






Industry 	Transport 	Buildings 	Power 	Energy storage 
<p>There are industries that will particularly struggle to decarbonise due to their energy intensive processes like steel, chemical and cement industries. Hydrogen can be utilised as a fuel source or as a feedstock replacing high carbon dioxide emitting fossil fuels.</p>	<p>Currently, the majority of transportation methods in land, sea and air use fossil fuels. These can be replaced with Hydrogen. Hydrogen powered rail, trucks, buses, ferries, and cars are already in use, and airlines are in testing phase for commercial applications.</p>	<p>Direct use of renewable electricity is found to be more efficient than heating space and water by the use of green hydrogen since the electricity needed to produce gas is much higher. Heating buildings by hydrogen gas is still a viable solution for places that lack any other alternatives than fossil fuels.</p>	<p>It is possible to connect hydrogen power plants to the grid. Currently, fossil fuels are used to generate back up power to the grid when renewable energy cannot meet the demand. Hydrogen could replace fossil fuels to generate back up power.</p>	<p>Hydrogen can be stored through compression, liquefaction, and conversion to ammonia. Addressing challenges of renewable energy wastage during peak hours and shortages during high consumption periods, it emerges as a key solution to maximise renewables' contribution to our energy mix. With long-term storage capabilities, hydrogen can efficiently generate electricity as needed and has the potential to be the most cost-effective long-term electricity storage option.</p>