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Planning

Cell Assembly Equipment for UKBIC Flexible Industrialisation Line (FIL)

UK Battery Industrialisation Centre

F01: Prior information notice

Prior information only

Notice identifier: 2022/S 000-028351

Procurement identifier (OCID): ocds-h6vhtk-037438

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Section I: Contracting authority

I.1) Name and addresses

UK Battery Industrialisation Centre

Rowley Road, Baginton

Coventry

CV8 3AL

Contact

Procurement

Email

ProcurementTenders@ukbic.co.uk

Telephone

+44 2475267743

Country

United Kingdom

Region code

UKG - West Midlands (England)

Internet address(es)

Main address

<https://www.ukbic.co.uk/>

Buyer's address

<https://www.ukbic.co.uk/>

I.3) Communication

Additional information can be obtained from the above-mentioned address

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Other activity

Research & Development

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Cell Assembly Equipment for UKBIC Flexible Industrialisation Line (FIL)

Reference number

DN636361

II.1.2) Main CPV code

- 31000000 - Electrical machinery, apparatus, equipment and consumables; lighting

II.1.3) Type of contract

Supplies

II.1.4) Short description

UKBIC has a requirement to purchase a range of equipment for the assembly of both cylindrical and pouch cells to establish a Flexible Cell Assembly Line at the UK Battery Industrialisation Centre.

The UK Battery Industrialisation Centre (UKBIC) is part of the UK Government's Faraday Battery Challenge. UKBIC is a national battery manufacturing development facility helping to scale-up battery manufacturing and facilitate upskilling in the battery sector. We are a publicly funded, open access facility, funded by the Faraday Battery Challenge at UK Research and Innovation (UKRI).

This PIN lists the general requirements for cylindrical and pouch cell manufacturing equipment, which is required for the manufacture of high quality, commercially relevant, high power or high energy, cylindrical and pouch cells in low volumes.

This requirement is split into three lots:

Lot 1 – Vacuum drying ovens

Lot 2 – Cylindrical cell assembly equipment

Lot 3 – Pouch cell assembly equipment

Suppliers will be able to bid for individual lots, however bids that offer combined solutions

incorporating more than one aspect of this equipment are encouraged.

Bidders are also encouraged to put forward energy efficient solutions.

All equipment to provide UKCA conformity.

II.1.6) Information about lots

This contract is divided into lots: Yes

II.2) Description

II.2.1) Title

Vacuum Drying Ovens

Lot No

1

II.2.2) Additional CPV code(s)

- 31000000 - Electrical machinery, apparatus, equipment and consumables; lighting
- 42000000 - Industrial machinery

II.2.3) Place of performance

NUTS codes

- UKG - West Midlands (England)

II.2.4) Description of the procurement

Lot 1 – Vacuum drying ovens

Two independent vacuum ovens for the drying of electrodes. The ovens should have an internal volume of between 100l and 200l and a drying temperature range of 50 to 150°C. The system should have the capability to program the vacuum drying sequence to operate on a schedule.

The drying ovens shall be supplied with vacuum pumps that are compatible with the moisture and trace levels of solvents that will be removed from the anode and cathode electrodes.

Suppliers should highlight any other special features available, such as the ability to purge

with inert gas before/after drying.

II.2) Description

II.2.1) Title

Cylindrical Cell Assembly Equipment

Lot No

2

II.2.2) Additional CPV code(s)

- 31000000 - Electrical machinery, apparatus, equipment and consumables; lighting

II.2.3) Place of performance

NUTS codes

- UKG - West Midlands (England)

II.2.4) Description of the procurement

Lot 2 – Cylindrical cell assembly equipment

Cylindrical cell assembly equipment for the manufacture of 21700 and/or 46800 cells. The equipment should be capable of producing high quality commercially relevant cylindrical cells in low volume, such as 1-10 cells per hour.

It is anticipated that the assembly equipment will comprise multiple semi-automated stations that cover the entire cell manufacturing process from taking reels of anode and cathode electrode at the input and producing finished cells ready for FA&T (Formation Age & Test) as the output.

Ideally UKBIC wants the capability to produce both cylindrical cell types, however suppliers who can only offer a solution for one or other of the cell sizes are encouraged to do so.

Suppliers shall highlight what degree of flexibility there is to produce other cell sizes using this equipment, for example by reconfiguring the stations and the use of different sets of tooling.

II.2) Description

II.2.1) Title

Pouch Cell Assembly Equipment

Lot No

3

II.2.2) Additional CPV code(s)

- 31000000 - Electrical machinery, apparatus, equipment and consumables; lighting

II.2.3) Place of performance

NUTS codes

- UKG - West Midlands (England)

II.2.4) Description of the procurement

Lot 3 – Pouch cell assembly equipment

Pouch cell assembly equipment for the manufacture of pouch cells up to a size of 300mm long x 100mm wide x 4-12mm thick (counter sided taps). The equipment shall be capable of producing high quality commercially relevant pouch cells in low volume, such as 1-10 cells per hour.

It is anticipated that the assembly equipment shall comprise multiple semi-automated stations that cover the entire cell manufacturing process from taking reels of anode and cathode electrode at the input and producing finished cells ready for FA&T (Formation Age & Test) as the output.

Suppliers should highlight what degree of flexibility there is to produce other cell sizes using this equipment, for example by reconfiguring the stations and the use of different sets of tooling.

II.3) Estimated date of publication of contract notice

13 February 2023

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

We welcome the following information from any interested suppliers:

- Timings
- Layout / footprint (operational and equipment)
- Brochures
- Specification sheets
- Unique selling points compared to competition
- Technical and service support in the UK
- Typical Services required for: Power (Load - XX kw)/ Chilled water (Load - XX kW) /

Compressed air (Min/Max Pressure - XX bar)/ Special Gas requirements/ Compressed air

(Min/Max Pressure - XX bar)/ Equipment heat load (Thermal power released - XX W)/
Wastewater and -air