International Conference on Green Hydrogen 2023

IH2A
INDIA HYDROGEN ALLIANCE

Green Hydrogen Standard

Carbon Emissions from Green H2 Production

FTI CONSULTING

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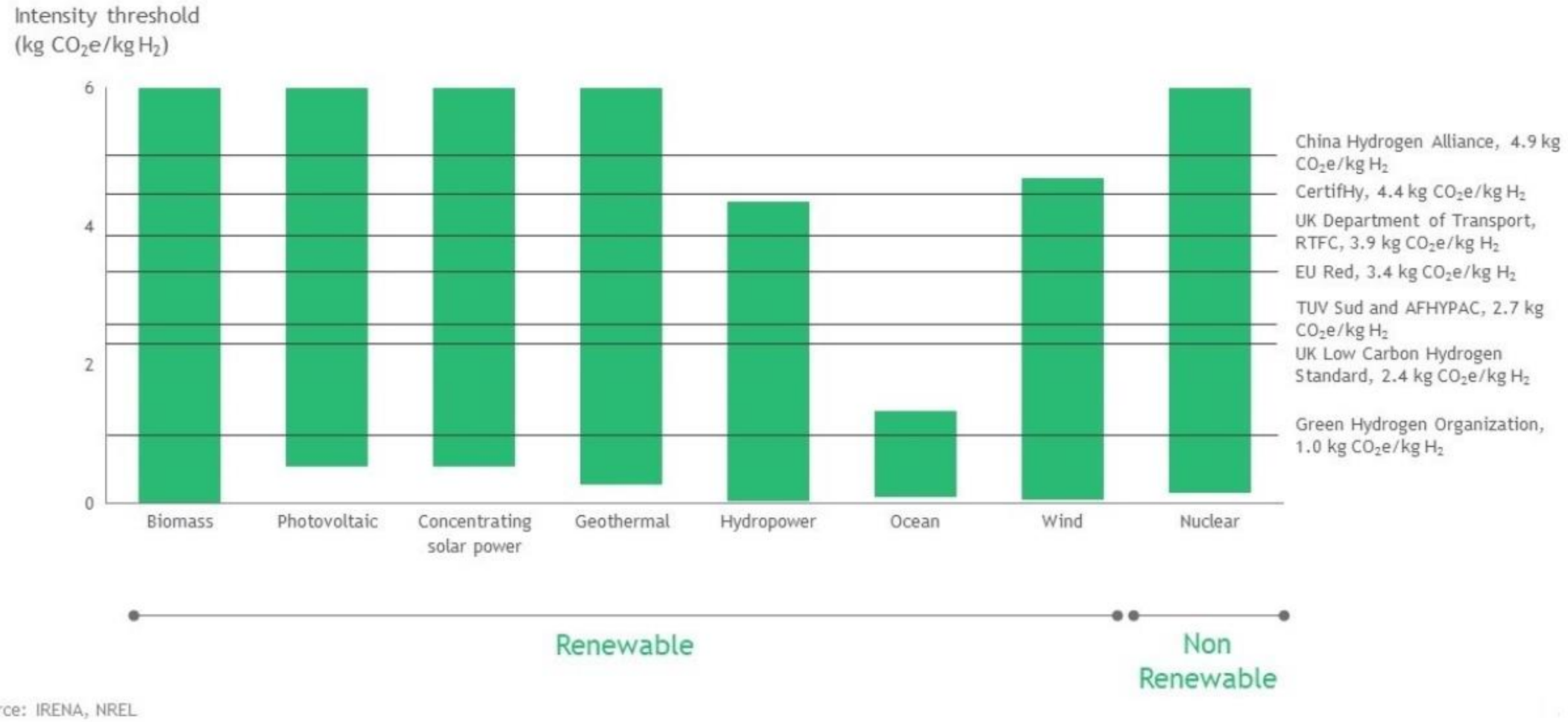
India's Green Hydrogen Standard

GHG emissions < 1 $kgCO_2e$/ kgH_2 from RE-based production



Source: IRENA, NREL

Carbon footprint per kg of generated hydrogen arrived at by combining National Renewable Energy Laboratory (NREL), Colorado, USA, evaluation of life cycle of GHG gas emissions from electricity generation with assumed electrolyzer power consumption in range of 48-58 kWh/kg H2. This do not include emissions from H2 transportation, compression, conversion to H2 derivatives. Emissions from electrolyser manufacturing process have also not been accounted. WEF-BCG report, Mar 3 2023.

H2 Standards and development of a National Green Hydrogen Economy

1) New ground - standards untested against in real applications due to limited commercial scale projects

2) Hydrogen certification schemes are still evolving - what standards approach should India take to help develop more commercial-scale H2 projects and be globally harmonized?

3) Certification process and capacity needs to be accelerated - measurement, reporting, monitoring, verification will be important

4) Important to align with global approaches, learnings from other jurisdictions in early-stage imperative in initial period (2024-2030)

Thank you

CONTACT
Amrit Singh Deo, Lead, IH2A Secretariat; and Senior Managing Director, FTI Consulting
Amrit.singhdeo@fticonsulting.com; +91 9167428242