

Q55

It is critical for India to harness the energy from hydrogen to attain the sustainable development goals effectively. Examine

Goal 7 sustainable development Goals emphasises on affordable, reliable, sustainable and modern energy to all. To achieve this India aims towards achieving renewable energy target of 175 GW by 2022. Introduction of green hydrogen concept in industrial and other commercial energy requirements of the country could be a game changer.

Benefits of Green energy from hydrogen :-

1. Green hydrogen is amount of hydrogen released without any carbon as a byproduct i.e. it would hugely reduce the carbon emissions.
2. Hydrogen is produced in fertiliser industries as a by-product, decarbonised hydrogen from ammonia based fertilised industries could use the earlier wasted hydrogen in energy generation.
3. Green hydrogen would reduce stress on conventional energy source and India's reliance on global supplies.
4. Reduction in carbon emissions would help India to achieve Nationally Determined targets under SDGs.
5. Hydrogen is the most abundant element in the solar system & has huge potential of generating vast amount of energy. Earlier this hydrogen fuel cell technology was used only in rocket propulsions. Technological advancement for fulfilling ^{increasing} domestic demands hydrogen energy could be helpful.

Challenges :-

1. Huge input cost required.
2. Logistics support from various sectors and proper supply chains are required
3. Public investments need to be strategised & channelised well.

Union Budget 2021 aims to make India a hydrogen economy and proposed National Hydrogen Mission to become global hub. Identification of high demand sectors & reduction of renewable power tariffs are required.