



NGEL Green Hydrogen Hub



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Overview

Project Location

Pudimadaka,
Visakhapatnam, AP



Airport

Visakhapatnam
(44km)



Land Size

1200 Acre (₹ 1,006 Cr.)



Seashore

2km



Road

NH 16 (20km),
SH 154 (50m)



Water source

Fresh - APIIC Network/
Yeluru Canal (15km)
80 MLD Desalination (2km)



Seaport

Gangavaram (36km),
Visakhapatnam (46km)



Power Supply

400kV NTPC Simhadri (18km)/
765 kV Anakapalli (30km)



Status:

1. GoAP in-principle approval for Green hydrogen hub in Feb'2023
2. Land Lease signed between APIIC and NGEL in Feb 2024. Registration completed.
3. Additional land - 200 acres (Chippada)
4. Future Expansion, 2029-32, 200 acres



Overview



Framework



Project Size

1600 acres, 2 MTPA green chemicals (1.5 MTPA Ammonia, 0.5 MTPA Methanol, 0.5 MTPA SAF/Urea), 300 acres of Manufacturing sheds (Opt)

Stakeholder Benefit



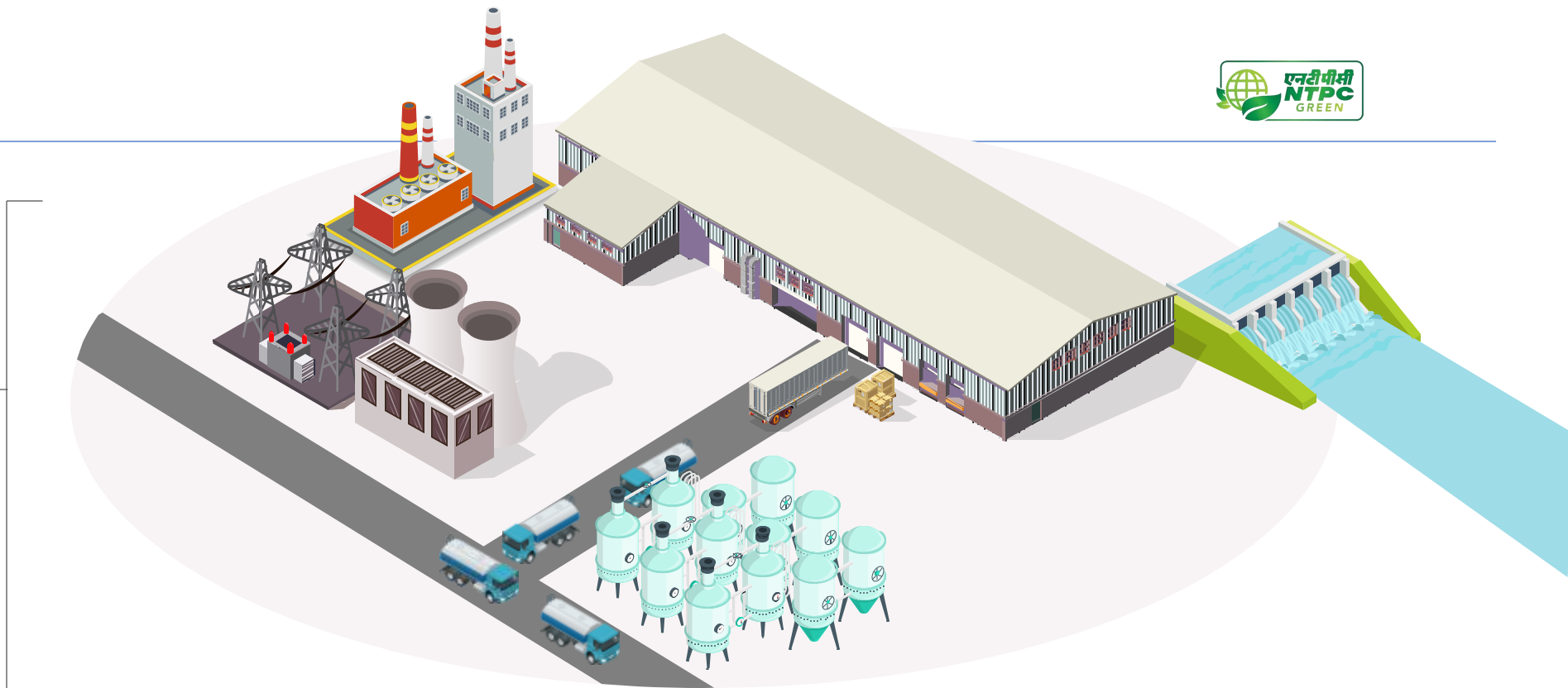
Strategically located Plug and Play sheds, Utilities, 57,000 Job creation Ease in Logistics

H2 Hub Policy Alignment



National Green Hydrogen Mission
AP Integrated Clean Energy Policy 2024

NTPC Renewable targets 2032



Investment

₹185,000 Crore
(\$ 22 Bn) Including investment in RE Capacity



Demand Potential

Domestic and Export Market for green chemicals and Green equipment produced



Infrastructure

Transmission corridor, 7 GW GIS, 80MLD Desalination, Admin Buildings, ETP, chemical storage terminal, Port, Logistics, Green zone, etc.

Action Plan for 2024-2032



Master Planning and Infra Engineering (Nov 24 – Apr 25)



Main Hub



Common Infra development (May 25 – Dec 26)

- Land, Road, Office, Gate Complex, Landscaping
- Water tank, Sewage treatment, Fire fighting, Waste management



Industrial Manufacturing Hub (Optional)

- Tender | Roadshows and Advt. (Dec 24 - Apr 25)
- Allotment to equipment Mfr. (Apr 25 – Dec 26)
- Construction of 25 Mfg sheds (Apr 25 – Aug 27)



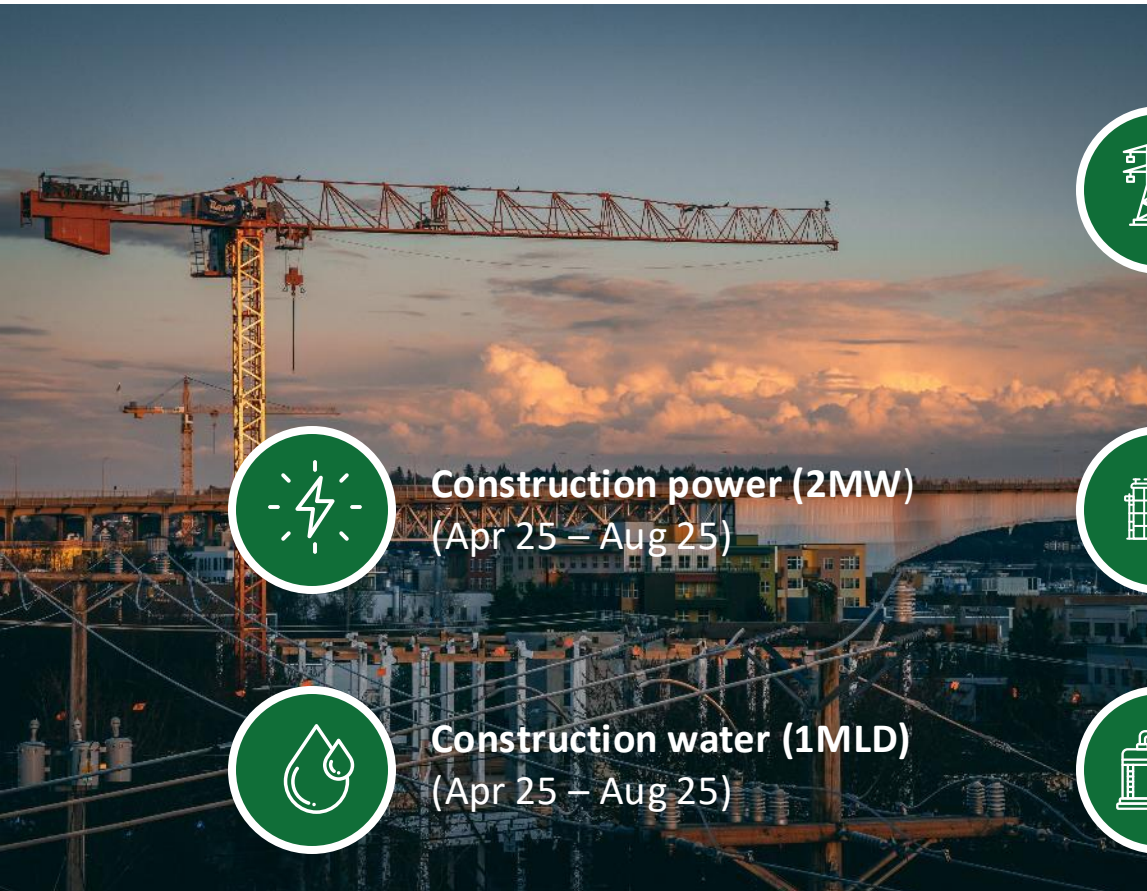
Green Chemicals (7500 TPD)

- In 4 phases, 2025 - 2032
- NH₃ (4500 TPD) , Methanol (1500 TPD), SAF/Urea (1500 TPD)

Action Plan for 2024-2032



Master Planning and Infra Engineering (Nov 24 – Apr 25)



Construction power (2MW)
(Apr 25 – Aug 25)



Construction water (1MLD)
(Apr 25 – Aug 25)



Electrical Infra (7 GW)

- DPR (Dec 24- Apr 25)
- Trans Corridor Ph I / II (Jun 25 – Jun 27)
- GIS Ph I – 2.5 GW / II- 2.5 GW (Jan 25 – Aug 27/28 – 32)
- Trans Corridor Ph III (29-30)
- GIS Ph III – 2 GW (29-30)



Desalination Plant (2x40 MLD)

- DPR (Dec 24- Apr 25)
- Land Acquisition 20 acres (May 25 – Nov 25)
- Construction (Jan 26 – Dec 27)



Port Infra and Chemical storage

- DPR (Dec 24- Apr 25)
- Land Acquisition 200 acres (May 25 – Nov 25)
- Construction (Jan 26 – Dec 28)

Utilities

Action Plan for Green Chemicals



Phase-I Green Ammonia (Domestic)		Phase-II Green Ammonia (Export)		Phase-III Green Methanol (Export)		Phase-IV 1500 TPD (future expansion-SAF/Green Urea)	
Domestic nearby supply	(Mar 25) 450 TPD	DPR	(Jun 24 – Apr 25)	DPR	(Mar 25) 450 TPD	CO2 pipeline - 23 km	(Jan 29-Mar 32)
Construction	(Apr 25 – Mar 28)	3000 TPD NH3	(Sep 25 – Aug 28)	2400 TPD CO2 Capture (Simhadri-1000 MW)	(Jan 26 – Dec 28)	1500 TPD SAF/Urea	(Jan 29-Mar 32)
280 MW Electrolyser	(Jan 26 – Jan 28)	NGEL – 1000 TPD	(Sep 25 – Aug 28)	CO2 pipeline - 23 km 1500 TPD	(Jan 26 – Dec 28) (Jan 26 – Dec 28)		



Action Plan for Green Chemicals



Green Ammonia (Export)



DPR (FFI- NH3)	(Jun 24 – Apr 25)
3000 TPD NH3	(Sep 25 – Aug 28)
NGEL – 1000 TPD	(Sep 25 – Aug 28)

Green Ammonia (Domestic)



Domestic Supply	(Mar 25) 450 TPD
Construction	(Apr 25 – Mar 28)
280 MW Electrolyser	(Jan 26 – Jan 28)

Green Methanol (Export)

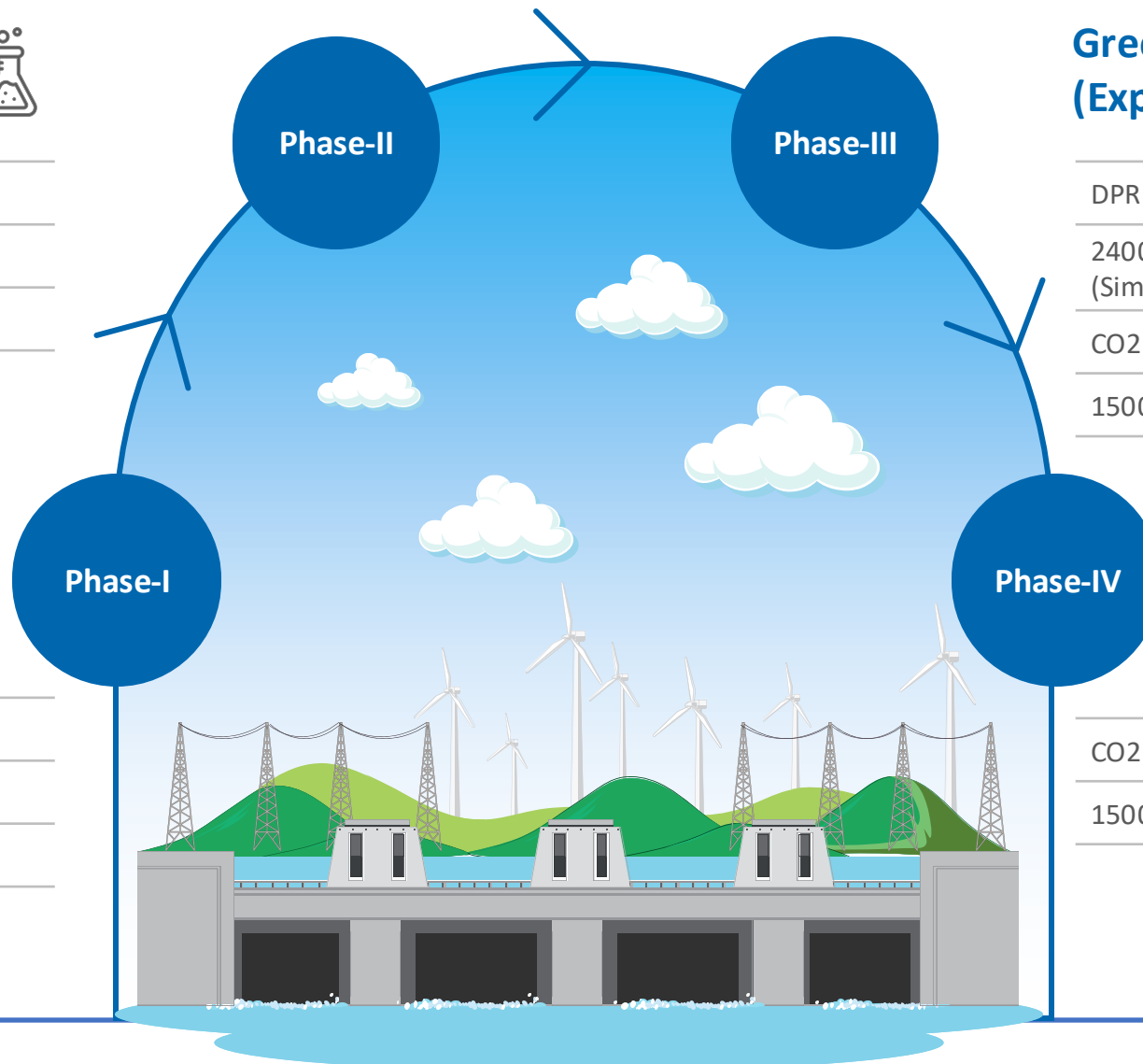


DPR (TOYO)	(Mar 25) 450 TPD
2400 TPD CO2 Capture (Simhadri-1000 MW)	(Jan 26 – Dec 28)
CO2 pipeline - 23 km	(Jan 26 – Dec 28)
1500 TPD	(Jan 26 – Dec 28)

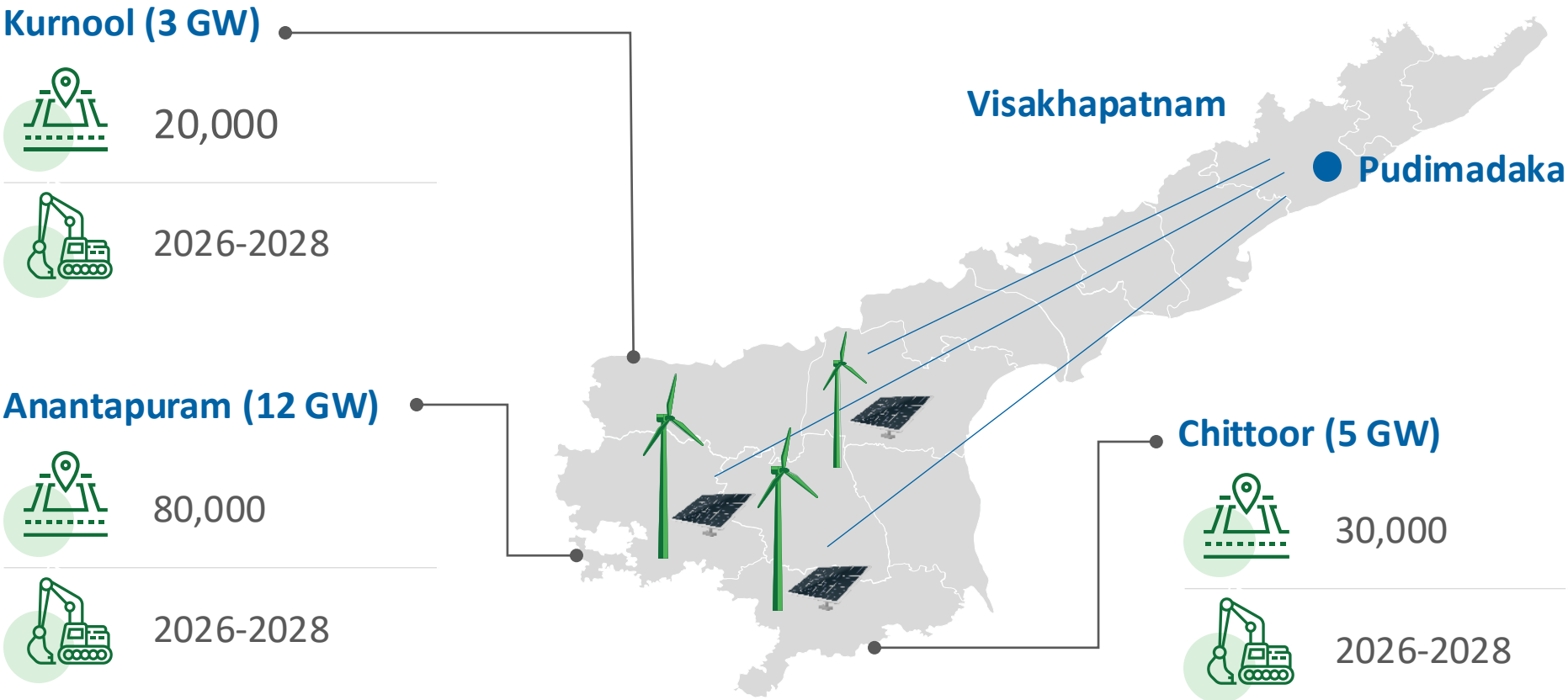
1500 TPD (future expansion-SAF/ Green Urea)



CO2 pipeline - 23 km	(Jan 29-Mar 32)
1500 TPD SAF/Urea	(Jan 29-Mar 32)



Action plan for RE



H2 Hub Potential
RE-RTC 7 GW

Investment in RE:
₹ 100,000 Cr

Land (Acres)* Construction

* MoU signed to setup 20 GW RE Capacity on 04.03.2023

Collaborations



International Developer-1

Green Ammonia 1 MMTPA

- Solar and Wind Projects with or without Storage upto 20 GW capacities. Production of Green hydrogen to the tune of 0.5 MMTPA and green derivative fuels
- To incorporate a JV Company for implementation of the project(s) aforesaid,



International Developer-2

Green Methanol 0.5 MMTPA

Thank You

