

Picture courtesy of Gas Connect Austria

# HYDROGEN: PAN-EUROPEAN COOPERATION, SECTOR INTEGRATION

## ACER – Energy Community webinar

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online

# Ten-Year Network Development Plan 2020 scenarios



## National Trends

- Policy Scenario based on member states' National Energy and Climate Plans (NECPs)
- EU 2030 Energy and Climate Framework (-40% CO<sub>2</sub>, 32 % RES, 32.5 % energy efficiency)
- EC 2050 Long-Term Strategy: 80 – 95 % CO<sub>2</sub> reduction



## COP 21 scenarios

+1.5°C (66.7 % probability)

Carbon neutrality by 2050

Benchmarked with EC LTS

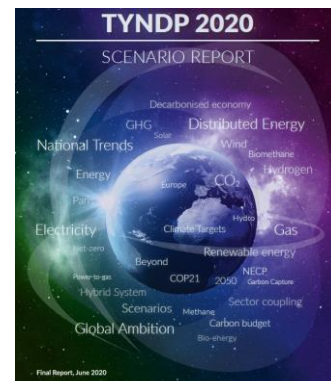
Distributed Energy

**De-centralised** approach to the energy transition:  
active customers, small-scale solutions, circular approach

Global Ambition

**Centralised** approach to the energy transition:  
large-scale renewables, imports and decarbonisation

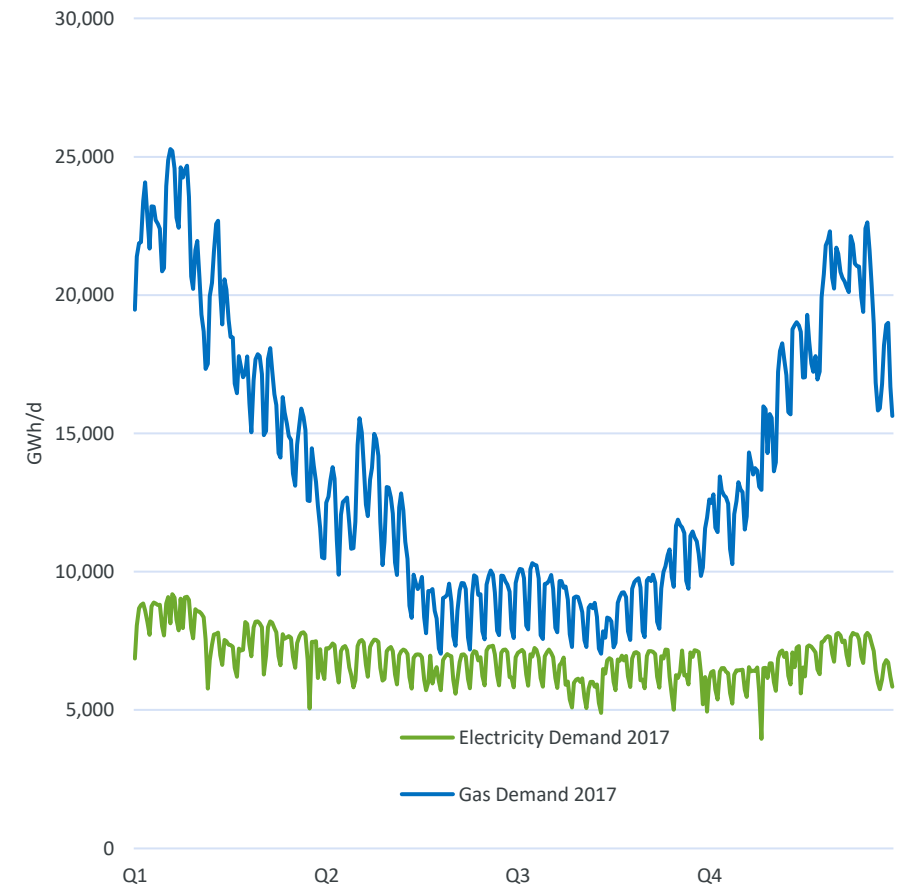
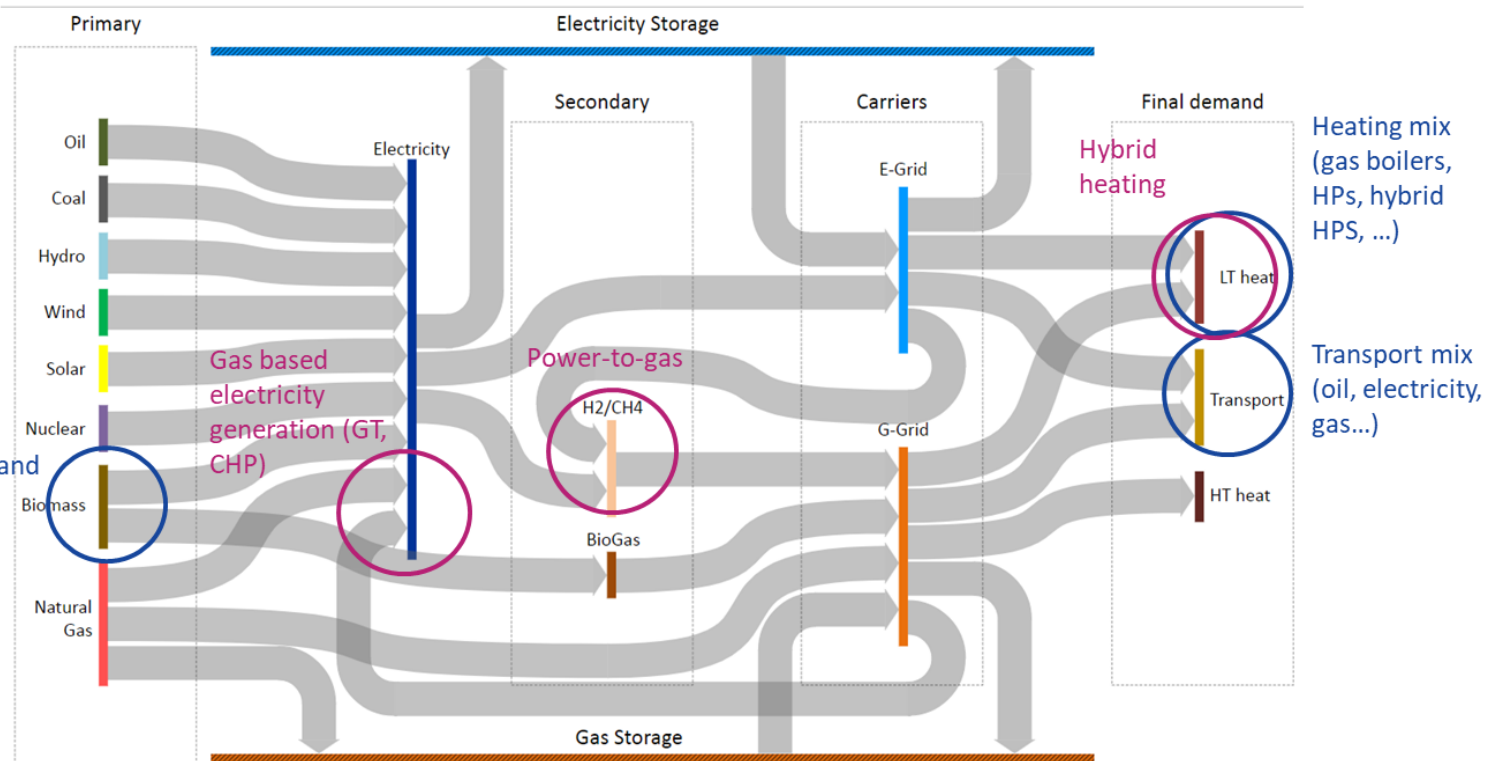
To reach Net Zero 2050, all renewable and decarbonisation technologies are needed and hydrogen plays a major role



# Energy System Integration in TYNDP

Hydrogen plays a central role in gas and electricity interactions

Direct and indirect interactions



# Role of gas in an integrated system

Renewable and decarbonised gases, incl. hydrogen, are needed to support the decarbonisation of all sectors

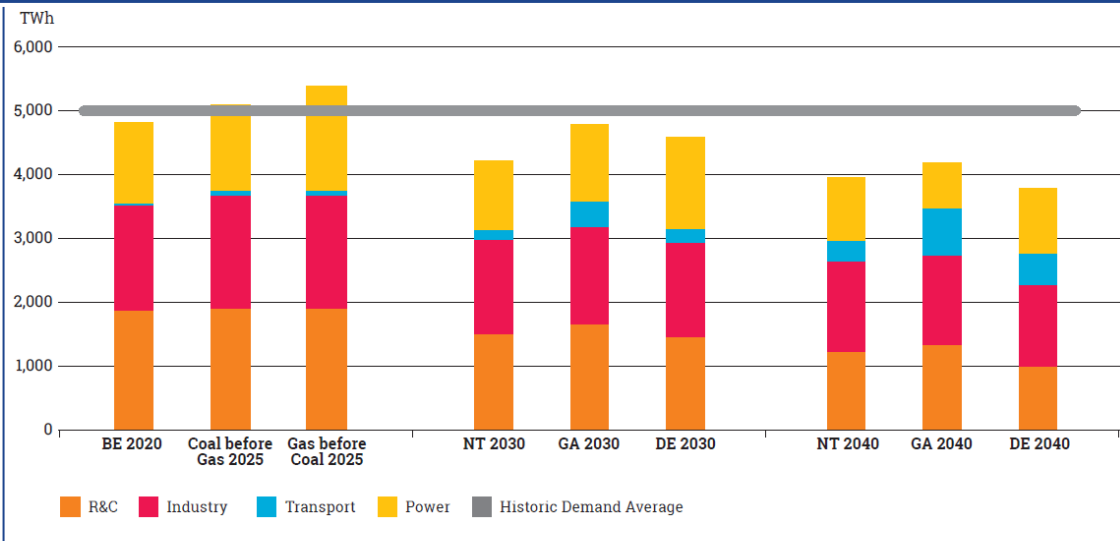


Figure 12: Sectoral breakdown of total gas demand in EU28

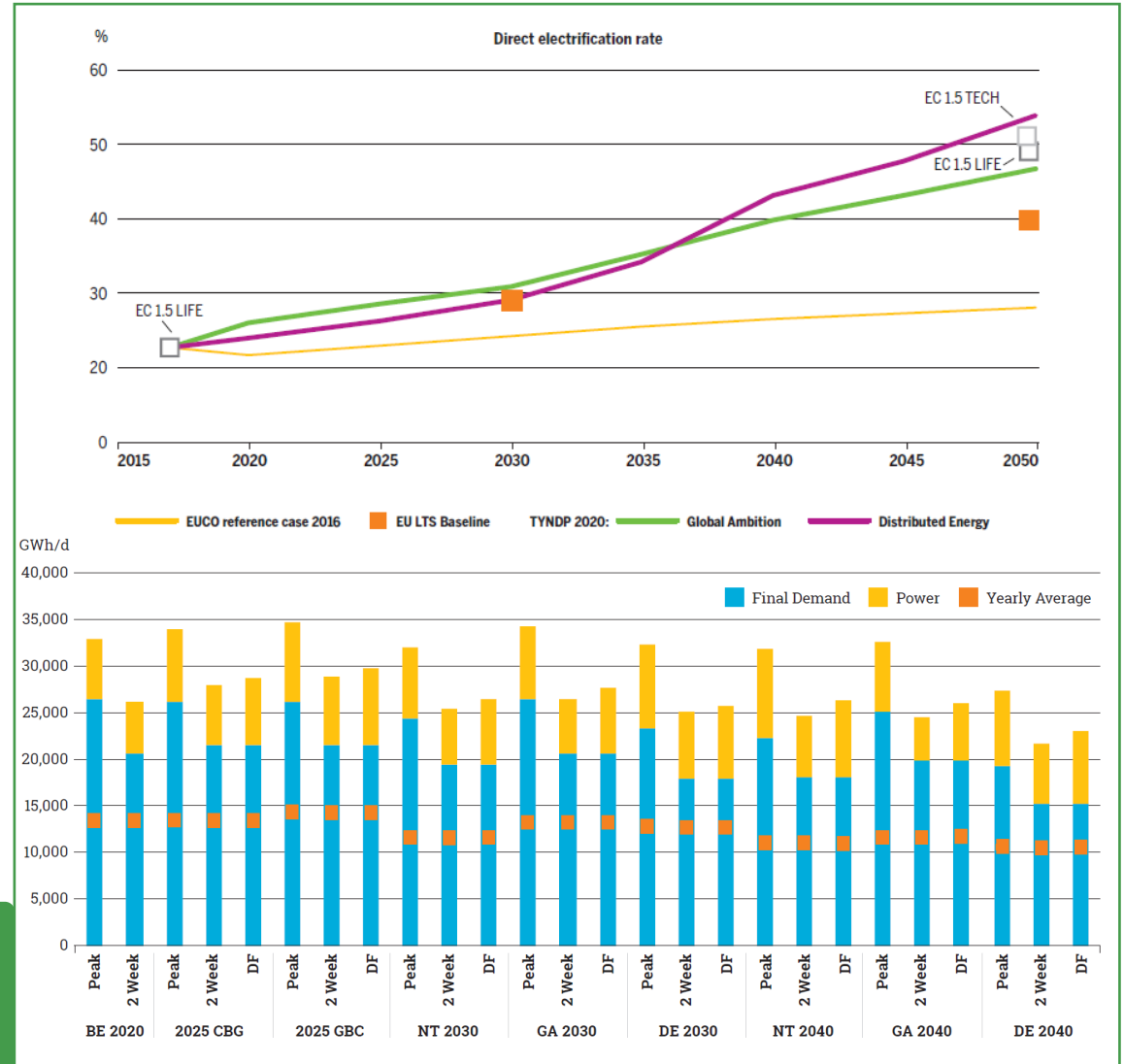


Figure 13: Gas demand in high demand cases (Peak, 2-Week cold spell, Dunkelflaute\*)

A net zero energy system with high level of electrification requires a high level of flexibility incl. seasonal and daily



**Thank you for your attention**

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