

Reply to Parliament Question No 4142 for 16.12.2024 for Rajya Sabha regarding “Green Yodha” in respect of Numaligarh Refinery Limited (NRL):

Q no. (1): **How does the ministry plan to balance the country’s energy demands with need to reduce carbon emissions and transition to cleaner energy sources?**

Reply: Ministry to reply.

[In line with all Oil and gas industries, NRL developed a Net Zero roadmap during 2022 with project plan, timeline and project costs as a guiding document to achieve net zero carbon emissions by the year 2038 with regards to scope 1 & scope 2.

Accordingly, company is gauging the carbon emissions YoY and has braced up with multiple projects involving low carbon, green, alternative and renewable energy technologies namely CO to acetic acid; green Hydrogen; SAF; waste ammonia recovery; Solar PV rooftops; RERTC (Renewable energy Round the clock) by integrating renewable energy into the refinery’s power mix, alongside massive plantation drive.]

Q no. (b): **What initiatives is the ministry taking to promote innovation and R&D in green technologies and sustainable energy solutions?**

Reply: Ministry to reply.

[To promote and adopt innovation and R&D in green technologies, company would utilise the benefit through Govt policies like VGF and subsidies while adopting projects like Green Hydrogen, Bioethanol, SAF, pilot-based coal gasification to sustainable fuels; R&D in various innovations viz utilising cyanobacteria for bioremediation of hydrocarbon tank bottom and Effluent treatment plant sludge, assess wind energy potential in Northeast India using mobile Lidar technology. NRL embarked into these projects to support energy security and equip in transition scenario.]

Q no. (c): **How does the ministry plan to address the energy access gap in rural and underserved areas, what role will renewable energy play in this effort?**

Reply: Ministry to reply.

[NRL in collaboration with OIL India planning to set up 25 CBG (Compressed Biogas) plants across the various districts of Assam and Northeast each at minimum 2TPD capacity supporting the govt’s scheme SATAT and Gobardhan for alternate energy growth.

The product Compressed Biogas would be injected into the Natural Gas pipeline circuit. This NG would cater to meet city gas through the CGD network. And this will create additional LPG pool to divert to underserved rural areas. With this initiative, the distribution would extend clean fuel to meet this section of the community.]

Q no. (c): **what is ministry's strategy for managing transition for workers in the oil and gas sector??**

Reply: Ministry to reply.

[NRL's strategy for managing transition for workers in the oil and gas sector is as follows:

- NRL have started in taking up few training programmes for reskilling, retraining on transition technology viz periodic training on AI/ML, generative AI, paperless application for business process.
- On the job training on new technology projects.
- Company is recognizing sustainability stewardship of the talent and skilled people who adopt newer technologies periodically.]

Note for Supplementary:

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%.
