

# BIDDERS' CLARIFYING QUESTIONNAIRE

## PRE-BID CLARIFICATIONS QUESTIONNAIRE

### A. TECHNICAL CLARIFICATIONS

#### 1\*. FCEB Scope Clarification

Please clearly confirm whether the supply of Fuel Cell Electric Buses (FCEBs) forms part of the EPC Contractor's scope of work. If included, please specify the required quantity, technical specifications, registration requirements, testing obligations, warranty requirements, spare parts requirements, and post-delivery support obligations eg maintenance and operator training. If excluded, please clarify the owner-supplied vehicle interfaces required during commissioning and performance testing.

-Yes, it is under Bidder's scope and please refer to ERQ for details.

#### 2. Site Data and Subsurface Conditions

Please confirm whether any geotechnical investigations, borehole logs, groundwater studies, flood assessments, topographical surveys, utility mapping, or soil contamination assessments have been completed. If available, please provide these reports. If unavailable, please clarify whether differing site conditions will constitute a compensable variation.

-This needs to be carried out during the detailed design phase once the contract is awarded.

#### 3. Grid Connection Responsibility

Please clearly define the battery limits between the Owner and EPC Contractor for electrical infrastructure. Specifically, confirm responsibility for:

- Grid connection approvals
- Incoming utility feeders
- Transformer upgrades
- Protection studies
- SCADA integration with utility systems
- Metering requirements
- Grid synchronization approvals

-EPC Contractor, while DoE will facilitate with the approvals.

## 4. Hydrogen Demand Assumptions

What minimum hydrogen offtake assumptions were used in establishing the plant capacity and performance requirements?

Please confirm whether the Owner guarantees hydrogen demand sufficient to support performance testing and commissioning activities.

**Reason:** Availability and production guarantees can be impossible to demonstrate without demand.

-The project is expected to refuel 2 FCEBs in the short term, with the plans to expand the FCEBs fleets in the future.

## 5. What approvals are mandatory in Bhutan versus PESO-only approvals?

- Bhutan do not have specific mandatory approvals regarding green hydrogen re-fuelling station unlike PESO in India.

## 6\*. What are the guaranteed utility supply conditions?

**Electricity** – guaranteed grid connection voltage, available transformer capacity, the maximum permissible voltage fluctuation, expected harmonics, expected frequency variation, guaranteed annual grid availability is guaranteed, Who bears responsibility if load shedding occurs?

-33 kV is the grid connection voltage. For other details please refer Bhutan Grid Code Regulations, 2024.

**Water supply** – Please provide a minimum 12-month water-quality dataset and seasonal hydrological data for the Wangchhu River abstraction point, including turbidity, TDS, hardness, silica, chlorides, TOC, temperature range and seasonal flow rates. Electrolyser performance depends heavily on this.

-Not available and Bidder is requested to conduct those tests at their own cost.

## 7. Waste Disposal

**Waste water disposal** – Disposal pathways, Sludge handling requirements, Brine disposal requirements, Environmental discharge permits.

-Needs to captured during the ESIA and permits need to be sought to Department of Environment and Climate Change, Bhutan.

**Oxygen disposal** – lack of clarity on Oxygen is to be vented, recovered, purification or storage required?

- Please refer ERQ 3.6, where bidder needs to conduct detailed FS on excess hydrogen generated for ammonia and derivatives while utilizing oxygen.

**Waste disposal** – The contractor is responsible for Safe disposal of packing materials, hazardous materials, chemicals, and civil works waste. But little clarity on: a) Approved disposal facilities in Bhutan b) Hazardous waste permits c) Availability of licensed disposal contractors

-No disposal facilities available and study needs to be conducted as part of ESIA.

## 8. Hydrogen Storage Requirements

Please confirm whether future capacity expansion has been considered and whether the EPC Contractor is required to provide space, foundations, controls, or tie-ins for future storage or dispenser expansion.

-It would be based on land conditions available and it is not part of the EPC contract.

## 9. Cybersecurity and SCADA

Please provide project cybersecurity requirements, including:

- Network architecture
- Remote access requirements
- Data ownership
- Data retention requirements
- SCADA integration standards
- Applicable cybersecurity standards

-Already answered, please refer National Cybersecurity Strategy (2024-29)

## 10\*. What Commissioning Exclusions Apply?

The tender requires the EPC contractor to successfully complete:

Factory Acceptance Testing (FAT) – ERQ Section 6.3.1

Pre-commissioning – ERQ Section 6.3.2

Trial Operation – ERQ Section 6.3.3

Performance Guarantee (PG) Testing – ERQ Section 6.3.4

The concern is that the documents define what needs to be achieved, but do not clearly define what events are excluded from the contractor's responsibility during testing.

-All the tests are included under the bidder's scope.

Example: Suppose the EPC contractor starts a 100-hour compressor performance test under ERQ 6.3.4 and:

- the utility grid fails,
- the water supply is interrupted,
- the owner's operators stop the plant,
- communications fail,
- regulatory authorities suspend operations,
- the hydrogen buses are unavailable for dispensing tests.

Does the contractor fail the test? Or is the test paused and restarted? The tender does not clearly say.

- Please refer GCC 41.

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## B. CONTRACTUAL CLARIFICATIONS

### 11\*. Permitting Responsibility and Schedule Relief

Please clarify the allocation of responsibility for obtaining all permits, approvals, licences, clearances and statutory consents required for the project. For each approval, please identify:

- The approving authority.
- The party responsible for preparing and submitting applications.
- Expected approval timelines.
- Applicable fees and charges.
- Whether the Owner will provide support or act as the applicant where required.

-Environmental Clearance – Department of Environment and Climate Change

-Land Clearance and ownership – Land clearance already sought by DoE and ownership will be available only after ESIA.

-Forestry Clearance – Already sought

-Power Clearance – DoE and Bhutan power Corporation Ltd

And others...

DoE will facilitate in seeking the approvals and clearances.

Further, please confirm that delays arising from permit approvals, regulatory reviews, authority comments, changes in regulations, or actions by government agencies that are outside the EPC Contractor's reasonable control will entitle the Contractor to an extension of time and corresponding cost relief.

-Yes, time extension will be given as per [GCC 41 Compensation events for time extension and GCC 37 Variations](#)

## **12\*. Performance Guarantee Relief Events**

Please provide a comprehensive list of events that qualify for extensions of time and relief from performance guarantees, including:

- Utility outages
- Water supply interruptions
- Owner-caused delays
- Regulatory delays
- Force majeure events
- Delayed approvals
- Bus unavailability
- **Third-party interface failures**

Please refer [GCC 41](#)

## **13\*. Undefined Scope Clarification**

Please confirm that the EPC Contractor shall not be required to provide any equipment, systems, works or services that are not expressly identified in the Contract Documents, Employer's Requirements, approved detailed design, or agreed variations.

- While we have tried to include everything in the ERQ,

## **14. Change Management**

Please confirm the mechanism for handling scope changes arising from:

- Regulatory changes
- New permit requirements
- Additional safety requirements
- Owner-requested modifications
- Changes resulting from authority comments

We will follow [GCC 41 and 38](#) accordingly.

## **15. Can DLP Support Be Delivered Remotely?**

This question relates to the Defect Liability Period (DLP), which is the period after project commissioning during which the EPC contractor remains responsible for defects, warranty issues, maintenance support, and performance-related obligations.

In this tender, the DLP is two years after commissioning, and the contractor is required to provide ongoing support, spare parts, consumables, and a qualified O&M expert. (ERQ Sections 7.3–7.8)

The specific concern arises from ERQ Clause 7.7, which states:

"The Bidder shall provide one qualified O&M Plant expert for the entire Defect Liability Period at no additional cost to the Owner."

Please clarify whether the required O&M expert must be permanently resident on site throughout the entire DLP period, or whether periodic site visits combined with remote support are acceptable.

[Already answered](#)

## **16. Spare Parts Responsibility**

Please provide the minimum mandatory spare parts inventory required during the DLP period and identify whether critical spares are expected to be held locally in Bhutan.

[-Yes](#)

## **17. Is local partnership / local content encouraged or expected?**

[- Yes, Bhutanese local partners are encouraged.](#)

## **18. Owner's Engineer**

Please confirm whether an Owner's Engineer or Independent Engineer will be appointed for the project. If so, please clarify:

- Their scope of authority
- Approval responsibilities
- Review timelines
- Interface with the EPC Contractor
- Whether the services are to be procured separately

[Please refer SBD.](#)

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# **C. COMMERCIAL CLARIFICATIONS**

## 19. Payment Milestone Clarification

Please provide a detailed milestone payment schedule indicating the payment trigger, percentage allocation, certification requirements, payment timeline, retention applicable, and release conditions for each milestone.

The key milestones of concern are:

### Detailed Design (5%)

### Equipment Supply (50%)

- Factory Acceptance Test completion
- Ex-works shipment
- Arrival in Bhutan
- Delivery to site
- Installation
- Mechanical completion

### Safety Studies (4%)

### Commissioning and Trial Operation (20%)

- Mechanical completion
- Successful trial operation under ERQ 6.3.3
- Successful Performance Guarantee testing under ERQ 6.3.4
- Or final owner acceptance

-Some were already answered and please refer SBD as well.

## 20\*. Commercial Evaluation Methodology

Please clarify the methodology that will be used to determine the successful bidder following technical evaluation. Specifically, please confirm the relative weighting of technical and financial scores, the method for normalising commercial scores, and whether the award will be made on a lowest-price basis or a combined technical-commercial evaluation basis.

-Financial Bid (30 Points), we have different cost estimate for PEM and Alkaline technology.

-The bid will be awarded to the highest (Technical Bid (70) + Financial Bid (30)). Financial Bid will be evaluated as per the SBD.

## 21\*. Treatment of Abnormally Low Bids

Please clarify the process for evaluating abnormally low bids and confirm whether bids priced below a specified threshold relative to the Engineer's Estimate or average bid price may be rejected or required to provide additional justification.

*Please refer ITB 29, More than or less than 20% of our Estimate will be considered abnormal bids.*

## **22\*. Definition of the Preferred Bid**

Please provide an illustrative example of the final commercial evaluation methodology, including the treatment of bids that are significantly above or below the Employer's Estimate and the methodology used to determine the preferred bidder where multiple bidders meet the technical threshold.

- Once bid is technically qualified, the bid will be subjected to financial evaluation of 30 Points. For the financial evaluation, DoE has estimate for both the PEM and Alkaline, depending on the technology type, the financial bid will be assessed as per the procedures given in the standard bidding document.