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Not applicable

Gaseous Hydrogen Supply for Experimental Programme

Health & Safety Executive

F14: Notice for changes or additional information
Notice identifier: 2024/S 000-021452
Procurement identifier (OCID): ocds-h6vhtk-047ce5
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Section I: Contracting authority/entity

I.1) Name and addresses

Health & Safety Executive

Redgrave Court, Merton Road

Bootle

L20 7HS

Email

tenders@hse.gov.uk

Country

United Kingdom

Region code

UKD7 - Merseyside

Justification for not providing organisation identifier

Not on any register

Internet address(es)

Main address

www.hse.gov.uk

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Gaseous Hydrogen Supply for Experimental Programme

II.1.2) Main CPV code

- 24100000 - Gases

II.1.3) Type of contract

Supplies

II.1.4) Short description

HSE require the supply of hydrogen gas for use during a research test programme. The gas is intended to be used by piping into an existing pressure reduction system which will meter the gas through to a flow management system.

The gas supply is required for use at the HSE Buxton (SK17 9JN) test site.

Section VI. Complementary information

VI.6) Original notice reference

Notice number: 2024/S 000-021377

Section VII. Changes

VII.1) Information to be changed or added

VII.2) Other additional information

HSE require the supply of hydrogen gas for use during a research test programme. The gas is intended to be used by piping into an existing pressure reduction system which will meter the gas through to a flow management system.

The following are the parameters which need to be met:

Location

The gas supply is required for use at the HSE Buxton (SK17 9JN) test site, specifically the 'H21' test area (picture upon request). It is intended that the gas supply would be placed/parked underneath the right most portal frame structure with the supply fed through to the left most structure which will house the test pipework.

The gas supply structure is 4.83 m high to the purlins, 9.78 m wide between uprights and 20.10 m long. Access to the secure site is via a double gate which is 7.06 m wide. It is suggested that any potential supplier review this prior to agreement of the supply, major infrastructure changes are not possible within the scope of this project.

If there are any other requirements on the test site, this should be stipulated in the proposal, such as earth bonding, power, separation distances etc.

Flow rates and pressures

The maximum and minimum planned flow rates of hydrogen required are 0.3 kg/s and 0.004 kg/s respectively. The maximum inlet pressure (MAWP) to the test facility must not exceed 500 barg (higher pressures may be acceptable depending on supplier pre-regulation). The minimum supply pressure is 100 barg. It is highly desirable that the max flow rate can be achieved across the full 500-100 barg outlet range.

To satisfy the ability to meet maximum flow rate for the longest duration, it is envisaged a 500 barg tube trailer would best match this key requirement. However, suitable alternatives can be proposed and considered but need to be clearly justified as suitable against all requirements.

In terms of duration of use (i.e. maintenance of the flow rates), it is expected that testing will likely start with ramp tests increasing flows from minimum to maximum and back down

again. Testing will also include rapid flow increases to maximum. The exact durations of the tests are very difficult to estimate as present however, it could be expected that the ramp tests may require running up to an hour of use per day.

Quantity

The expected total quantity of hydrogen to be required is 1000 kg net spread over the use period specified below with a contingency/cost for an additional month and repeat delivery costs of 500 kg hydrogen net (either within the existing timeframe or within the additional month). These quantities are a first pass estimate and flexibility of supply will be highly desirable.

It is expected the minimum inlet pressure to the test facility will need to be 150 barg for the existing regulation system to provide maximum flow (0.3 kg/s) so the useable gas quantity must be taken from the gas pressure above this.

Timescales

The anticipated delivery schedule requirement is w/c 11th November through to 16th December 2024; however, the client is developing a novel test rig to utilise the hydrogen so the start of testing may be delayed. The supplier should indicate its ability to be flexible on delivery schedule for consideration as part of supplier selection.

A cost breakdown should be provided based on rental period (a minimum of monthly breakdown). It will also be beneficial to understand what the ongoing costs may be, and the availability of whatever solution is proposed.

To reduce time loss during testing, the expectation is that turnaround time for any refuelling is kept to a minimum, ideally in the order of 1-2 days (assuming multiple deliveries would be required to meet the need).

Gas Quality

The hydrogen required must be a minimum purity of 99.9%, dry and ideally pre-filtered to 2 m. There is a preference for 'green' (renewably sourced) hydrogen if available, the source of the hydrogen should be made clear in the proposal.

Gas Outlet

The gas outlet should be sized, and pressure rated to meet the flow/pressure demand already described. HSE have no preference on process connection, however, the proposal must make it clear what it is.

Liability

The full terms and conditions of use should be detailed in any proposal including any liability during storage/use.