


Power to X



The main role of green H₂ is in end-uses where decarbonisation options are few


Industrial sector



- Existing industrial feedstock for refineries, ammonia and other chemicals production
- New process uses in steel manufacturing
- Replacement of fossil fuels for process high temperature heat

No alternatives for deep decarbonisation of industry


Mobility sector



- Heavy trucks and long-haul freight
- Public transport in busses and trains
- Maritime and shipping (H₂ and ammonia)
- Aviation (synfuels and direct H₂ use)

Electrification may be possible but not with current technology


Heat sector



- Space heating with hydrogen boilers to replace gas and other fossil fuels
- Hybrid heat pumps

Electrification possible with heat pumps but not 100%

Power sector



- Energy storage and Power-to-X
- Direct H₂ use in CCGTs
- Co-firing Ammonia and Coal
- Enabler of more intermittent RES
- Fuel cells

No alternatives for seasonal storage of energy

