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**New Delhi, 2nd Nov 2024:** NETRA, the R&D wing of NTPC Ltd., embarks to set up green hydrogen production plant using Plasma Oxy Gasification of MSW/Agri-Waste technology. Upon set-up, it shall be a unique plant globally, wherein plasma assisted ‘oxy gasification’ of MSW-RDF/Agri-Waste shall be carried to produce ‘very high quality syn-gas’, from which high purity hydrogen (>99.9%) shall be separated using a novel configuration of ‘gas membrane’ and ‘pressure swing adsorption’.

This demonstration plant will produce about 1 Tonne per day green hydrogen by gasifying about 25 Tonne per day MSW/Agri-Waste. Besides ‘Carbon-Mono-Oxide’ separated from ‘Hydrogen Recovery System’ shall be used to produce electricity using a low calorie gas engine.

It may be mentioned that other than electrolysis, which is a highly energy intensive process (55-60 kWh/kg H<sub>2</sub>), Gasification & Reformation of MSW/Agri-Waste is the only pathways to produce green hydrogen.

This cutting-edge technology is in line with NETRA’s commitment to undertake research projects and demonstrate technologies for achieving Energy Transition goals and NTPC’s commitment for adopting ‘Circular Economy’ models.

This opens a new avenue for NTPC Green Energy Limited (NGEL), a wholly-owned subsidiary of NTPC in the domain of green hydrogen.