

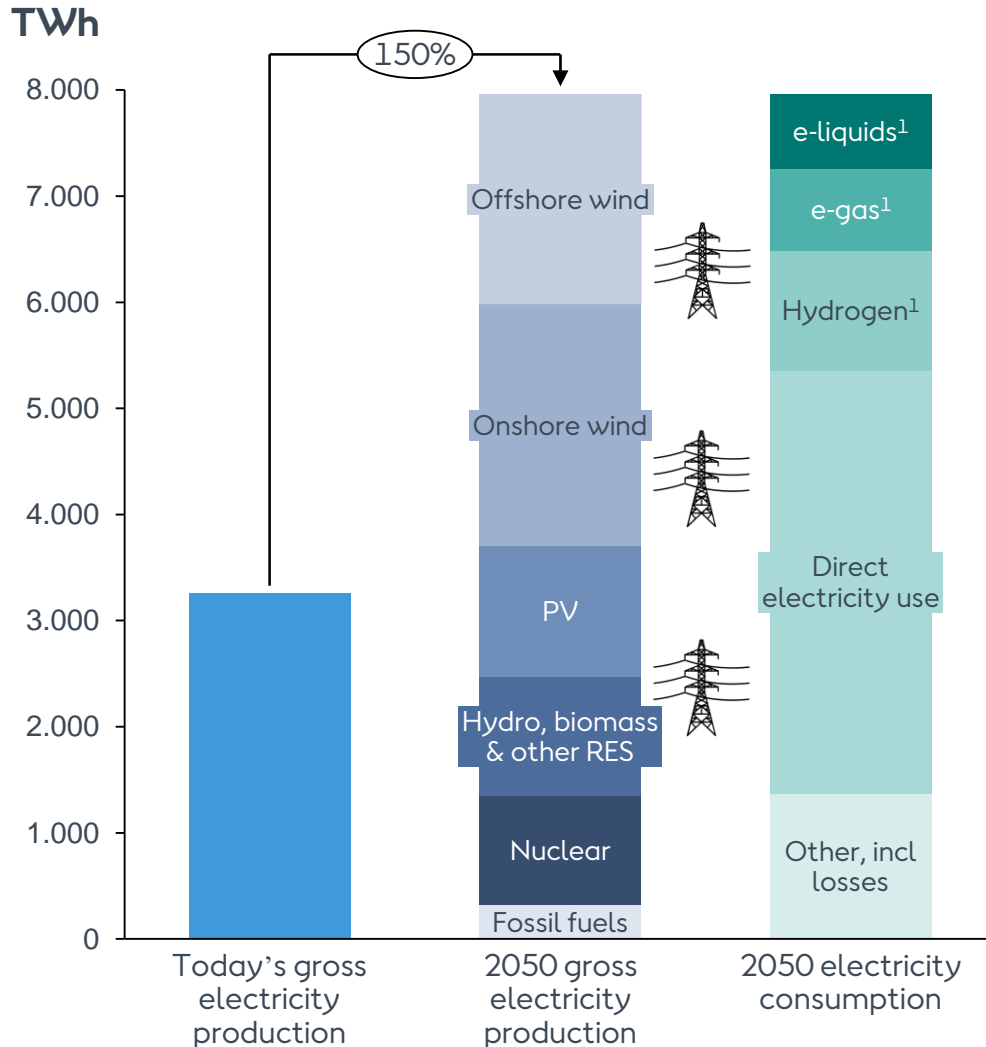
# Decarbonizing European energy

Wind Energy Denmark 2019

Orsted

Ulrik Stridbæk  
October 1<sup>st</sup> 2019

# A decarbonised Europe needs grid and renewables



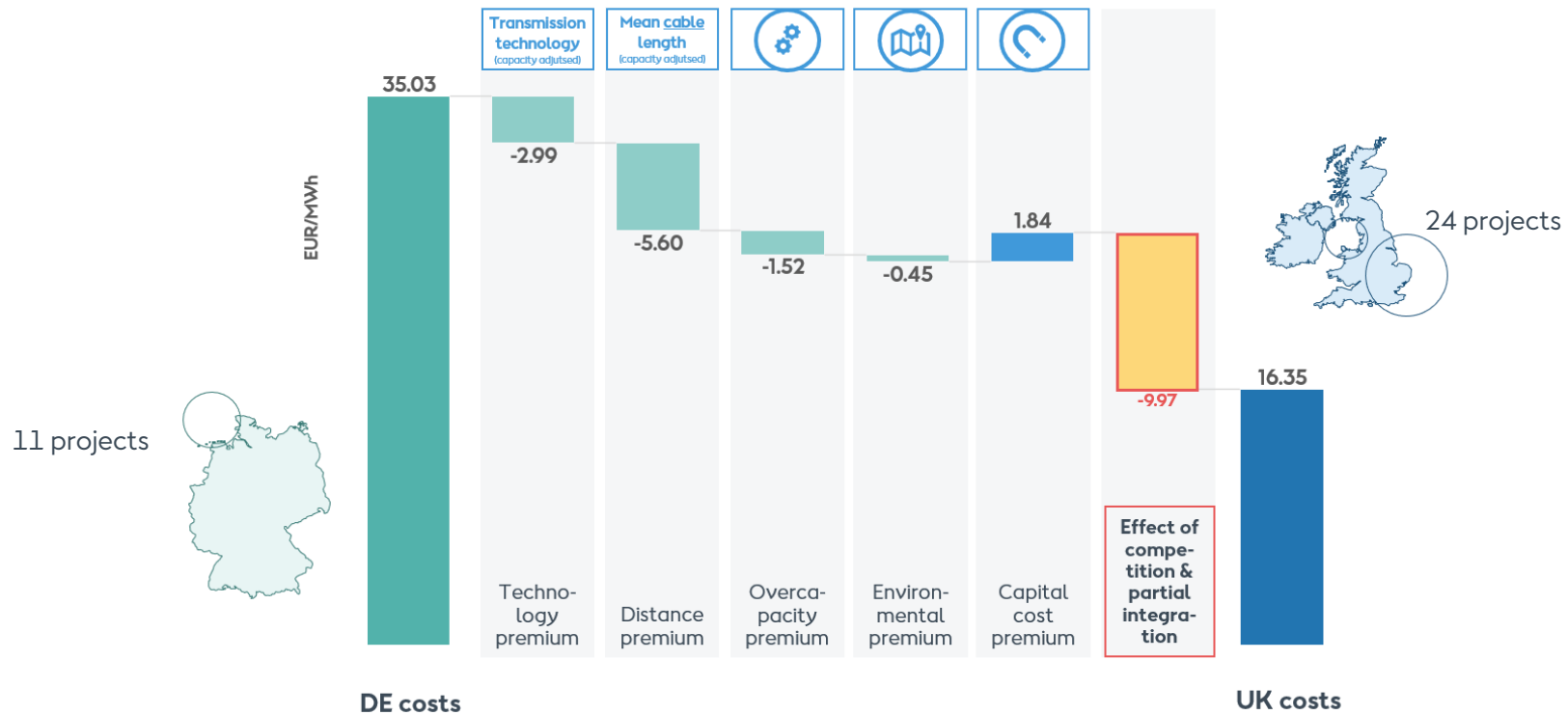
- 150% increase in electricity consumption
- Rethinking needed to reduce additional need for electricity transmission to less than 150% and to bring down cost:
  - Optimise location and flexibility of new power use
  - Optimise use of different infrastructure modes – shift some transmission needs from electricity transmission to existing pipes
  - Optimise offshore grid planning and bring down cost by competition

Source: 1.5Tech scenario from European Commission and own calculations

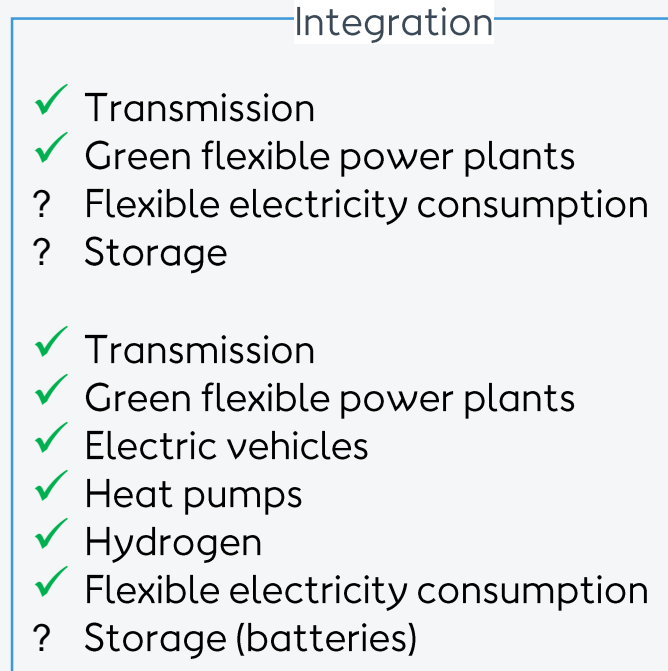
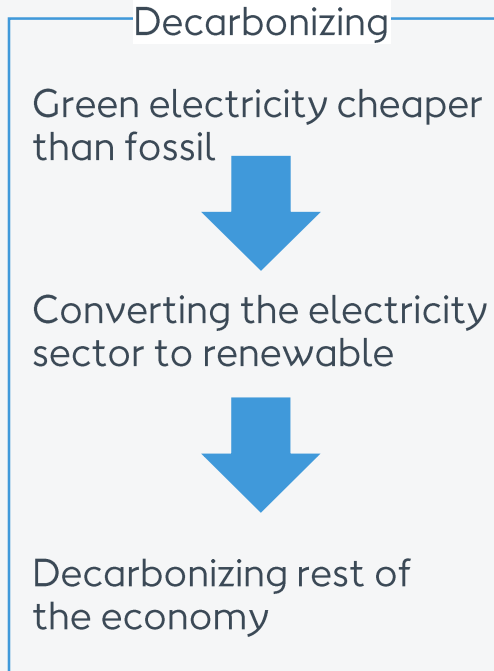
Note 1: Own calculation used to convert Mtoe e-liquids, e-gas and hydrogen into electricity consumption, assuming electrolyser with 70% efficiency and 3% losses converting hydrogen to e-gas and e-liquids.

# Competition on offshore transmission drives down costs

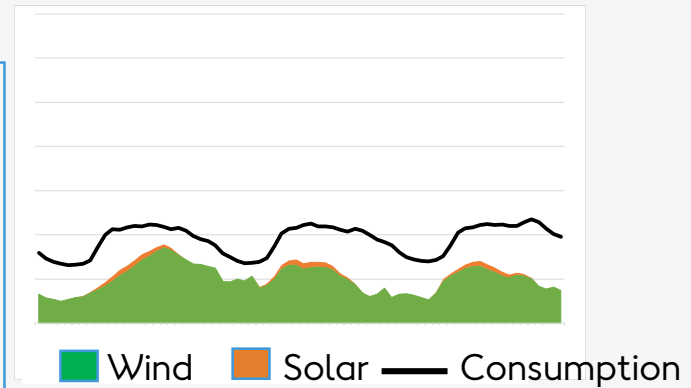
Comparing costs of offshore transmission in Germany and UK, EUR/MWh<sup>1</sup>



# The energy system of the future



3 days in May, 2018, MWh



3 days in May, 2040, MWh

