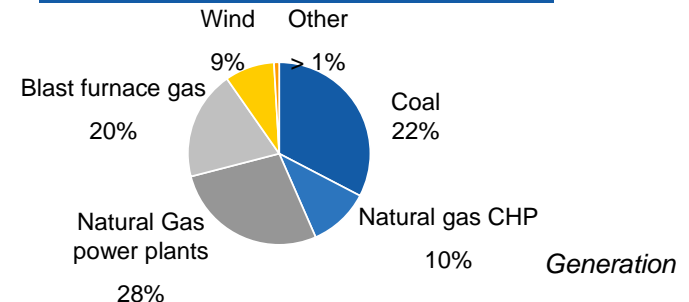


The #3 player in power generation in the Netherlands

NL Generation by Installed Capacity¹



BG Benelux Fuel Mix production 2008

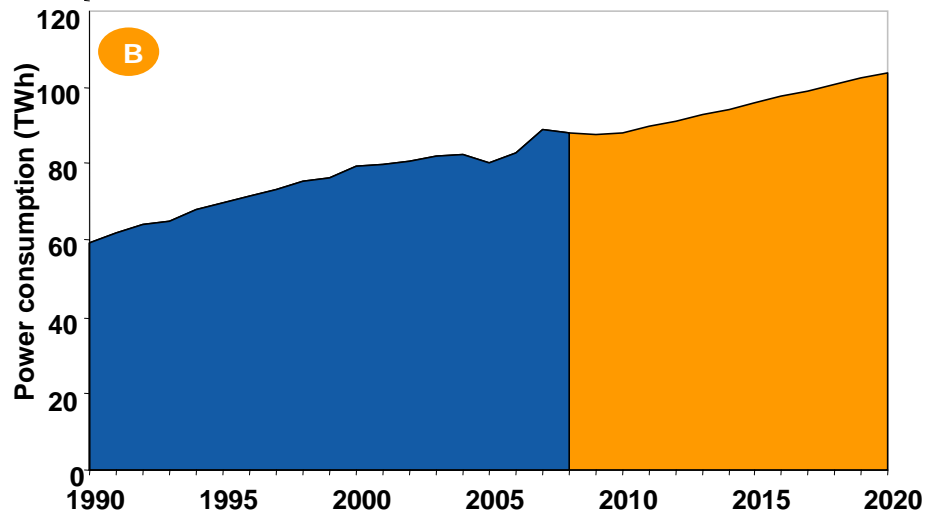
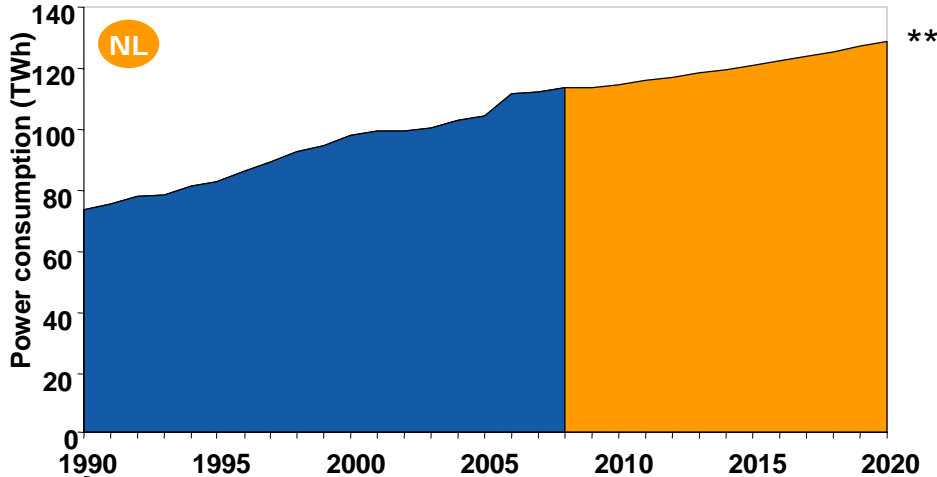
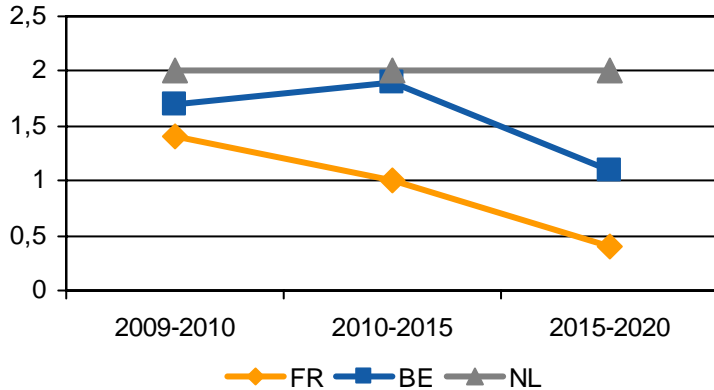


* Wind activities are managed by BG Pan Europe

Back-up

Electricity demand : stable growth expected in the Netherlands, slowing growth expected in Belgium

Annual average change in electricity demand in % *



- Stable growth in demand is expected in the Netherlands, slowing growth in Belgium
- Long term impact of current economic downturn on the one side, and development of mass-demand technologies such as heat pumps and electrical transport is unclear

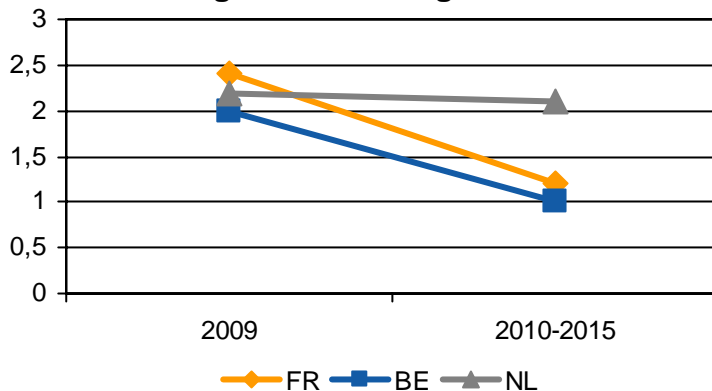
* http://www.entsoe.eu/library/news/UCTE_SAF-2009-2020_Report.pdf

** Source: Datamonitor 2009

■ Forecasted demand ■ Actual demand

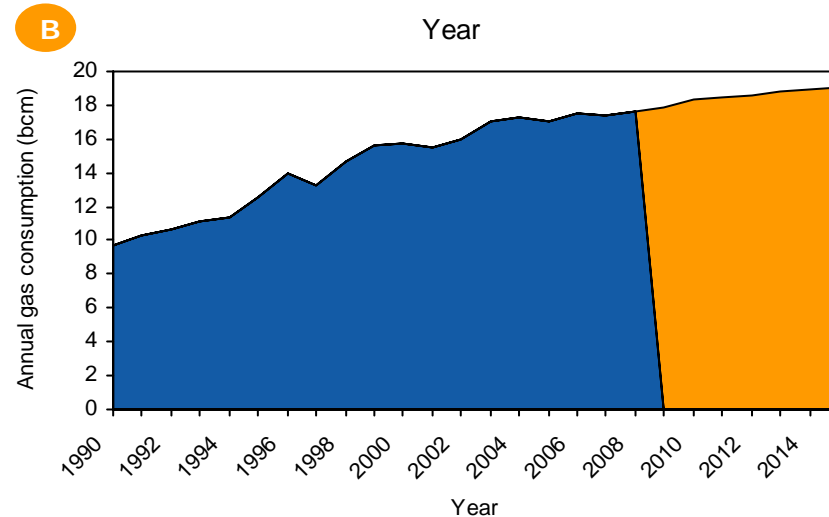
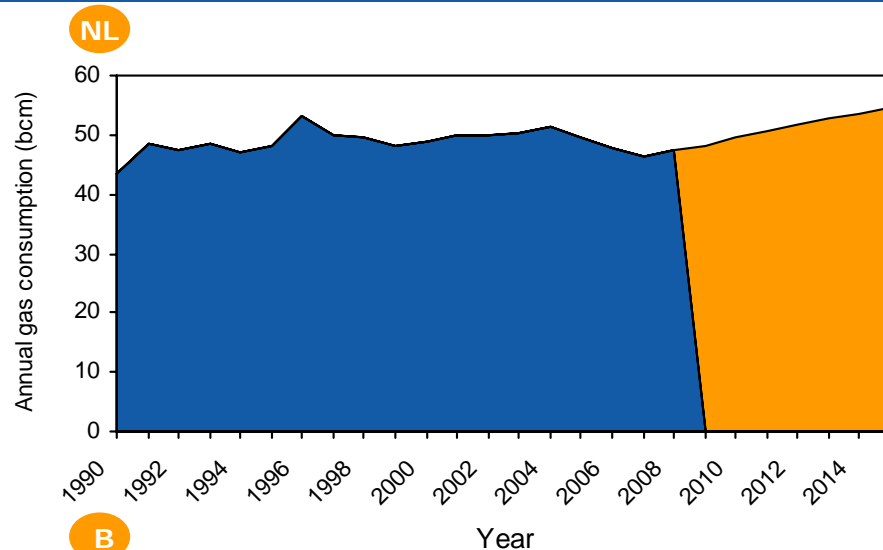
Gas: increased demand expected in all countries

Annual average increase in gas demand in %



- Demand to small and retail customers is expected to slightly decrease in the NL due to increasing efficiency in energy consumption. However demand for industries and power stations is continuing to rise
- In Belgium, demand is expected to grow for all segments. The main growth area is the gas used by power stations due to new developments

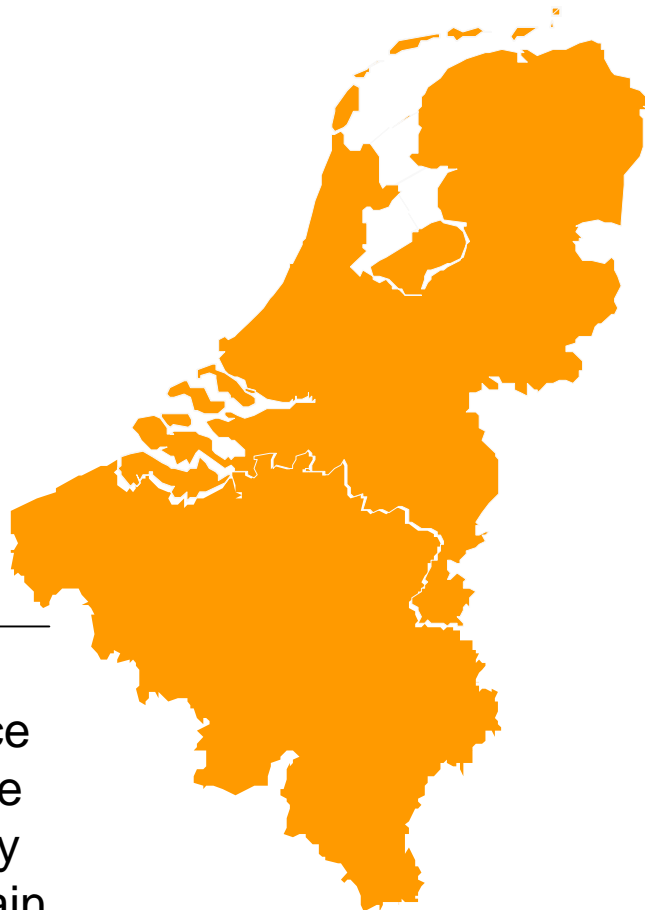
Source: Datamonitor 2009



High level view on renewables in BG Benelux core countries

Belgium

Invest to meet renewables obligations in Belgium, since the costs of non-compliance are too high and the penalty system is expected to remain in place and good incentive



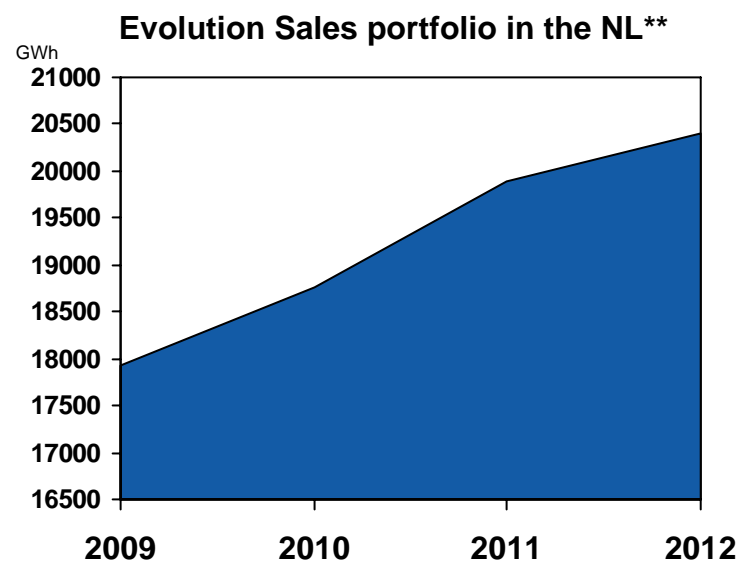
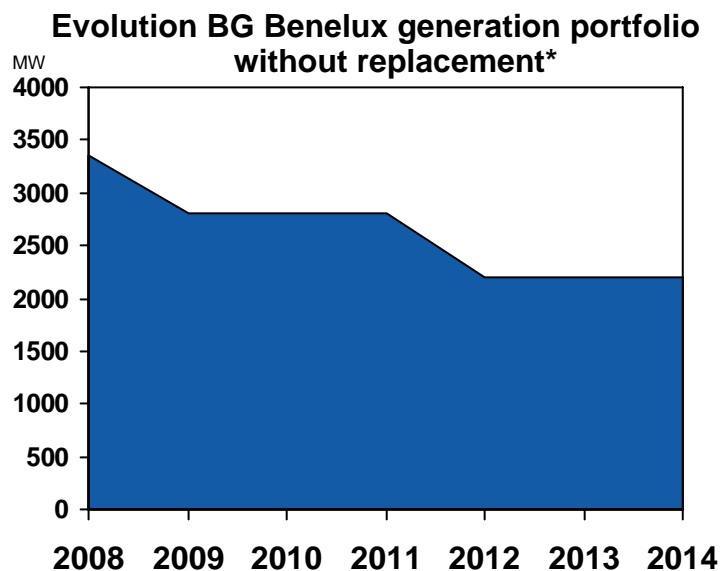
Netherlands

Strive to meet renewables targets in the NL (based on EU target) by

- Investing in onshore wind generation ASAP*
- Developing offshore wind opportunities
- Developing biomass cofiring opportunities
- Having a large enough funnel of options to meet any reasonable target, mostly investing post 2012 but preparing today

** Wind activities are managed by BG Pan Europe*

Security of supply / shortage in Dutch generation in combination with an ageing asset base



Some plants in BG Benelux' portfolio are expected to be decommissioned during the Business planning period while sales volumes are expected to grow driven by the B2B segment

BG Benelux' strategy is to have a balanced position between supply and generation and to maintain its market share in generation, therefore replacement of current generation is planned