Reply to Parliament Question No 11156 for 25.03.2025 for Rajya Sabha regarding "Industrial Policy with Trillion Economy Goal" in respect of Numaligarh Refinery Limited (NRL):

Q no. (a): **the manner in which the Ministry plan to align industrial policies with India's $5 trillion economy goal, ensuring the manufacturing sector contributes significantly to GDP growth;**

Reply: Ministry to reply.

[NRL has undertaken the following major ongoing projects, ensuring the manufacturing sector contributes:

Sl.	Project Name	Location / State(s)	Project Cost (INR Cr)
1	Numaligarh Refinery Expansion – 6 MMTPA refinery at Numaligarh	Assam	22,494
2	Paradip – Numaligarh Crude Oil Pipeline (PNCPL) and crude oil import terminal	Assam, Odisha, Bihar, Jharkhand, West Bengal	11,407
3	Revamp of Delayed Coker Unit at Numaligarh	Assam	370
4	Polypropylene Unit	Assam	7,231
5	2G Ethanol Plant (JV project)	Assam	4,200
6	Green Hydrogen Project	Assam	170
7	Dabidubi LPG Plant	Assam	338
8	Siliguri Marketing Terminal Expansion	West Bengal	484
9	Coke Drum Structural Package (CDSP)	Assam	635
10	Power Recovery Turbine in PFCC Unit	Assam	293
11	220 KV Grid Connectivity	Assam	185
12	DCU Reliability and Efficiency Improvement Project	Assam	355

After completion of these projects, NRL's annual turnover will increase from Rs. 24,000 crore to Rs. 60,000 crore, making 2.5-fold increase.]

Q no. (b): **the extent to which is the Government incentivizing industrial decarbonization, ensuring that large-scale manufacturing units reduce carbon emissions; and**

Reply: Ministry to reply.

[NRL has developed a strategic roadmap to guide the achievement of net zero greenhouse gas (GHG) emissions for scope 1 and scope 2. The NRL aims to reduce emissions from an anticipated 3.4 million tons of CO_2e (expected after reaching a processing capacity of 9 million tons by 2026-27) to net zero by 2038.

The following initiatives are taken by NRL to reduce GHG emission and achieve net zero:

i. **Afforestation**: NRL has taken-up following flagship initiatives of tree plantation in Assam and other state:

   a. 1,00,000 saplings in 40 ha. land at Nakkati Chapori, Golaghat District, Assam.
   b. 68000 saplings in 35 ha. land at Kandoli PRF, Nagaon District. Assam.
   c. 3,50,000 saplings in 28 Ha. land in Abhoypur Village, Dibrugarh District Assam.
   d. Development and construction of 3 nos. Bamboo Nurseries in Assam to generate 60 lakh bamboo saplings to be planted in in three yrs.
   e. NRL has participated in the Green Credit Programme (GCP) notified on 13th October,2023 by MoEF&CC. A 55 ha of land parcel has been registered in Nawada, Bihar under the GCP, for planting 60,500 no. of trees in the degraded land. Plantation will start in next 1-2 month.

   The tree plantation in above mentioned plots already been completed. NRL would take maintenance of the forest for a period spanning 5 years. The afforestation as mentioned above will generate a carbon sink of about 0.26 million ton of CO_2 equivalent per year.

ii. **Green H2 Projects:**

   a. NRL is setting up a 2.4 KTPA green hydrogen plant on EPC basis, which is targeted to be commissioned by June 2025. WO awarded to Greenko ZeroC and job is under progress.
   b. NRL has floated a tender to set up a 10 KTPA Green hydrogen on BOO (Build, Own and Operate) basis and to supply Green Hydrogen for use in refinery, under SIGHT 2B scheme of MNRE.

      Total CO_2 emission reduction from above two green hydrogen project shall be about 0.124 MMTPA.
   c. Green H2 generation capacity shall be increased in future, by setting – up more unit s of green H2, to replace the grey H2.

iii. **CCUS projects:**

   a. It is planned to set -up a CO plant of capacity 400 MT/day using SMR gas from existing HGU. DFR for the same is under preparation. The CO_2 present in the SMR gas shall be captured from the SMR gas as part of the new CO plant. Approximately 260 TPD CO_2 shall be captured. The CO_2 captured will be utilized by Oil India Limited for EOR activity in their crude oil exploration site.
   b. More projects based on suitable technology /process of CCUS, shall be selected after the study, for capturing CO_2 from flues gases/process gases and implemented.

iv. **Use of RE Power:** RE power shall be purchased through PPA and received through Grid in refinery power mix in the upcoming NREP (target to be commissioned by Dec.2025). It is targeted to use about 60 MW of RE power by 2030 which will reduce about 0.34 MMTPA of equivalent CO2. The consumption of RE power in the refinery power mix shall be further increased in future.

v. **Replacement of FO to FG in existing refinery:** FO consumed in furnaces of existing unit shall be replaced by NG by modification of burners.

vi. **Energy Efficiency Improvement:** Energy efficiency study is being carried out to identify new projects to improve efficiency and reduce emission.

NRL has set targets to achieve Net Zero by year 2038.]

Q no. (c): **the details of policies are being implemented to develop new industrial corridors and special economic zones (SEZs), ensuring robust infrastructure for heavy industries?**

Reply: Ministry to reply.

<u>Note for Supplementary</u>:

Numaligarh Refinery Limited (NRL) is a Public Sector Enterprise with a 3.0 MMTPA petroleum refinery at Numaligarh in Golaghat district of Assam. Present shareholding pattern of NRL is Oil India Limited (OIL) – 69.63%, Govt. of Assam (GoA) – 26% and Engineers India Ltd (EIL) – 4.37%.

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