

# GASNATURALLY'S POLICY ROADMAP TO 2030

GasNaturally is confident that with the right policy decisions that allow gas to play its full role in the energy mix, Europe can reach 2030 having satisfied the objectives of security of supply, competitiveness and sustainability.

The following points should be taken into consideration:

- One single legally binding, economy-wide GHG reduction target for 2030 would provide the predictability needed to make long-term investments in low-carbon technologies.
- To address the current imbalance between demand and supply in the EU ETS, structural measures should be adopted to reform the ETS and ensure its long-term stability. The ETS is the central instrument for cost-effective GHG reductions achieved in a technology-neutral manner.
- GasNaturally advocates the phase-out of support schemes for technologically mature renewables, without retroactive effect, and continued technology-neutral support for all promising, non-mature low-carbon technologies.
- Whilst ensuring a level playing field, the EU should propose policies that enable gas to develop its full potential in reducing GHG emissions cost-efficiently. Such policies should encourage a switch from coal to gas and renewables.
- GasNaturally advocates a policy framework that supports research and development of all promising, non-mature energy technologies that seek to lower GHG emissions.

## Natural Gas in Europe

A VISION FOR 2030

#### SOURCES:

1. GLE Investment Database, July 2013" (it's on <http://www.gie.eu/index.php/maps-data/lng-investment-database>)
2. IHS CERA Report, Sound Energy Policy for Europe: Pragmatic Pathways to a Low-Carbon Economy, 2011
3. ENTSOG Ten-Year Network Development Plan 2011 – 2020
4. "Fuelling the Future - Towards a Sustainable Gas Market in Europe", Fluxys, Energinet.dk, Gasunie, June 2012, p.8
5. Commission Staff Working Document - Actions towards a comprehensive EU framework on LNG for shipping, 2013, p.16
6. IGU World LNG Report 2013, p. 42. Prices are for LNG in Spain and HFO prices are for HFO with 1% sulphur.
7. Impact Assessment, Proposal for a Directive on the deployment of alternative fuels infrastructure, p.23
8. "EU launches clean fuel strategy", European Commission press release, 24 January 2013
9. "LNG, Powering the Future of Shipping", Germanischer Lloyd, July 2012



## SUPPLY

Europe enjoys varied supplies of gas, with a majority coming from European countries (including Norway). Europe will continue to diversify its gas supplies via new significant sources such as the United States, and in the long term Azerbaijan, East Africa, Eastern Mediterranean, etc. Developing untapped domestic gas resources will reduce Europe's import dependency. Europe's potential to diversify its natural gas supplies will further be realised through deliveries of liquefied natural gas (LNG) from all over the world.

DOMESTIC GAS PRODUCTION

GAS + SOLAR

COMBINED CYCLE GAS TURBINE

INDUSTRIAL PLANT

CO<sub>2</sub>  
CARBON CAPTURE & STORAGE

Switching from coal- and oil-fired power generation to best performance CCGT plants<sup>2</sup>

-60%  
vs.  
1990 levels  
CO<sub>2</sub> EMISSIONS

## GAS & RENEWABLES

Gas-fired power generation is well suited to provide flexible generation to complement variable renewable energy sources as it is capable of rapid response to changes in demand. If the necessary market conditions and policies are in place, the increased use of natural gas for power generation will help the EU achieve considerable emissions reductions by 2030. In such a scenario, gas and renewables will grow together, displacing coal from the fuel mix for power generation.

IMPORTS BY PIPE

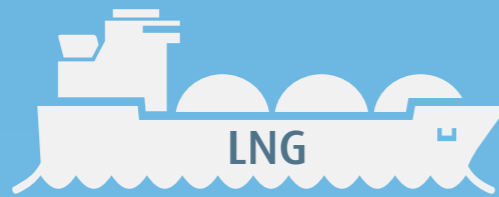
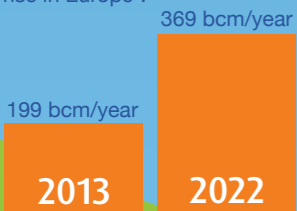
# GAS AT THE CENTRE OF OUR ENERGY SYSTEM IN 2030

Biogas can be produced from various sources (biomass, organic waste) and is already injected today into the gas grid

BIOGAS PLANT

POWER-TO-GAS

Regasification capacity expected to rise in Europe<sup>1</sup>.



LNG

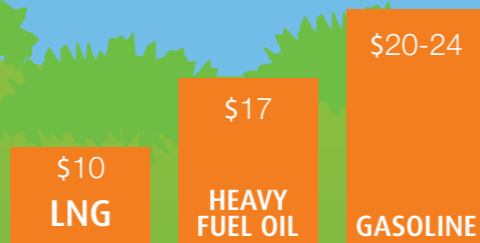


LNG-FUELLED SHIP

LNG TERMINAL

## GAS IN TRANSPORT

In the future, natural gas has the potential to play a greater role in transport, in light of lower CO<sub>2</sub> and other emissions. According to industry estimates, LNG heavy-duty vehicles could reach more than 50,000 units per year by 2020. By then, they could represent 10-15% of the market.<sup>7</sup> Today, there are however only 38 filling stations for LNG for heavy-duty vehicles in the EU.<sup>8</sup> Refuelling infrastructure therefore needs to be developed to allow the technology to grow. There are also interesting prospects for LNG in maritime transport, with a clear environmental case of 25% lower CO<sub>2</sub> emissions and very substantial reductions in emissions of sulphur, nitrogen oxide and particulate matter.<sup>9</sup>



GAS STORAGE

## INFRASTRUCTURE

The current gas infrastructure can be used for the future energy system without any fundamental modifications beyond 2050. However, further investments will be needed to safeguard secure supplies, provide alternative supply routes and integrate growing variable renewable energy sources. Investments needed by 2020 are estimated around €90 billion for transmission, storage and LNG.<sup>3</sup> For comparison purposes, it should be noted that the transmission of gas is up to 20 times cheaper than the transmission of energy in the form of electricity.<sup>4</sup> Gas storage offers seasonal and short-term flexibility in a fully functioning European gas market, as well as security of supply.

## INNOVATION

The priority use of renewable energies in the future will require a very flexible storage of excess electricity since a constant balance between electricity production and consumption is technically needed. The ideal way could be Power-to-Gas, which allows for the storage of renewable electricity in the natural gas grid. Electricity can be converted to hydrogen (H<sub>2</sub>) via electrolysis, a proven technology in the chemical industry. The hydrogen produced is either fed directly into the gas grid or turned into methane (CH<sub>4</sub>). Finally, by 2030 and beyond, CCS should be an important option to reduce carbon dioxide emissions. The CO<sub>2</sub> captured from power generation or industry can either be stored underground or reinjected into the gas system as synthetic methane, using Power-to-Gas facilities. End-user technologies such as condensing boilers, gas heat pumps, micro-CHP and fuel cells in space heating & cooling are continuously improved by the industry and will make gas use even more efficient in the future.



LNG

CNG