

Import + Local production

Transport + Storage

Application



Safety aspects of large-scale transport and use of hydrogen carriers

Improving system design regarding utilisation of space, system efficiency, costs and use of residual heat and O₂

Improving durability of electrolyser components, reliability, circularity and reduction of expensive and scarce materials used

Reduction of project footprint by development of local supply chain for materials, equipment and technology & service providers

Systems integration challenges e.g. minimising grid congestion and coupling intermittent renewable power generation to electrolyser systems



Development of and connecting to large-scale storage facilities

Matching supply & demand of H₂ via flexible production, offtake, connecting to H₂ grid and storage

Development of H₂ safety norms & standards for the integration of electrolyser systems, H₂ transport networks (metallic and non-metallic pipelines) and H₂ storage facilities in the Dutch industrial zones

Stimulate knowledge sharing and training opportunities in light of the shortages of qualified (technical) personnel across the green H₂ value chain

Stimulate flexible H₂ demand, by e.g. adaptation of application processes, and the development of (temporary) hybrid solutions

Further improvement in the use of hydrogen as fuel regarding safety, efficiency and NO_x emission reduction

OVERALL CHALLENGES: GREEN HYDROGEN CERTIFICATION, SAFETY (PERCEPTION), COST REDUCTION, AVAILABILITY RENEWABLE ELECTRICITY