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Planning

Reducing NRMM Emissions on Construction Sites: Market Sounding Questionnaire

Transport for London

F01: Prior information notice

Prior information only

Notice identifier: 2023/S 000-036243

Procurement identifier (OCID): ocds-h6vhtk-0422d3

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Section I: Contracting authority

I.1) Name and addresses

Transport for London

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LONDON

E201JN

Contact

James Inchbald

Email

jamesinchbald@tfl.gov.uk

Telephone

+44 7960549041

Country

United Kingdom

Region code

UKI - London

Justification for not providing organisation identifier

Not on any register

Internet address(es)

Main address

<https://tfl.gov.uk>

I.3) Communication

Additional information can be obtained from the above-mentioned address

I.4) Type of the contracting authority

Regional or local authority

I.5) Main activity

Other activity

Transport

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Reducing NRMM Emissions on Construction Sites: Market Sounding Questionnaire

II.1.2) Main CPV code

- 43300000 - Construction machinery and equipment

II.1.3) Type of contract

Supplies

II.1.4) Short description

Transport for London (TfL) is undertaking an early market engagement exercise, by inviting potential suppliers to complete a Market Sounding Questionnaire (MSQ) for an upcoming Non-Road Mobile Machinery Emission (NRMM) Trial trial. The aim of this trial will be to to reduce construction site emissions, specifically in relation to the use of Non-Road Mobile Machinery (NRMM) and explore feasibility of solutions which reduce associated on-site emissions.

If you have any questions regarding this PIN please contact:

jamesinchbald@tfl.gov.uk

TfL have recently switched to a new sourcing system, SAP Ariba, meaning that TfL's processes are now different to those that suppliers may be familiar with. The following instructions explain this new system and provide guidance on how interested parties will be able to communicate with TfL and access the MSQ through the new system.

For help on registering on the SAP Ariba system and for checking if your organisation already has an account please refer to <https://content.tfl.gov.uk/supplier-registration.pdf>

In case of registration problems please contact Ariba_Supplier_Enablement@tfl.gov.uk

Upon completion of registration, interested parties must inform the TfL lead via email (jamesinchbald@tfl.gov.uk), in order that they can be invited to the event in Ariba. They will then have unrestricted and full access to the MSQ, free of charge through their dashboard when they login to Ariba at <https://service.ariba.com/Supplier.aw>. Any subsequent competitions shall also be run through SAP Ariba.

Please can you express your interest by emailing jamesinchbald@tfl.gov.uk by close of play 23rd January 2024 to be gain access to the MSQ event. The last date that MSQ submissions shall be accepted is 26th January 2024.

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 31100000 - Electric motors, generators and transformers
- 31400000 - Accumulators, primary cells and primary batteries
- 31600000 - Electrical equipment and apparatus
- 34100000 - Motor vehicles
- 34300000 - Parts and accessories for vehicles and their engines
- 43000000 - Machinery for mining, quarrying, construction equipment
- 44000000 - Construction structures and materials; auxiliary products to construction (except electric apparatus)
- 45000000 - Construction work
- 51500000 - Installation services of machinery and equipment
- 71500000 - Construction-related services
- 73100000 - Research and experimental development services

II.2.3) Place of performance

NUTS codes

- UKI - London

II.2.4) Description of the procurement

TfL is seeking to reduce construction site emissions, specifically in relation to the use of Non-Road Mobile Machinery (NRMM) and explore feasibility of solutions which reduce associated on-site emissions.

NRMM, particularly from the construction sector, is a significant contributor to London's air

pollution, in April 2023 1,365 NRMMs were actively operating in London, of which 1163 were compliant with the NRMM Low Emission Zone (LEZ) . The NRMM LEZ uses the Mayor and London Borough's planning powers to control emissions from NRMM used on construction sites.

The NRMM LEZ requires all engines with a power rating between 37 kW and 560 kW to meet an emission standard based on the engine emission "stage". Stages describe the standards that need to be met depending on where the site is. The current NRMM LEZ requirements are:

- o Stage IV for construction machinery operating in the Central Activities Zone and Opportunity Areas (including Canary Wharf) and stage IIIB in the rest of London.

- o Stages IIIB and IV have not been defined for machines with constant speed engines, such as generators. This means that these machines will need to meet stage V.

- o Stage IV has also not been directly defined for variable speed engines smaller than 56 kW. In most cases these engines will need to meet stage V if they are in the Central Activities Zone and Opportunity Areas (OAs).

NRMM LEZ requirements are set to become more stringent;

- o From 1 January 2025 the standards will be stage IV throughout London

- o From 1 January 2030 the standards will be stage V throughout London

Significant progress has been made in the move to reduce emissions from NRMMs on construction sites, by using new and existing technologies, such as batteries on site to provide energy. However, at present, many NRMMs on construction sites around London still face challenges in the transition to zero emission technology.

Challenges in using emission free NRMM include:

- Power loading Requirements - Construction sites often have fluctuating power demands based on the machinery and equipment in use. Emission-free NRMM may face challenges in meeting the power loading requirements, especially during peak usage times.
- Battery Recharging- Establishing charging infrastructure on construction sites poses a significant challenge. Power connections can be expensive and subject to long lead times and delays. Site layouts also changes continuously during the construction so locating charging stations may not be practical. As a result, recharging batteries can be logistically complex. The time required for recharging batteries can also lead to downtime for construction equipment which may impact efficiency.

- **Battery Reliability and Confidence** - The reliability of batteries is a critical factor in the successful deployment of emission-free NRMM. Construction sites demand robust and durable power sources that can withstand the often harsh and demanding conditions of construction environments. Building trust in the reliability of emission-free NRMM involves addressing concerns related to reliability. Construction companies may be cautious about adopting new technologies due to concerns about reliability and the potential impact of technology failures on construction processes.
- **Hydrogen Storage** - Storing hydrogen safely is essential when used on construction sites and Hydrogen is highly flammable and this can add an additional layer of Health and Safety complexity to the deployment of hydrogen-powered NRMM especially adjacent to TFL's Infrastructure'.
- **Tower Crane Power Requirements** - Tower cranes are essential on construction site and ensuring that emission-free power sources can meet the power demands of these cranes is crucial. This includes considerations for heavy lifting, especially in compliance with Stage V emissions standards. Meeting the stringent Stage V emissions standards while maintaining the necessary power output for tower cranes requires advanced technology. Developing NRMM that aligns with these standards without compromising performance is still a significant challenge.

Based on the challenges identified above and our experience to date, TfL would be seeking to trial solutions which can address the following problem statement:

How might we reduce emissions associated with the use of NRMM within TfL's construction portfolio?

TfL are seeking solutions which allow for the transition to diesel-free, zero emission plant in the near future.

TfL would also be interested in the better use of existing machinery through efficiencies which would reduce emissions.

II.3) Estimated date of publication of contract notice

1 July 2024

Section IV. Procedure

IV.1) Description

IV.1.8) Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: Yes

Section VI. Complementary information

VI.3) Additional information

TfL reserves the right without prior notice to amend the information provided, including, but not limited to, changing the timetable, the scope and nature of the procurement and the procurement process. In particular, TfL reserves the right to issue circulars to interested parties providing further information or supplementing and / or amending the procurement process. In no circumstances shall TfL incur any liability in respect of any changes. This will be subject to the requirements of public law, the UK and EU procurement rules and Treaty on the functioning of the European Union rules and general principles.

TfL reserves the right without prior notice not to follow up the MSQ documents in any way or with any interested parties. TfL also reserves the right to terminate this process at any time without awarding a contract. TfL will not enter into a contract based solely on the responses to the MSQ document and no information contained within the MSQ document or in any communication made between TfL and any interested party in connection with the MSQ document shall be relied upon as constituting a contract or representation that any contract shall be offered