DELIVERING THE ENERGY TRANSITION FOR A COMPETITIVE EUROPE

-

EURELECTRIC VISION

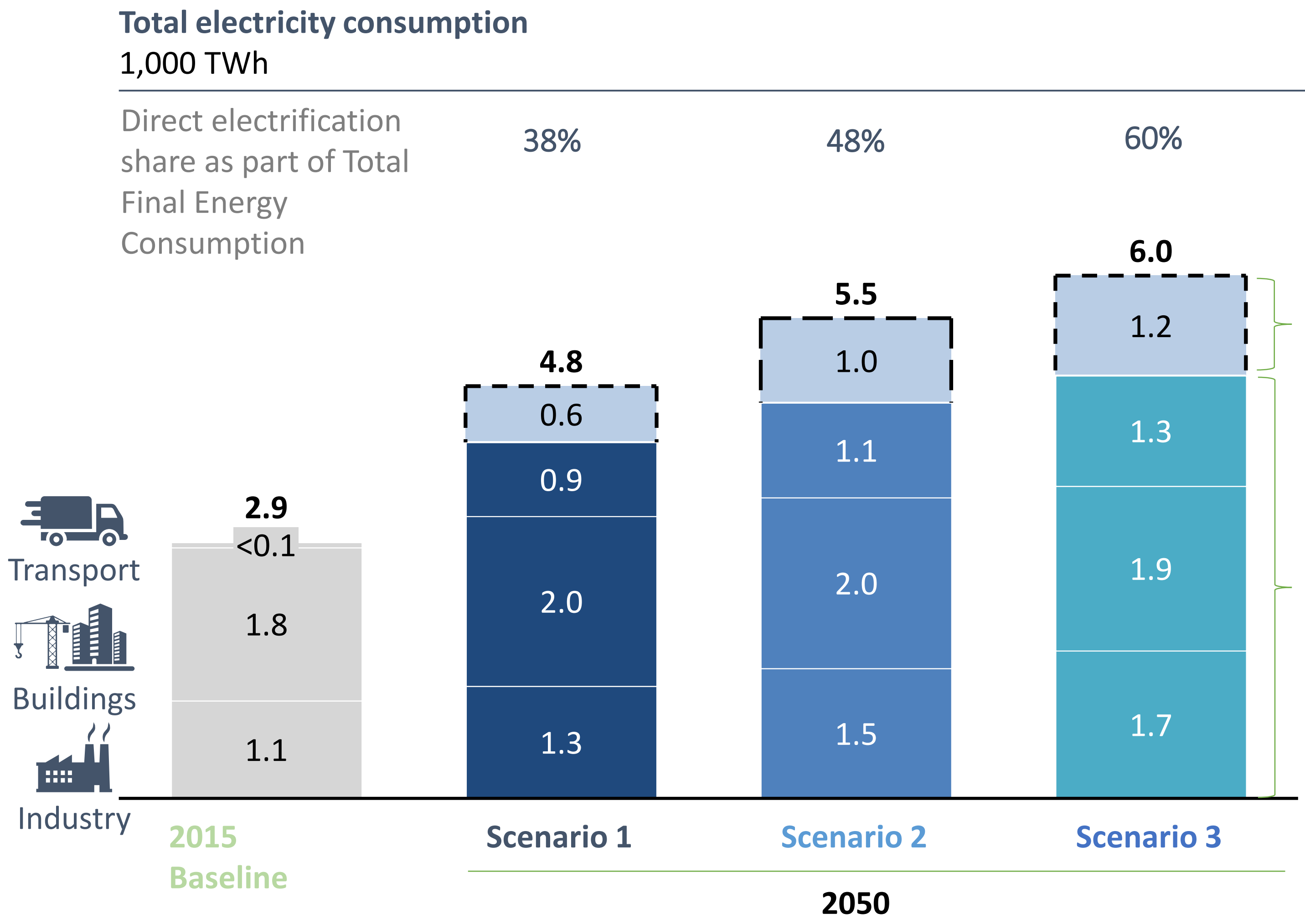
Eurogas Annual Conference
Brussels, 3 April 2019

Marion LABATUT
Eurelectric Policy Director


eurelectric
powering people
80%
90%
95%

Significant amounts of electricity are required to produce E-fuels used to decarbonize transport, buildings, industry

eurelectric powering people



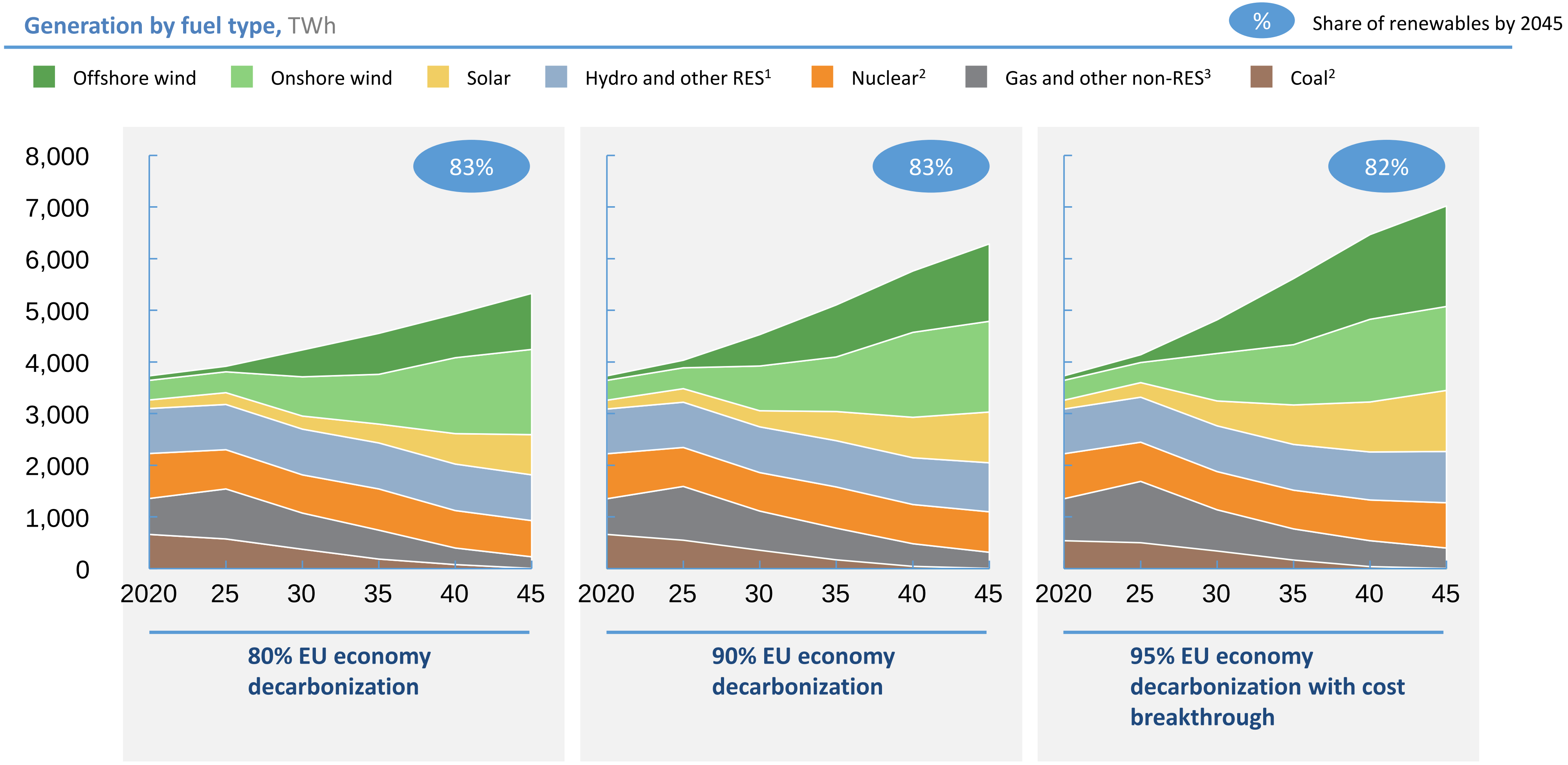
Additional electricity demand:

- Indirect electrification related to power-to-X: H2 production, synthetic fuels, etc
- Electricity demand driven by production of biofuels[1] and CCS[2]

Direct electricity consumption

1 Biofuels require feedstock as well as additional energy (either in form of thermal energy or power) for their production – see glossary
2 Total CO2 abated through CCS: <200 Mt Co2; CCS may require technology improvement as well as increasing acceptability, e.g., for underground storage

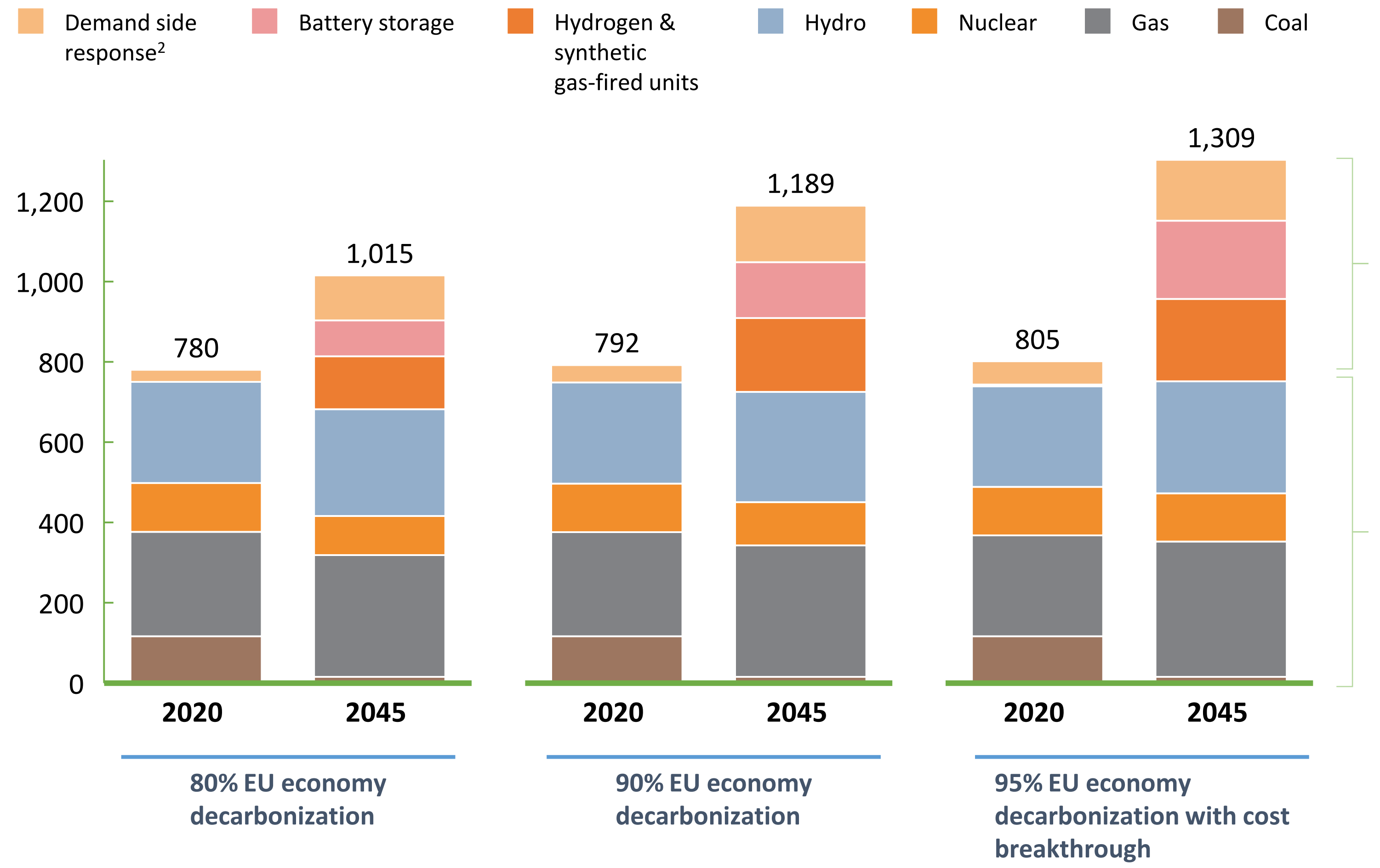
In the least-cost, carbon neutral electricity system the bulk of electricity is provided by renewables



[1] Includes also small amounts of geothermal, biomass and biogas
[2] National policies on nuclear and coal phase out have been reflected
[3] Up to 15% of gas capacity with CCS and other non-renewables

System flexibility is provided by several sources of dispatchable resources serving as a back-up for days with low renewable generation

Dispatchable resources[1]**,** GW



New sources of flexibility

- Enable better utilization of other generators
- Significant increase in capacity expected

Traditional sources of flexibility

- Similar capacity needed in a high renewables, higher demand system as today
- Provide electricity when renewables production is low and ability to leverage DSR has been exhausted
- Hydro plays a unique role and can improve the overall dispatch and system economics

[1] District heating that is coupled with power sector is not included in this analysis
[2] DSR flexibility is provided by hour to hour load shifting in transportation, buildings and heating