

EOI no.: **NRL/CA/R&D/2023/01**

Date: 25.04.2023

Expression of Interest (EOI) for Supplying, installation and on-site maintenance of Wind Lidar with accessories at Numaligarh, Assam, India

Numaligarh Refinery Limited (NRL) intends to invite Expression of Interest (EOI) from reputed and experienced Domestic/International manufacturer, vendor; for the supply, installation, and on-site maintenance of Wind Lidar with accessories at Numaligarh/ Jorhat with on-site maintenance warranty for three years.

1. About NRL:

Numaligarh Refinery Limited (NRL), a subsidiary of Oil India Limited, is located at Numaligarh in the District of Golaghat, Assam, India.

The grass root refinery designed for processing 3 MMTPA of Assam Mix Crude was commissioned in the year 1999 and commenced commercial operations from October 2000. NRL is on its way to treble its capacity to 9 MMTPA by 2025 with processing of imported crude from Paradip port of India. NRL was conferred the status of "Category-I" Miniratna PSU by Govt. of India on 31st October 2003.

NRL is certified under ISO 9001 for Quality Management, ISO 14001 for Environment Management, OHSAS 18001 for Occupational Health & Safety, ISO 27001 for Information Security Management System and ISO 50001 for Energy Management.

The present shareholding pattern of NRL is given below:

Oil India Limited	69.63 %
Govt. of Assam	26 %
Engineers India Limited	4.37 %
Total	100%

2. Objective of EOI:

NRL is planning to procure LIDARS to create a bankable and relevant wind energy data base for North East region for viable wind energy projects.

Therefore, NRL is inviting expressions of interest from potential manufacturers/vendors to collect information for a subsequent bidding process. The required specifications have been incorporated as Annexure-A.

3. Submission of EOI:

The responses as per **Annexure-A** and **Annexure-B** must be submitted in sealed envelope to the following address: **Bipul Kalita, DGM(Speciality Chemical), NRL Centre GS Rd, Christian Basti, Guwahati, Assam 781005** and a copy via email to bipul.c.kalita@nrl.co.in Applications should reach on or before 22nd May 2023.

4. Disclaimer:

- a) NRL has issued this Expression of Interest with the best intention to identify the interested bidders and has no compulsions to enter into definitive contractual agreements. This EOI does not guarantee conversion of this EOI into any definitive contractual agreements.
- b) It is also agreed that NRL, in its sole discretion, may reject any or all proposal made by respondent(s), may change the conditions relating to the EOI or cancel this EOI at any time without assigning any reason.
- c) Prospective respondent(s) acknowledge and agree that response to the EOI is purely voluntary action on their part and for any expenditure on this account shall be borne by respondent(s).
- d) NRL will have no obligation or liability to the respondent(s) in the event of cancellation of EOI.

Note: Respondents are requested to keep themselves updated with the website on regular basis for any addition / deletion / modification / clarification or notification in respect of this, at EOI stage. No separate notification will be issued in any other media.

ANNEXURE – A

TECHNICAL SPECIFICATIONS OF THE LIDAR, ACCESSORIES AND MAINTENANCE

Particulars	NRL Requirements	Bidder's comment
Physical Properties	Size: Should comfortably fit inside a cabin of Size (L*B*H, 3mx1.5mx2m) along with batteries and the accessories. Weight: Should not exceed 65 kgs	
Lidar Measurement Parameters: The Lidar should measure the minimum parameters:	•Wind speed (vertical and horizontal component) •Vertical wind shear •Wind veer •Wind direction	
Vertical Wind Measurement Levels	5 or more, at minimum height of 10 meter or lower to maximum height up to 200m or higher from ground level.	
Data averaging interval	1 second- and 10-minutes averaging	
Wind speed sensing ability	1 m/s to 75 m/s	
Measurement accuracy range	Wind Speed: 0.1 m/s Wind direction: < 1°	
Sampling Rate at a single height	25 Hz or better	
Operational temperature	-20°C to +50°C or better	
Safety Requirements	Laser classification: Should be Class 1(Eye safe) IP Rating: Whole instrument should be IP67	
Additional Measurement: MET station collocated with the LIDAR.	Temperature, Air pressure and Humidity Data collected by the MET station shall be recorded in the device data stream itself.	
Communication	•The device shall allow remote access to the device via GSM/GPRS modem and Ethernet. • Ability to check and adjust device remotely. • configuration and operation remotely. • Ability to retrieve wind speed, wind direction, Temperature, Pressure and Humidity data remotely. • Ability to start, stop and restart the device remotely.	

Data Transfer & Storage	10-minute average data should be transferred automatically to user defined receiver once in a day. 1 second average data should be downloadable remotely (based on network condition). Data should also be stored in internal memory for at least six months for manual download.	
Power supply for normal operation	• The Lidar should be powered by Solar Photovoltaic power back up with minimum autonomy of 5 days • Necessary charge controller, mountings, batteries etc should be provided.	
Software	• The latest available software version for configuration of Lidar, data download, data display and related functions must be made available along with equipment.	
Lidar mounting arrangement Lidar should be installed inside a cabin of Size (L*B*H, 3mx1.5mx2m), manufactured using MS corrugated sheets, 1.2mm (18 gauge), flooring of 20 mm cement fibre Board, 3 mm Aluminium chequered plate.	• Cabin shall be duly painted Outside and Inside. • Cabin should be waterproof, termite free, heat- resistant and comfortable in extreme hot or cold climate. • Cabin should have lifting & shifting arrangements with 2 wheels. • Cabin should have 1 No of main door Size (7Ft.x3Ft.) • Cabin should have 1 No of Exhaust Fan.	
Protective Outer Enclosure	A Protective steel mesh painted enclosure with an openable door should be fitted to the mobile platform (Height 6.5 ft)	
Mounted Surveillance Camera	Two surveillance cameras one facing front and the other facing back should be mounted.	
Training	Comprehensive training for the designated team for not less than five days at Guwahati/Jorhat	
Maintenance and Calibration	Any technical malfunction of the lidar must be addressed within forty-eight hours after reporting; any servicing required must be carried out by installing a replacement equipment within ten working days.	

ANNEXURE-B

DETAILS OF THE RESPONDENT

Sl. No.	Parameters	Details
1	Name of the Company	
2	Country where the company is registered	
3	Address	
4	Contact Person: a) Name & Address b) Email id c) Phone no.	
5	Status of the Company a. Whether registered under the Companies Act 1956 or the Companies Act 2013 b. If not, Country of Incorporation	
6	Last three years net worth of the company	
7	Last Three Years Annual Turnover of the Company	
8	Past relevant experience	
9	Estimated Cost of LiDAR along with accessories (Indicative)	
10	Lead time for delivery	
11	Calibration Frequency	
12	PAN	
13	GST Registration No.	