

1/54/2023 - NT
Ministry of New and Renewable Energy
Government of India

Atal Akshay Urja Bhawan
Lodhi Road, New Delhi – 110003
1st November 2023

OFFICE MEMORANDUM

Subject: Details of year-wise planned Green Ammonia/ Green Methanol capacities and corresponding withdrawal capacities - reg.

The undersigned is directed to refer to the discussions held during the meeting chaired by Hon'ble Minister with Green Hydrogen industry stakeholders/associations on 19th October 2023, wherein Hon'ble Minister had instructed the developers to provide details of year-wise planned Green Ammonia/ Green Methanol capacities and corresponding withdrawal capacities desired at different locations. Hon'ble Minister also instructed that this information should be shared with the Central Transmission Utility of India Limited (CTUIL) for the purpose of planning the required substation capacities at these specified locations.

2. MNRE has consolidated the information received from various developers regarding their planned projects and their withdrawal requirements at the respective locations. The compiled list is attached herewith.
3. This issues with the approval of the component authority.


Anubhav Uppal
Scientist - C

Enclosed: as above

To:

Shri Abhay Choudhary
Chairman
Central Transmission Utility of India Limited
First Floor, Saudamini, Plot No.- 2, Sector- 29
Near IFFCO Chowk Metro Station
Gurgaon – 122001, Haryana

Copy for information to:

- i. Chairman, Central Electricity Authority
- ii. PS to Hon'ble Minister
- iii. PSO (Secretary), MNRE

Connectivity to the Grid for planned Green Ammonia/ Green Methanol Plants						
S. No.	Developer	Product (Green Hydrogen/ Ammonia/ Green Methanol/ others-specify)	Planned Capacity (in Million Tonnes Per Annum)	Expected Year of Operations (provide breakup of capacity year wise)	Location where connectivity is required (mention the nearest port as well, if applicable)	Required Capacity of Power withdrawal from nearest Substation (in GW)
1.	Renew Power	Green Ammonia	1.1 MMTPA	300 TPD - 2026 1500 TPD - 2028 1500 TPD - 2030	Paradip	3 GW
		Green Ammonia	1.1 MMTPA	300 TPD – 2027 1500 TPD - 2029 1500 TPD - 2031	Gopalpur	3 GW
		Green Ammonia	1.1 MMTPA	300 TPD – 2027 1500 TPD - 2029 1500 TPD – 2031	Tuticorin	3 GW
		Green Ammonia	1.1 MMTPA	300 TPD – 2027 1500 TPD - 2029 1500 TPD - 2031	Kakinada	3 GW
		Green Ammonia	1.1 MMTPA	300 TPD – 2027 1500 TPD - 2029 1500 TPD - 2031	Kandla	3 GW
		Green Methanol	0.3 MMTPA	450 TPD - 2027 450 TPD - 2029	Rayagada	1.1 GW
		Green Methanol	0.5 MMTPA	750 TPD - 2027 750 TPD - 2029	Malkangiri	1.8 GW
2.	Axis Energy Ventures India Pvt Ltd	Green Hydrogen, Ammonia, Methanol and its derivatives	2 MMTPA	1 MMTPA – 2027 1 MMTPA - 2030	Ramayapatnam Port, Andhra Pradesh	3.5 - 4 GW
3.	Welspun New Energy	Green Hydrogen & Green Ammonia	0.7 MMTPA (GA equivalent)	0.1 MMTPA - 2027 0.6 MMTPA - 2030	Kendarpada dist.	3.5 GW
		Green Hydrogen & Green Ammonia	1 MMTPA (GA equivalent)	0.1 MMTPA - 2027 0.9 MMTPA - 2030	Kandla area, Kutch district	5 GW
4.	Gentari Hydrogen - India	Green Ammonia	0.5 MMTPA (500 KTPA) Phase 1	2027	V. O. Chidambaranar Port - Tuticorin (Tamil Nadu)	750 MW (0.75 GW)
		Green Ammonia	0.5 MMTPA	2028	New Mangalore Port	750 MW (0.75 GW)

			(500 KT PA) Phase 1		- Mangalore (Karnataka)	
5.	Aditya Birla Renewables	Green Ammonia	0.1 MMTPA	2027-28	Paradip Port	0.15 GW
6.	Greenko	Green Ammonia	1 MMTPA	2026	Kakinada	1.5 GW
		Green Ammonia	1 MMTPA	2027	Kakinada	1.5 GW
		Green Ammonia	1 MMTPA	2027	Tuticorin	1.5 GW
		Green Ammonia	1 MMTPA	2028	Mangalore	1.5 GW
		Green Ammonia	1 MMTPA	2028	Kandla	1.5 GW
7.	Adani New Industries Limited (ANIL)	Green Ammonia	1.2 MMTPA	2027	Injection point: (a) Lakadia ISTS S/s (up to 4 GW from Zone 3) (b) At a nearby location of Zone II / Zone I which may be taken into CEA planning considering huge quantum of power. Else, Radhanesda ISTS S/s (up to 18 GW) from Zone II / Zone I	4 GW
		Green Ammonia	1.2 MMTPA	2028		7 GW
		Green Ammonia	1.6 MMTPA	2029		6 GW
		Green Ammonia	1.6 MMTPA	2030		5 GW (22* GW combined) Withdrawal point - Proposed ISTS S/s at Navinal, Mundra (22 GW) <i>*Overall plan is for transmission of ~ 40 GW of RE through ISTS by the end of 2032 for ~9 MTPA of Green Ammonia production</i>
8.	Infinity Global	Green Ammonia (Odisha)	0.5 MMTPA	Phase 1- 2027 Phase 2- 2029	Gopalpur Port, Odisha	0.75 GW RTC
		Green Ammonia (Tamil Nadu)	0.5 MMTPA	Phase 1- 2027 Phase 2- 2029	Tuticorin Port, Tamil Nadu	0.75 GW RTC

9.	Ocior Energy	Green Ammonia	1 MMTPA	0.1 MMTPA – Jan 2027 0.9 MMTPA – Jan 2030	Gopalpur Industrial Park (TATA SEZ) in Odisha near Gopalpur port	0.15 GW [connected on state (Odisha) transmission system by Jan 2027] 1.5 GW [connected on Inter State transmission system by 2030]
		Green Ammonia	1 MMTPA	0.1 MMTPA - Jan 2027 0.9 MMTPA - Jan 2030	Kandla, Gujarat near Deendayal/Kandla port	0.19 GW (connected on Inter State Transmission System by Jan 2027) 1.5 GW (connected on Inter State transmission System by 2030)
10.	Hindustan Petroleum Corporation Limited (HPCL)	Green Hydrogen – Visakhapatnam Refinery	0.37 KTPA (0.00037 MMTPA)	November 2023	Visakhapatnam, Andhra Pradesh	2.6 MW (0.0026 GW)
		Green Hydrogen – Barmer Refinery	4.30 KTPA (0.0043 MMTPA)	December 2025	Newai, Dist. Balotra, Rajasthan	30 MW (0.03 GW)
		Green Hydrogen – Visakhapatnam Refinery	2.60 KTPA (0.0026 MMTPA)	December 2025	Visakhapatnam, Andhra Pradesh	20 MW (0.02 GW)
		Green Hydrogen – Visakhapatnam Refinery	21.80 KTPA (0.0218 MMTPA)	2030	Visakhapatnam, Andhra Pradesh	150 MW (0.15 GW)
11.	Bharat Petroleum Corporation Limited	Green Hydrogen through electrolysis (cumulative production)	0.70 KTPA (0.0007 MMTPA)	2025	Bina, MP	5 MW (0.005 GW)
			7.60 KTPA (0.0076 MMTPA)	2027	Yet to be finalized	55 MW (0.055 GW)
			20.70 KTPA (0.0207 MMTPA)	2030	Yet to be finalized	150 MW (0.15 GW)

		Green Hydrogen through biomass (cumulative production)	37 KTPA (0.037 MMTPA)	2030	Yet to be finalized	
12.	NTPC	Green Ammonia	0.5 MMTPA	2027	VOC Port, Tuticorin, Tamil Nadu	1 GW
		Green Ammonia	1 MMTPA	2027	Deendayal Port, Kandla, Gujarat	2 GW
		Green Ammonia	2 MMTPA	2027	Pudimadaka, Andhra Pradesh (Near Visakhapatnam Port)	4 GW
		Green Ammonia	0.5 MMTPA	2028	Syama Prasad Mookerjee Port, (Near Haldia port)	1 GW
		Green Methanol	0.5 MMTPA	2028	Simhadri / Pudimadaka, Andhra Pradesh, (Near Visakhapatnam Port)	1 GW
Total			29.295 MMTPA			75.3 GW