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Planning

Carbon Capture Services

LONDON NORTH EASTERN RAILWAY LIMITED

UK2: Preliminary market engagement notice - Procurement Act 2023 - [view information about notice types](#)

Notice identifier: 2025/S 000-015557

Procurement identifier (OCID): ocds-h6vhtk-05040a

Published 16 April 2025, 1:35pm

Scope

Description

LNER's Research and Innovation team is looking to procure a service that uses technology to directly capture carbon from the surrounding air of LNER locations, for example micro algae bio-reactors. The service is to provide relevant metrics and success measures of its activity.

LNER have successfully developed and piloted a solution via the Future Labs programme, but before going out to tender we wish to engage with the market to ensure that we are considering all relevant technology that currently is available or in development.

The Problem:

There are only 2 existing methods of carbon offsetting in the UK which are regulated by the UK government:

1) tree planting and 2) peatland restoration, both which require large areas of land. For LNER to offset our carbon emissions, we would need to plant over 40 million trees each year.

Additionally, between 2030-2050 the cost of carbon offsetting is estimated to increase by

256%, meaning current methods would not be viable, in addition to the scrutiny being placed on companies that claim carbon neutrality through planting trees. LNER have a limited amount of land available of varying size and shape in which to deploy carbon capture technology. We need to investigate new and efficient ways to decrease our carbon footprint through natural carbon capture methods that we can deploy across our varied estate.

The Challenge:

How might we:

Use our existing estate to capture carbon directly from the air so that the carbon is stored for the longest time possible?

Generate value from any by-product that is generated from the carbon capture process, so that the initiative helps to pay for itself?

Constraints: What the solution must work within

Must be able to be deployed at a scale

Must be a Carbon Net Positive solution (capturing more carbon in its lifespan than it takes to create)

Must be adaptable in how it is deployed, fitting into small, large and irregular shaped spaces

Must be as remote in operation as possible, meaning as little as human interaction as possible

Contract dates (estimated)

- 1 August 2025 to 31 July 2027
- Possible extension to 31 July 2030
- 5 years

Main procurement category

Services

CPV classifications

- 90740000 - Pollutants tracking and monitoring and rehabilitation services

Contract locations

- UK - United Kingdom

Engagement

Engagement deadline

2 May 2025

Engagement process description

If you have a relevant solution either as a concept, in development or commercially available, please respond to the questionnaire available at <https://forms.office.com/e/rmq102AgLH>

Participation

Particular suitability

- Small and medium-sized enterprises (SME)
- Voluntary, community and social enterprises (VCSE)

Submission

Publication date of tender notice (estimated)

12 May 2025

Contracting authority

LONDON NORTH EASTERN RAILWAY LIMITED

- Companies House: 04659712
- Public Procurement Organisation Number: PQZP-5496-ZTHY

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Organisation type: Public undertaking (commercial organisation subject to public authority oversight)