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Introduction

Scientists ~~and~~ ~~technocrats~~ have for years been engaged in the quest ~~for~~ of discovering alternatives ~~fuels~~ to fossil fuels which are responsible for the production of over @ 30 million tons per annum of ~~carbon~~ CO_2, ~~dioxide~~ ~~is~~ ~~has~~ ~~catalysing~~ catalysing human - induced global heating. There is a hope of utilising 'Green Hydrogen' as a driving source to power our several fields, with 'zero emission'.

Essentiality

① ~~In~~ India, ~~being~~ a power hungry nation and rapidly increasing population, CO_2 emissions in the country in 2021 is expected to be 30 million tonnes higher than ~~the~~ ~~levels~~ of 2019.

② India has vast unused lands.

③ India is a country which has plenty of sunlight and wind energy.

④ India's ~~emissions~~ power consumptions are to increase ~~as~~ because the country will push ~~hard~~ harder to bring the poor people out of

poverty ~~and~~ in the upcoming years, ~~and~~ ~~so~~ which means increase ~~of~~ in ~~power~~ ~~consumption~~ emissions.

(5) Hydrogen, ~~is~~ the most abundant element on the planet, ~~is~~ has energy density almost 3 times that of diesel.

(6) Green Hydrogen is ~~a zero carbon fuel~~ made by electrolysis using renewable power sources to ~~separate~~ split water into hydrogen and oxygen. India is a water abundant country.

(7) ~~Ensure~~ Ensure diesel savings to several lakhs annually and reduce air pollution. ~~the particulate matter and carbon~~

Challenges

* Production cost too high.
* Expected to be around $1.5 per Kg although India has perpetual sunlight, wind energy and vast unused lands.
* Rapidly increasing India's population, requires more production.

Conclusion

With new things come new challenges, possibilities, responsibilities and ~~duties~~ advantages. Although green Hydrogen is an environment friendly and safe fuel, for the next generations, ~~for~~ for a country like India, it is not impossible but hard to create the shift.