



H<sub>2</sub>/CO<sub>2</sub>

2030

Production 19 TWh H<sub>2</sub>

2045

96 TWh H<sub>2</sub>,  
20 Mt CO<sub>2</sub> DAC



6 million heat pumps, efficient electric appliances, efficient lighting, decline in direct electric heating

14 million heat pumps, increased use for cooling and ventilation, efficient heat pumps, decline of direct electric heating, efficient appliances



Heat pumps, efficient lighting

Heat pumps, efficient lighting



25% of vehicle kilometers travelled in road freight with batteries and overhead lines, 14 million electric cars

80% of vehicle kilometers travelled in road freight with batteries and overhead lines, 36 million electric vehicles



Electrified process heat, electricity-based steam production, efficient cross-sectional technologies

Electrification of process heat, CO<sub>2</sub> capture, electricity-based steam production in electric boilers and high-temperature heat pumps

Prognos, Öko-Institut, Wuppertal Institut (2021)

DAC = Direct Air Capture, HH = Households, BTS = Business, trade and services. Storage demand includes pumped storage hydro and stationary battery storage in public grids. Power consumption of home batteries in combination with PV systems is not considered here.