

# Proposed Production Technologies

## Hydrogen from water and electricity

- Electrolysis - a method of producing hydrogen from water using electricity

## Hydrogen from manufacturing byproducts

- Capture and purification of hydrogen byproduct from chlor-alkali processes, which are chemical manufacturing processes that produce chlorine and sodium hydroxide (caustic soda) for industrial uses

## Hydrogen from natural gas

- Autothermal reforming with carbon capture - Uses natural gas to create carbon dioxide (CO<sub>2</sub>) and hydrogen (H<sub>2</sub>). Carbon dioxide can be captured or stored underground.
- Pyrolysis - Uses natural gas to produce carbon and hydrogen. Solid carbon from the pyrolysis process can be used for various products.