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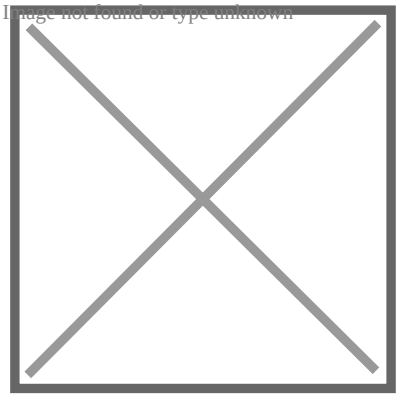

National Green Hydrogen Mission

Description

What is Green Hydrogen:

- Hydrogen can be classified into different types based on its production method. Examples – grey hydrogen, blue hydrogen, yellow hydrogen, green hydrogen, etc. Green hydrogen is produced using renewable energy sources, such as wind or solar power, which split water into hydrogen and oxygen. It is the most sustainable type of hydrogen and eco-friendly because its production doesn't result in any carbon emissions.
- Green hydrogen is currently expensive to produce compared to grey and blue hydrogen. However, advancements in technology and increased investments in renewable energy are expected to reduce the cost of green hydrogen in the future. The cost is expected to fall below $2 per kilogram by 2030.
- Green hydrogen will be used in various areas, including powering zero-emission cars, buses , and trucks in transportation; making steel, cement, and chemicals in the industry without fossil fuels; storing energy from wind and solar power for electricity; providing clean heating for homes and buildings; and fueling ships and planes in a cleaner way.

What is the 'National Green Hydrogen Mission':

- The National Green Hydrogen mission was launched in January 2023 with the aim of positioning India as a global leader in green hydrogen production.
- Under this mission, the government gives incentives to encourage investments in green hydrogen projects. It also provides funding for research and development efforts to improve the efficiency and reduce the cost of hydrogen production technologies. Moreover, it builds essential infrastructure such as hydrogen refuelling stations and pipelines to support the widespread use of green hydrogen in transportation, industry, and power sectors. Additionally, the mission promotes international collaborations to exchange knowledge and best practices in hydrogen technology.
- As of 2024, the Indian government has announced an investment of Rs.19,744 crore for the National Green Hydrogen Mission. This funding aims to develop a green hydrogen

production capacity of at least 5 million metric tonnes per annum by 2030. It also targets the development of 125 GW of renewable energy capacity to support the production of green hydrogen.

Benefits of this mission:

- By reducing greenhouse gas emissions, the mission contributes to global climate goals and supports India's commitments under the Paris Agreement.
- By shifting towards domestic production of green hydrogen, India can significantly reduce its reliance on imported oil and natural gas, which are subject to volatile global prices and geopolitical risks.
- The green hydrogen industry is expected to generate new jobs and stimulate economic growth through investments in technology and infrastructure.

Conclusion:

By focusing on green hydrogen production from renewable sources like wind and solar power, India aims to reduce its dependence on imported fossil fuels, enhance national energy security, and mitigate the environmental impact of greenhouse gas emissions. The National Green Hydrogen Mission aims to make India a major player in the global hydrogen economy.

Your Turn…

What are your thoughts on the National Green Hydrogen Mission? Express your point of view through the comment section below. Subscribe to our blog to read answers to the trending GD topics.

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