

Green Hydrogen

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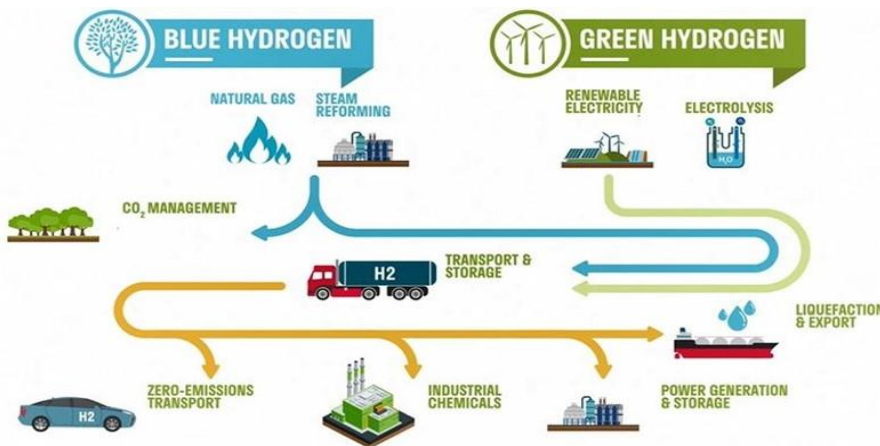
What is Green Hydrogen?

There are many different ways to produce hydrogen ranging from grey, blue, turquoise all the way to green. The colors represent the carbon footprint associated with producing the hydrogen. For example, grey hydrogen is responsible for significantly higher CO₂ emissions compared to blue or turquoise. This leads to green hydrogen which is the process of producing hydrogen using renewable electricity (a process called electrolysis) to produce energy without admitting any CO₂ into the atmosphere.

Grey hydrogen	Blue hydrogen	Green hydrogen
Split natural gas into hydrogen and CO ₂	Split natural gas into hydrogen and CO ₂	Split water into hydrogen by electrolysis powered by water or wind
CO ₂ emitted in the atmosphere	CO ₂ stored or reused	No CO ₂ emitted

Why is it Significant?

Hydrogen has been used as a fuel source to power cars, aircraft and spacecraft since the 1900's. Green hydrogen plays a key role in the world's surge to become carbon free as it only emits water vapor and leaves behind no emissions unlike coal and oil. As of right now a major disadvantage associated with green hydrogen is cost. Renewable resources are key to generating green hydrogen which in turn drives up costs. However as renewable technology continually advances driving costs lower and lower; hydrogen will undoubtedly be one of the fuels of the future.



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Advantages of Green Hydrogen



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100% sustainable:
Zero emissions during combustion or production



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Green hydrogen can be transformed into electricity or synthetic gas and used for domestic, commercial, industrial or mobility purposes.



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Hydrogen is easy to store and therefore can be used for other purposes after production.



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Green hydrogen can be mixed with natural gas at ratios of up to 20 % and travel through the same gas pipes and infrastructure.