

Hydrogen could play decisive role in India's net zero emission & in making India Atmanirbhar in energy?

Hydrogen energy is of one emerging clean fuel technologies. ~~to the~~

India has brought Hydrogen energy policy on 17 February 2022. This policy will ~~bring~~ in guidelines and challenges in developing Hydrogen energy projects. ^{green}

Hydrogen is one of the cleanest fuels which will help in reducing carbon footprints & clean energy goals.

India ~~is~~ consuming $1/3$ rd global average energy as per Energy institute of India.

⇒ Factors need to observed in ~~bring~~ making Hydrogen energy over conventional energy resources.

→ We need ~~to~~ 9 litres of water to generate 1 Kg of Hydrogen

→ Electrolyzers capacity is expected to be 300MW all over the world which ~~need greater investm~~ is not sufficient.

→ The cost of generating electrolyzers is also high

→ The electricity required to generate Hydrogen should

go. up.

- Transportation of Hydrogen should be structured on the basis of gas-pipeline transportation system
- Storage of Hydrogen
- Capital investments requirement is more
- ⇒ To create demand in this green energy fuel government should incentivise mature industries such as ~~steel~~ refining, & fertilisers, where Hydrogen acts as major ingredients.
- ⇒ Research & development should be accelerated to bring in ~~cost effective~~ cost-effective ways in generating this energy
- ⇒ Production Linked incentives should be brought under ~~this scheme~~ in producing electrolyzers at ~~low~~ low cost benefits.
- ⇒ Manufacturing of electrolyzers should be supported by government subsidised schemes
- ⇒ India has set up its first hydrogen plant at Assam with an installed capacity of 10 kg per day.

⇒ The transformation India's ~~energy~~ conventional energy sector to green energy sector needs comprehensive and ~~structured~~ implementation. All the stakeholders, Government, private sector, Transportation, Finance, ^{should} work together to make ~~the~~ green energy hub & ~~putting~~ becoming from energy importer to dominant exporter.

⇒ With moving towards green energy fuel, India therefore, India will contribute in reducing ~~emissions~~ mitigation global climate crisis ~~which was~~ & fulfilling the commitments made by India in COP26 agreement.