

The background is a solid blue gradient, transitioning from a lighter blue at the top to a darker blue at the bottom. At the top, there are several wavy, horizontal lines in various shades of blue and cyan, creating a sense of movement and depth.

Hydrogen

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Basics

- Energy carrier like electricity.
- Secondary form of electricity.
- Main use is for Transportation.
- Loses more energy than created.
- Produced from other sources, such as water, biomass, or nuclear power.
- Preferably use wind energy and solar energy to produce Hydrogen.

Ways to Obtain

- Biomass
 - Organic rubbish, agricultural wastes, algae
- Water
- Natural Gas
- Hydrocarbons
 - Highly emissive of CO₂

Hydrogen as Fuel

- 95% of Hydrogen is obtained from natural gas which means that CO₂ emissions are abundant.
- Plans to release the CO₂ into the ground would be much better for the environment, but hard to do.

Hydrogen as Fuel

- Takes almost 5 times more space to hold Hydrogen than gasoline covering the same distance.
- Its low density makes it necessary to cool and compress the gas as much as possible for storage.

Fuel Cells

- Loses energy when converted into electricity.
- Quiet, no pollution
- Puts water back into the cycle.
- Widespread use of Hydrogen is not yet developed far enough.

Fuel Cells

- <http://videos.howstuffworks.com/ballard/651-ballard-shows-how-a-fuel-cell-works-video.htm>

Disadvantages

- Cannot travel as far on Hydrogen as fuel
- Highly explosive
- Infrastructure for available Hydrogen is not in place, and it's expensive
- Technology to store Hydrogen is lacking
- Uses primary fuel to create



Advantages

- Very Clean; few emissions: heat and water
- Produced by biomass, water, and nuclear energy
- More of the fuel is used than in gasoline powered cars.