vantedge

On Point

Sources of low carbon hdrogen in India - Identifying different clusters as per RE and conventional energy

Part -9 (Hdyrogen ecosystem development and identification of key future market growth clusters in India)

RES, Power & Utilities

RACeninrac

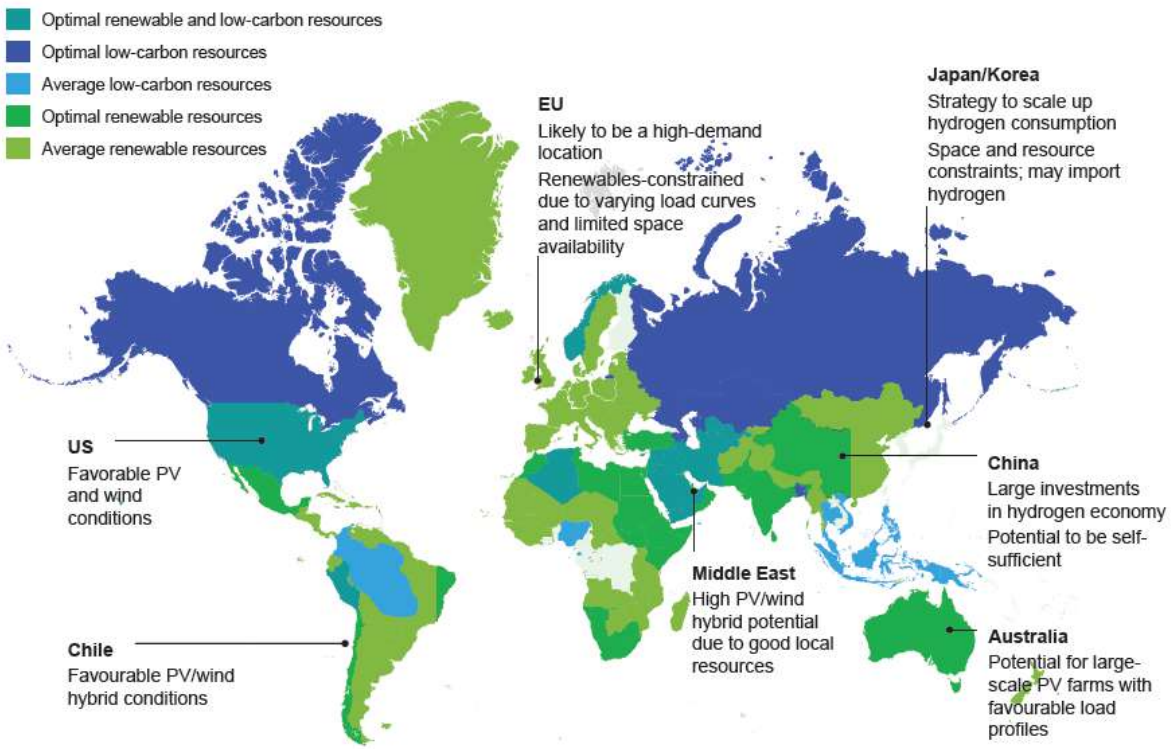
powered by whY

HYDROGEN TODAY - 2023

95% OF HYDROGEN PRODUCTION IN INDIA IS FOSSIL BASED

Even globally the extent of hydrogen produced is dominated by fossil-based process of steam methane reforming (SMR) and is no different in India either. Through this process whatever, H_2 produced is categorized as gray hydrogen and leads to enhanced carbon emission. The transition therefore is required in India as well and the process of hydrogen production must shift from SMR to electrolysis. Although, in China and Australia oil & gasification is also used but the cleanest form of H_2 production shall be through electrolysis, mainly with chlor-alkali process.

Best source of low-carbon hydrogen in different regions



Source: IRENA & eninrac research & analysis

Assessment of solar PV resources for renewable hydrogen production

State wise solar power installed capacity

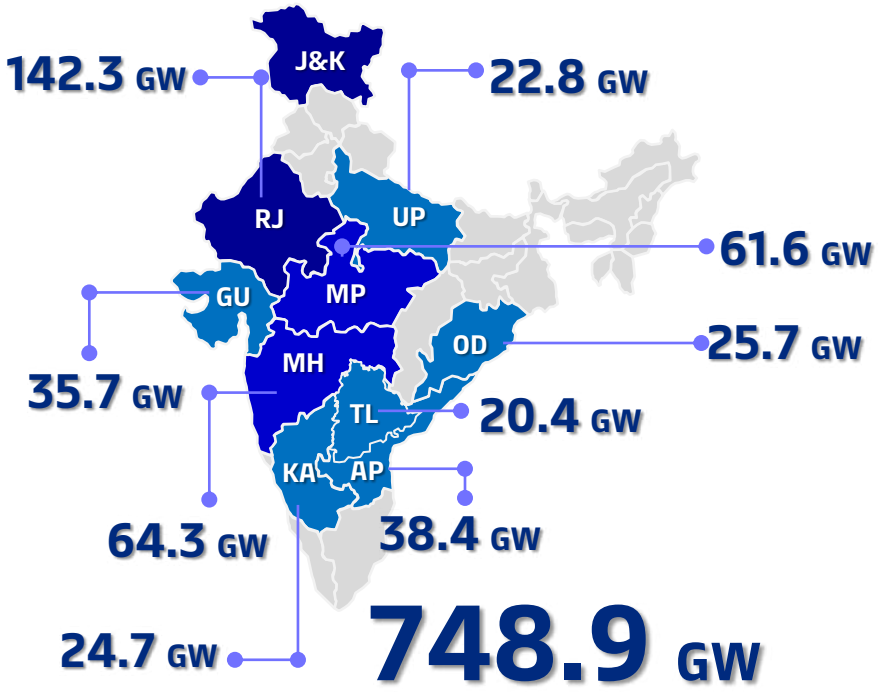
49.3 GW

Total solar power installed capacity of India as of 2022

~64

Total upcoming solar power projects in India under different stages of implementation

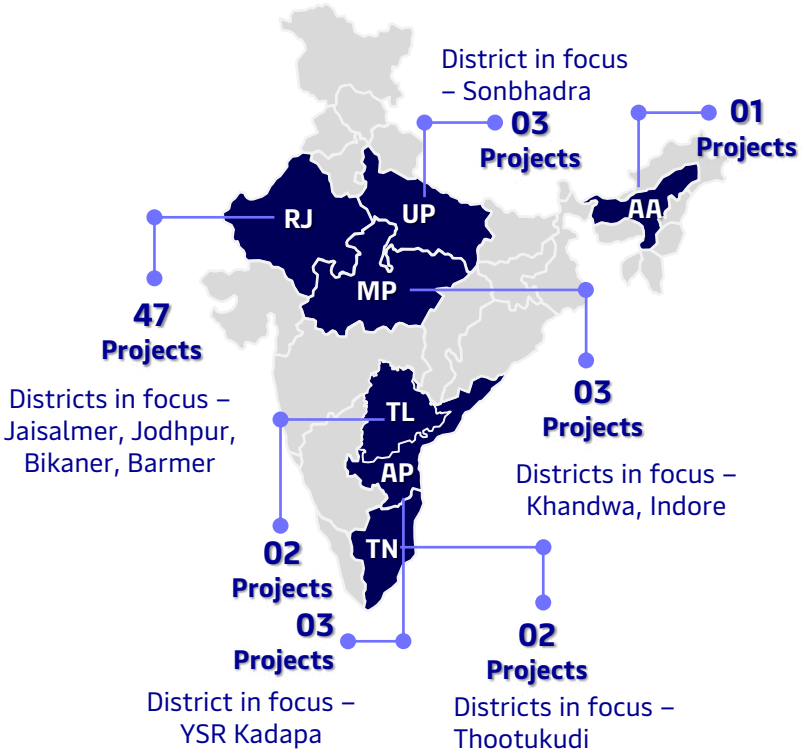
State wise estimated solar power potential – Leading 10 states, potential hubs for hydrogen



748.9 GW

Total solar power estimated potential of India

Key states in focus – Potential hubs for hydrogen



Source: Eninrac research, MNRE, Channel Checks

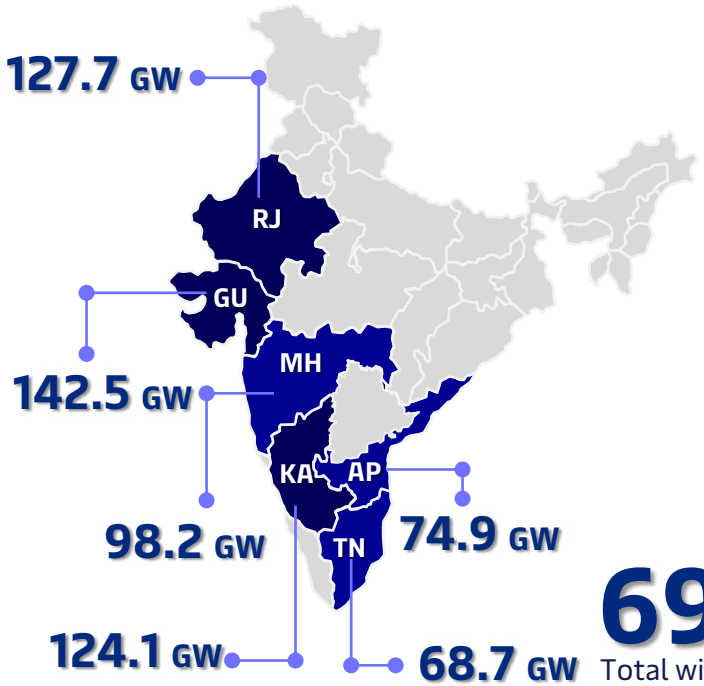
Assessment of solar PV resources for renewable hydrogen production

State wise wind power installed capacity

40 GW

Total wind power installed capacity of India

State wise estimated wind power potential – Leading 06 states, potential hubs for hydrogen



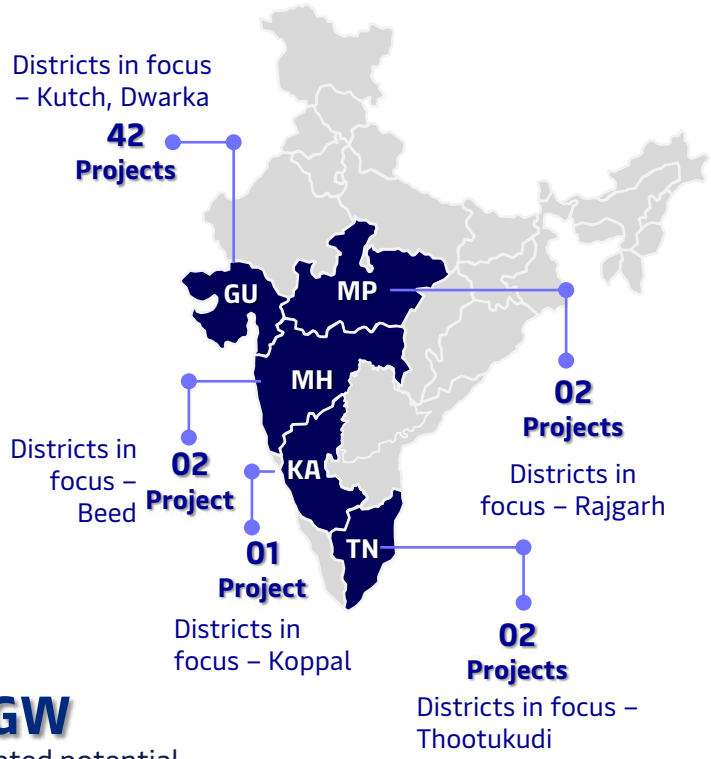
695.5 GW

Total wind power estimated potential of India @ 120 m

~ 51

Total upcoming wind power projects in India under different stages of implementation

Key states in focus – Potential hubs for hydrogen



Source: Eninrac research, MNRE, Channel Checks

WANT TO LEARN MORE ABOUT THE REPORT ?

WRITE OR CALL TO US

at connect@eninrac.com
+91 93190 48963/47963, +91 72900 16953