



Technology Gaps in Utility Scale Hydrogen Production

Hydrogen Export Industry Workshop
University of Western Australia

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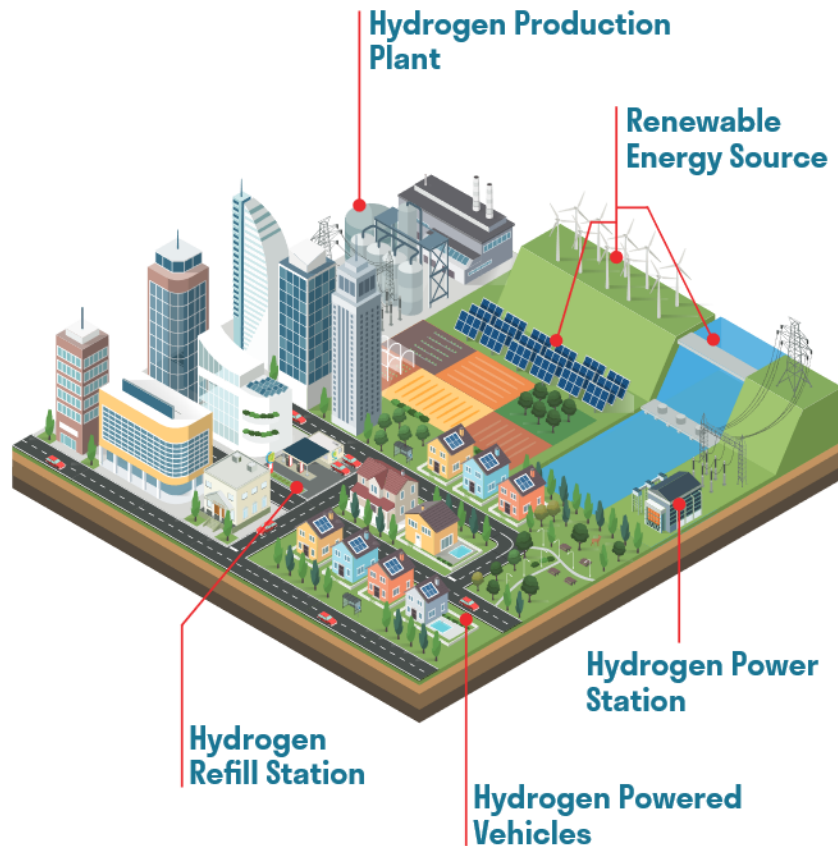
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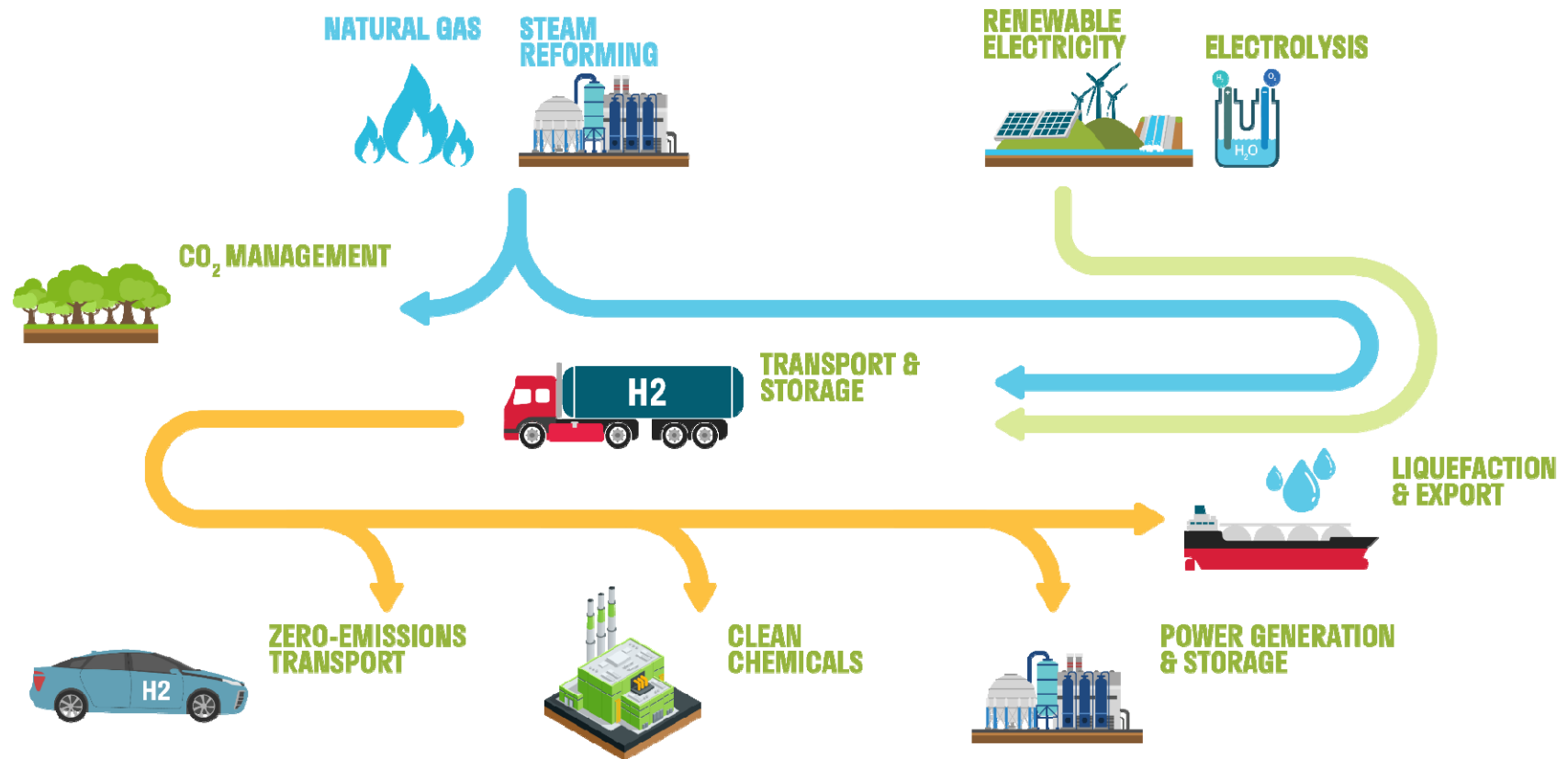


The Potential Future of Australian Energy Communities



- + Renewable penetration continues to increase
- + Renewables are used to produce H₂ to power energy needs
- + Lower generation costs through export scale H₂ production
- + Grid costs reduced due to efficient use
- + Low electricity costs improve industrial competitiveness and living standards
- + All remain connected to trade energy

Technology Opportunities – What We Need To Solve



Production:

- + Lowest possible CAPEX and OPEX
- + Integrated low cost renewable energy
- + Lower cost electrolysis
- + Methane cracking – H₂ and carbon
- + Balance of plant optimisation
- + Intelligent assets

Transportation:

- + Loading / unloading facilities
- + Domestic and export
- + Lifecycle optimised supply chain solutions
- + End use lowest total supply cost

Storage:

- + Liquefaction at scale
- + Integrated heat/power
- + Scalable and flexible solutions

End Use:

- + Regasification facilities
- + Power generation
- + Low cost distribution networks
- + Integrated hubs





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