



# Mahatma Phule Renewable Energy and Infrastructure Technology Limited

(Subsidiary of MPBCDC, a Government of Maharashtra undertaking)

## NOTICE FOR INVITATION OF REQUEST FOR PROPOSAL

MAHAPREIT invites offers from Manufacturer and suppliers Service Provider / Developer for setting up 1 MW Green Hydrogen Plant integrated with ecosystem on BOO basis. The interested bidders may submit their offer on or before at 3 PM on 17/06/2022. Details of RFP can be viewed on <https://mpbcdc.maharashtra.gov.in/> and <https://mahapreit.in/>

Executive Director

# 8X5



# महात्मा फुले नविनीकरणीय ऊर्जा व पायाभूत प्रौद्योगिकी मर्यादित

(म.फु.मा.वि.म. ची उपकंपनी, महाराष्ट्र शासनाचा उपक्रम)

## प्रस्तावाची विनंती (RFP) मागविण्याकरिता सूचना

महाप्रित हे बीओओ तत्त्वावर इकोसिस्टिमशी एकात्मिक असलेला १ मेगा वॉट हरित हायड्रोजन प्रकल्प स्थापन करण्याकरिता निर्माते व पुरवठादार / सेवा पुरवठादार विकासकांकडून प्रस्ताव मागवित आहे.

इच्छुक निविदाकारांनी त्यांचे प्रस्ताव १७/०६/२०२२ रोजी ३ वाजता किंवा त्यापूर्वी प्रस्तुत करावे. आरएफपीचा तपशील

<https://mpbcdc.maharashtra.gov.in/> आणि <https://mahapreit.in/> येथे पाहता येईल.

कार्यकारी संचालक

**MAHATMA PHULE RENEWABLE ENERGY &  
INFRASTRUCTURE TECHNOLOGY LTD (MAHAPREIT)**

**(A Subsidiary of Mahatma Phule Backward Class Development  
Corporation Ltd.) (A Govt. of Maharashtra Undertaking)**

**INVITATION TO OFFER e-REQUEST FOR PROPOSAL  
(e-RFP)**

**MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY LTD  
(MAHAPREIT)**

**INDEX**

SR. NO.	SECTION	PARTICULARS	PAGE NO.	
			FROM	TO
1	SECTION – I	DETAILED INVITATION TO OFFER NOTICE	3	7
2	SECTION – II	DEFINITIONS	8	12
3	SECTION – III	INSTRUCTIONS TO BIDDERS GENERAL INSTRUCTIONS TO BIDDER FOR MAIN BIDDING/ TECHNICAL - FINANCIAL BIDDING PROCESS	13	19
4	SECTION – IV	GENERAL INSTRUCTIONSTO BIDDER	20	33
5	SECTION – V	SCOPE OF WORK-RELATED SPECIFIC INFORMATION	34	48
6	SECTION – VI	ANNEXURE	49	68

**SECTION – 1**

**DETAILED INVITATION TO OFFER NOTICE**

# MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY LTD (MAHAPREIT)

B – 501 PINNACLE CORPORATE PARK, NEXT TO TRADE CENTER, BKC(EAST) MUMBAI  
400051

## e-RFP Notice No. for MAHAPREIT/21-22/ETAP/H2/1

Eol Document Number : CGM/ETAP/H2/1

Main Portal: <https://organizations.maharashtra.nextprocure.in>

Online electronic bids for below mentioned work are invited by the Managing Director on behalf of MAHAPREIT Ltd, Mumbai from Experienced Manufacturer and suppliers Service Provider/Traders/Developers for Setting up of 1MW Green Hydrogen based Project on “Build-Own-Operate” basis (OPEX MODEL) integrated with ecosystem. The time schedule for various bidding phases is given in the detailed e-RFP notice, which is also available on website as part of the bid document.

Sr. No.	Name of work	EMD Amount Rs.	Period of completion	Offer Document Cost Rs.	Remarks
1.	Manufacturer and suppliers Service Provider/Traders Developer for setting up 1 MW Green Hydrogen Plant integrated with ecosystem on BOO basis and logistic arrangement within 100 Km.	1000000	3 Months	10,000 + GST 1800	

RFP forms are available on Website

<https://organizations.maharashtra.nextprocure.in>

from date: 23.05.2022

**Online Request for Proposal (RFP) shall be accepted on website**

<https://organizations.maharashtra.nextprocure.in> date : 17.06.2022

All BIDDERS are hereby cautioned that the e-RFP containing any deviation from the contractual terms and conditions, and other requirements and CONDITIONAL e-RFP shall be rejected.

1. Validity Period: The offer of the Bidder shall remain valid for 120 days from the date of opening of financial Bid.
2. The post qualification process is applicable for this e-RFP and Rates once quoted shall be Non-Negotiable.
3. The Professional Service Provider Legal Firms participating for the first time in e- RFP will have to procure Digital Signature Certificate as well as should compulsory get themselves enrolled on e-tendering <https://organizations.maharashtra.nextprocure.in>.
4. If any assistance is required regarding e-RFP (upload and download) please contact 26200351/62028527 cgm.etap@mahapreit.in MAHAPREIT Ltd. & [helpdesk@nextenders.com](mailto:helpdesk@nextenders.com)
5. All requisite information required for the submission of Offer documents is available on the above said website.
6. All rights are reserved by the Competent Authority to reject any or all Offers in full or in part without assigning any reason or accept the offer beyond the validity period.

## TIME SCHEDULE OF e-RFP NOTICE

Sr.No.	Details	Start Date	End Date
1	Sale of Tender document & Document Download	23.05.2022 at 10.00 hrs.	16.06.2021 at 15.00 hrs.
2	Date and time of Online Pre Bid Meeting	03.06.2022 at 14.00 hrs	
3	Last Date and time of BidSubmission		17.06.2021 up to 15.00 Hours
4	Opening of Bid		
4 (a)	Date and time of opening of Technical Bid	17.06.2022 at 16.00 Hours	
4 (b)	Date and time of opening of Price Bid	Will be intimated latter	
<b>TIME SCHEDULE OF OPENING OF THE e-TENDER</b>			
1.	e-Tender No.	Mahapreit/21-22/ETAP/H2/1	
2.	MODE OF TENDER	Open and e-Tender System Online submission of <b>Technical Bid</b> and <b>Price Bid</b> through <a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a> The intending Bidders are required to submit their offer electronically through this e- tendering portal. <b>No physical tender is acceptable by MAHAPREIT</b>	
3.	Date of publication RFP on websites and <a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a>	23.05.2022 at 10.00 hrs.	
4.	Date of availability to the RFP for downloading	16.06.2022 at 15.00 hrs.	
6.	Date & Time of Online Pre Bid meeting	03.06.2022 14.30 hrs	
7.	Last Date of Sale of tender at <a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a>	16.06.2022 17.00 hrs	
8	Date & Time of Submission of tender at <a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a>	17.06.2022 15.00 hrs	
9.	Date and time of opening of Technical Bid	17.06.2022 16.00 hrs	

<b>10.</b>	<b>Date and time of opening of Price Bid</b>	<b>Will be informed latter</b>
------------	--	--------------------------------

**TIME SCHEDULE OF e-RFP NOTICE**

These instructions to applicants are being issued for the detailed scope of the work is being provided Technical Section.

EXECUTIVE DIRECTOR  
MAHAPREIT



**SECTION – 2**  
**DEFINITIONS**

## **DEFINITIONS AND E-RFP DATA**

### **A. DEFINITIONS:**

#### **2.0 MAHAPREIT:**

MAHAPREIT shall mean the “MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY LTD”, MUMBAI acting through its Managing Director.

Additional Information about **MAHAPREIT:**

The Head quarter of the **MAHAPREIT** is Mumbai.

The functions and powers of the MAHAPREIT have been provided in the Memorandum of Association & Articles of Association In general, it has been entrusted with the work of accelerating the economic upliftment of the economically weaker families belonging to the Scheduled Castes.

#### **2.1 REGISTERED ADDRESS FOR COMMUNICATION**

*B – 501 PINNACLE CORPORATE PARK, NEXT TO TRADE CENTER, BKC (EAST)  
MUMBAI 400051*

#### **2.2 WEBSITE:**

Web Site means official web sites for e-tendering having following web addresses: <https://organizations.maharashtra.nextprocure.in>

#### **2.3 APPLICANT:**

Bidder will Design, Engineering, Fabrication, Packing, Forwarding, Supply, Transportation and handling, Custom duty (and any other duties), Freight, Insurance, Unloading, Construction, Erection, Commissioning, Testing, PG Test including mandatory spares obtaining all Statutory approvals, and Training in line with the specifications provided in this document. All supporting packages and utilities other than those mentioned under the heading, ‘Terminal Points’ required for the Hydrogen Generation Plant shall be provided by the bidder as per eligibility criteria applying to become eligible to tender.

#### **2.4 EXECUTIVE DIRECTOR**

Executive Director shall mean Executive Director of MAHAPREIT Ltd.

#### **2.5 COMPETENT AUTHORITY:**

Competent Authority shall means the Managing Director of MAHAPREIT Ltd.

## 2.6 CONTRACTOR:

Contractor shall mean the registered firm who enters into contract, with the with Bidder or MAHAPREIT.

## 2.7 CONTRACT:

Contract shall mean and include following documents.

- Volume I - RFP Documents.
- RFP Document and information / data submitted by contractor.

## 2.8 WORK AND UNIT:

Work shall mean the work to be executed in accordance with Scope of Work of Contract.

Unit: Unit wherever production and installation location considered by MAHAPREIT

## B. RFP AT A GLANCE:

### 1.0 SUMMARY DETAILS

Sr. No.	Particulars	Details
1.1	Name of work	The scope of proposal setting up 1MW Hydrogen Generation Plant shall include Design, Engineering, Fabrication, Packaging, forwarding, supply, transportation and handling, insurance, unloading, construction, erection, commissioning, Testing, Performance Guaranty Test including mandatory spares obtaining all statutory approvals and Training for the staff on Build own and operate basis (BOO) Opex model
1.2	Estimated Cost.	<b>Lumpsum</b>
1.3	Offer Document Cost Rs.	<b>Rs.10,000/- + GST Rs. 1800/- (Offer Document Cost and E.M.D. amount shall be paid through E- payment gateway).</b>
1.4	Earnest money (EMD)	<b>Rs. 10,00,000/-</b>
1.5	Mode of payment (EMD)	RFP and E.M.D. amount shall be paid through <b>E- payment gateway.</b>
1.6	Retention Security Deposit	@ 5% per Value Payable.
1.7	Mode of Submission of RFP	RFP should be Submitted on-line on <a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a>
1.8	Class of Contractor	
1.9	Period of Work	3 Months

1.10	Contact Details of MAHAPREIT Official Address Email: Phone:	<a href="mailto:cgm.it@mahapreit.in">cgm.it@mahapreit.in</a> / <a href="mailto:cgm.etap@mahapreit.in">cgm.etap@mahapreit.in</a> 501 , 502 , Pinnacle Corporate Park , B Wing , 5 <sup>th</sup> floor . Next to Trade Centre BKC Mumbai
1.11	Any addendum / corrigendum /cancellation	Any addendum/corrigendum/cancellation of above RFP will be published on the web-site <a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a> and on the notice board of Office of the MAHAPREIT. The system shall generate a mail to those Bidders who have already participated in this RFP and those Bidders if they wish can modify their RFP.
1.12	Bid Documents	Bid Documents consisting of, information and eligibility criteria, plans, specification and schedule of quantities of the works are available on web-site <a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a> and the set of terms and conditions of contract and other necessary documents can be seen on the web-site till last date of sale and receipt of RFP papers. Interested Bidder may obtain further information at the web-site Portal <a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a>
1.13	Bid Documents acceptance period	The bid for the work shall remain open for acceptance for a period of 120 days from the last date of receipt of bids. If any Bidder withdraws his bid/ offer before the said period or makes any modification in the terms and condition of the bid, the EMD at the time of submission of RFP shall stand forfeited.
1.14	Bid Acceptance Criteria	Lowest Bidder who is Technically Qualified. Non-Negotiable
1.15	Other details	Other details including details of Portal Registration, Submission of bid, Resubmission and withdrawal of bid can be seen in the bidding documents which is available in web-site <a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a>
1.16	Documents to be uploaded	The PDF copies of original Documents should be uploaded on above mentioned web-site as per Para of this RFP Booklet and should be produced in the verification on demand after opening of the Technical Bid. The Bidders who participated in the on-line bidding can witness opening of the bid from any system logging on to the portal

		<a href="https://organizations.maharashtra.nextprocure.in">https://organizations.maharashtra.nextprocure.in</a> away from opening place. The bids can only be opened by the pre-designated officials only after the opening time mentioned in the bid. In the event of the specified date of bid opening being declared a holiday the bid will be opened at the appointed time and transaction in the next working day.										
1.17	RFP Acceptance Authority	Chairman and Managing Director, MAHAPREIT										
1.18	Account Details.	<p style="text-align: center;"><b>Bank details are below.</b></p> <table border="1"> <tr> <td><b>Party Name</b></td> <td><b>Mahatma Phule Renewable Energy and Infrastructure Technology Limited.</b></td> </tr> <tr> <td><b>Bank Name</b></td> <td><b>ICICI Bank</b></td> </tr> <tr> <td><b>Bank Branch</b></td> <td><b>MIDC, Andheri (East) Mumbai 400 049.</b></td> </tr> <tr> <td><b>Bank A/c No.</b></td> <td><b>054405500470</b></td> </tr> <tr> <td><b>I.F.S.C. Code</b></td> <td><b>ICIC0000544</b></td> </tr> </table>	<b>Party Name</b>	<b>Mahatma Phule Renewable Energy and Infrastructure Technology Limited.</b>	<b>Bank Name</b>	<b>ICICI Bank</b>	<b>Bank Branch</b>	<b>MIDC, Andheri (East) Mumbai 400 049.</b>	<b>Bank A/c No.</b>	<b>054405500470</b>	<b>I.F.S.C. Code</b>	<b>ICIC0000544</b>
<b>Party Name</b>	<b>Mahatma Phule Renewable Energy and Infrastructure Technology Limited.</b>											
<b>Bank Name</b>	<b>ICICI Bank</b>											
<b>Bank Branch</b>	<b>MIDC, Andheri (East) Mumbai 400 049.</b>											
<b>Bank A/c No.</b>	<b>054405500470</b>											
<b>I.F.S.C. Code</b>	<b>ICIC0000544</b>											

**SECTION – III**

**INSTRUCTIONS TO BIDDERS**

**GENERAL INSTRUCTIONS TO BIDDER FOR MAIN BIDDING**

**TECHNICAL / FINANCIAL BIDDING PROCESS**

## **INSTRUCTIONS FOR BIDDERS IN RESPECT OF BIDDING PROCESS**

### **3.1.0 INFORMATION AND INSTRUCTIONS TO APPLICANT BIDDERS:**

- 3 The Online e-RFPs are invited by the MAHAPREIT from Manufacturer and suppliers Service Provider/Traders/Developer for setting up 1 MW Electrolyzer Hydrogen Generation Plant integrated with ecosystem. 1 MW Electrolyzer Hydrogen Generation Plant proposal shall include Design, Engineering, Fabrication, Packaging, forwarding, supply, transportation and handling, insurance, unloading, construction, erection, commissioning, Testing, Performance Guaranty Test including mandatory spares obtaining all statutory approvals and Training for the staff as per the Scope of Work mentioned on Build-Own-Operated (BOO) basis.
- 3.1.1. The Applicant should download Main e-RFP Document from the website.  
<https://organizations.maharashtra.nextprocure.in>
- 3.1.2. The Online forms of master filter should be filled in completely and all questions should be answered. All information requested for in the enclosed forms should be furnished against the respective columns in the form. If any query is not relevant, it should be stated as "Not Applicable" Only 'dash' reply will be treated as incomplete information. All applicants are cautioned that incomplete information in the application or any change(s) made in the prescribed forms will render application to be treated as non- responsive.
- 3.1.4 The Main e-RFP Document shall be typed on applicant's letterhead and uploaded the signed scanned copy.
- 3.1.5 Any overwriting or correction shall be attested. All pages of the Main e-RFP Document shall be numbered and should be submitted as package with a signed letter of transmittal.
- 3.1.6 All the information must be filled in English language only.
- 3.1.7 Information and certificate(s) furnished along with the application form (the respective application that vouches to the suitability, technical know-how and capability of the applicant) should be signed by the applicant.
- 3.1.8** The applicant is encouraged to attach any additional information, (PDF copies of similar work orders which were already carried out, regarding his capabilities). No further information will be entertained after submission of Main RFP Document unless it is requested by

## **MAHAPREIT.**

- 3.1.9 The Main e-RFP Document in prescribed forms as required in this booklet duly completed and signed should be uploaded on web site along with all relevant documents. The documents submitted in connection with the pre-qualification shall be treated as confidential and will not be returned.

The cost incurred by applicant in preparing this offer, in providing clarification or attending discussions, conference in connection with this document, shall not be reimbursed by the **MAHAPREIT** under any circumstances.

### **3.1.10 Instructions to the Bidders:**

- 3.1.11 Detailed information regarding scope of work and volume thereof can be obtained by Bidder from the Office of MAHAPREIT on any working day and during the currency of RFP, in addition to the details available through these e-RFP documents.

### **3.1.12 BID QUALIFICATION REQUIREMENT (QR) & EVALUATION METHODOLOGY**

#### **A. Technical Criteria of BEC**

- (i) Bidder should be a manufacturer or a channel partner of manufacturer/Developer of Proton Exchange Membrane (PEM) Electrolyzer / PEM stack /AEM (Anion Exchange Membrane)/Alkaline Electrolyzer based Hydrogen Generation System and such Hydrogen Generation System of at least 40 KW as a single unit which should have been in successful operation for at least 6 (six) months prior to the bid due date.

In case bidder is channel partner of manufacturer who is not meeting the aforesaid Technical Criteria on its own, can qualify based on the experience of said manufacturer who meets the Technical Criteria as mentioned above.

**OR**

#### **(ii)**

- a. The bidder should have executed/developed industrial project(s) as Engineering, Procurement, and Construction (EPC) Contractor/ Engineering, Procurement, and Construction management (EPCM) consultant in the area of Process in Hydrogen Generation Plant / power / Metal / Oil & Gas / Chemical / Petrochemical / Hydrocarbon / Fertilizer during last 7 (Seven) years prior to the bid due date, with a Cumulative value of such project (s) Rs 10 (Ten) crores or more with individual value of such projects under single contract should not be less than Rs. 2 (Two) Crores. The reference project(s) should be in successful operation for at least 6 (six) months prior to the bid due date.



AND

- b. The bidder should have a Joint Undertaking with a Manufacturer who meets the Technical Criteria as mentioned above for supply of PEM/AEM/Alkaline Electrolyzer/Stack. The Bidder and Manufacturer must sign an undertaking for successful completion of the Contract. The Undertaking should be submitted along with the Techno-Commercial bid, failing which the Bidder shall be disqualified and its bid shall be rejected.

**B. Financial Criteria of BEC:**

**1.1 Annual Turnover:**

The minimum annual turnover of the bidder as per the audited annual financial statement in any one of the three preceding financial years shall be **INR 5,00,00,000/-**.

**1.2 Net Worth:**

Net worth of the bidder should be positive as per the audited annual financial statement of last financial year.

**1.3 Working Capital**

The minimum working capital of the bidder as per the audited annual financial statement of last financial year shall be INR 2,00,00,000/-.

**Note:**

- (i) **Annual Turnover:** Preceding 3 financial years mentioned in aforesaid BEC refer to immediate 3 preceding financial years wherever the closing date of the bid is after 30<sup>th</sup> Sept. of the relevant financial year. Audited financial results of the immediate 3 preceding financial years are not available, the audited financial results of the 3 years immediately prior to that will be considered.
- (ii) **Net Worth/Working Capital:** Immediate preceding financial year mentioned in aforesaid BEC refer to audited financial results for the immediate preceding financial year wherever the closing date of the bid is after 30<sup>th</sup> Sept. of the relevant financial year and audited financial results of the immediate preceding financial year is not available, in such case the audited financial results of the year immediately prior to that year will be considered.

**C. DOCUMENTS TO BE SUBMITTED FOR COMPLIANCE TO BEC**

(i) Technical Criteria of BEC:

<b>BEC Clause No.</b>	<b>Description</b>	<b>Documents required for qualification</b>
<b>Documents Required-Technical Criteria</b>		
A (i)	Experience	<p>The Bidder shall furnish documentary evidence as below:</p> <ul style="list-style-type: none"> <li>i.) Proof towards manufacturer/Developer of Proton Exchange Membrane (PEM) Electrolyser / PEM stack /AEM (Anion Exchange Membrane)/Alkaline Electrolyser based Hydrogen Generation System.</li> <li>ii.) Work order/ Letter of Acceptance along with schedule of rates and scope of work.</li> <li>iii) Completion Certificate issued by End user/ Owner/PMC</li> <li>iv.) Certificate of successful operation for at least 6 (six) months prior to the bid due date from End user/ Owner.</li> </ul>
A (ii)	Experience	<p>The Bidder shall furnish documentary evidence as below:</p> <p>(A) <u>Experience documents of Bidder:</u></p> <ul style="list-style-type: none"> <li>i.) valid Joint Undertaking (as per Form) for supply of Electrolyzer/Stack with a manufacturer who meets the Technical Criteria as mentioned in cl.no.A(i), which shall be valid for at-least four years from the bid due date.</li> <li>ii.) work order/ Letter of Acceptance along with schedule of rates and scope of work.</li> <li>iii.) Completion Certificate issued by End user/ Owner/PMC.</li> <li>iv.) Certificate of successful operation for at least 6 (six) months prior to the bid due date from End user/ Owner. Operation certificate from main contractor shall be supplemented by End user /Owner certificate to the main contractor establishing six months of operation.</li> </ul> <p>(B) <u>Documents of Manufacturer:</u></p> <p>All the documents of Manufacturer who meets the Technical Criteria mentioned in Cl.no.A (i) and as mentioned above.</p>

**ii) Financial Criteria of BEC:**

<b>BEC Clause No.</b>	<b>Description</b>	<b>Documents required for qualification</b>
B	Documents Required-Financial Criteria	
B(1.1)	Annual Turn-over	Bidder(s) shall submit copy of Audited Annual Financial Statement [including Auditor's Report, Balance Sheets, Profit and Loss Accounts statements, Notes & schedules etc.] of three (3) preceding Financial Year(s).  However, in case bidder is meeting the Annual Turnover criteria of BEC based on Audited Financial Statement of any one of the preceding 3 financial years, the same shall suffice.
B (1.2)	Net Worth	Bidder(s) shall submit copy of Audited Annual Financial Statement [including Auditor's Report, Balance Sheets, Profit and Loss Accounts statements, Notes & schedules etc.] of last Financial Year.
B (1.3)	Working Capital	Bidder(s) shall submit copy of Audited Annual Financial Statement [including Auditor's Report, Balance Sheets, Profit and Loss Accounts statements, Notes & schedules etc.] for the last Financial Year.

- A. Apart from above, Bidder must submit all other relevant documents/ information as specified in the Scope of Work/SCC for Technical Evaluation of bid or specified elsewhere in the Tender Document, towards proof of its responsiveness.**

**D. EVALUATION METHODOLOGY:**

The price quoted by the bidder inclusive of all taxes & duties except GST shall be checked for arithmetic correction, if any, based on price filled by the bidder in the **Price Bid format**.

The evaluation of all techno-commercially acceptable bids, to arrive at the lowest evaluated bid (**L1**) as per the procedure mentioned in Bid Documents and ROFR clause, shall be carried after considering total quoted lumpsum price for complete system excluding Goods & Service Tax (GST).

Note: In case any unregistered bidder is submitting their bid, their prices will be loaded with applicable GST (CGST & SGST/UTGST or IGST) during evaluation of bid.

**SECTION IV**  
**General Instruction to Bidders**

## **A– GENERAL INSTRUCTIONS**

### **1 SCOPE OF BID**

- 1.1 SCOPE OF BID: The scope of work/ Services shall be as defined in the Tender documents.
- 1.2 The successful bidder will be expected to complete the scope of Bid within the period stated in Special Conditions of Contract.
- 1.3 Throughout the Tender Documents, the terms 'Bid', 'Tender' & 'Offer' and their derivatives [Bidder/Tenderer, Bid/Tender/Offer etc.] are synonymous. Further, 'Day' means 'Calendar Day'.

### **2 ELIGIBLE BIDDERS**

- 2.1 The Bidder shall not be under a declaration of ineligibility by Employer for Corrupt/ Fraudulent/ Collusive/ Coercive practices.
- 2.2 The Bidder should not be under any liquidation court receivership or similar proceedings on due date of submission of bid. In case there is any change in status of the declaration prior to award of contract, the same must be promptly informed to MAHAPREIT by the bidder.  
It shall be the sole responsibility of the bidder to inform MAHAPREIT their status on above on due date of submission of bid and during finalization of the tender. Concealment of the facts shall be tantamount to misrepresentation of facts and shall lead to action against such Bidders decided by MAHAPREIT
- 2.3 Bidder shall not be affiliated with a firm or entity:
  - (i) that has provided consulting services related to the work to the MAHAPREIT during the preparatory stages of the work or of the project of which the works/services forms part of or
  - (ii) that has been hired (proposed to be hired) by the Employer as an Engineer/ translation charges, authentication charges and any associated charges including taxes & duties thereon. Further, MAHAPREIT will in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.
  - (iii) Consultant for the contract.
- 2.4 Neither the firm/entity appointed by MAHAPREIT as the Project Management Consultant (PMC) for a contract nor its affiliates/ JV'S/ Subsidiaries shall be allowed to participate in the tendering process.
- 2.5 Pursuant to qualification criteria set forth in the bidding document, the Bidder shall furnish all necessary supporting documentary evidence to establish Bidder's claim of meeting qualification criteria.
- 2.6 Power of Attorney:  
Power of Attorney (POA) to be issued by the bidder in favour of the authorised employee(s), in respect of the particular tender, for purpose of signing the documents including bid, all subsequent communications, agreements, documents etc. pertaining to the tender and act and take any and all decision

on behalf of the bidder (including Consortium). Any consequence resulting due to such signing shall be binding on the Bidder (including Consortium).

(I) In case of a Single Bidder, the Power of Attorney shall be issued as per the constitution of the bidder as below:

- a) **In case of Proprietorship:** by Proprietor
- b) **In case of Partnership:** by all Partners or Managing Partner
- c) **In case of Limited Liability Partnership:** by any bidder's employee authorized in terms of Deed of LLP
- d) **In case of Public / Limited Company:** PoA in favour of authorized employee(s) by Board of Directors through Board Resolution or by the designated officer authorized by Board to do so. Such Board Resolution should be duly countersigned by Company Secretary / MD / CMD / CEO.

(II) In case of a Consortium, Power of Attorney shall be issued both by Leader as well as Consortium Member(s) of the Consortium as per procedure defined herein above in favor of employee of Leader of Consortium.

The Power of Attorney should be valid till award of contract / order to successful bidder.

2.7 In case of change of constitution of bidder after submission of bid, the same shall be informed by the bidder to MAHAPREIT promptly. Failure to same shall be considered as misrepresentation by the bidder.

### **3 ONE BID PER BIDDER**

3.1 A Bidder shall submit only 'one [01] Bid' in the same Bidding Process either as single entity or as a member of any consortium (wherever consortium bid is allowed). A Bidder who submits or participates in more than 'one [01] Bid' will cause all the proposals in which the Bidder has participated to be disqualified.

3.2 More than one bid means bid(s) by bidder(s) having same Proprietor / Partners / Limited Liability Partner in any other Bidder (s). Further, more than one bids shall also include two or more bidders having common power of attorney holder.

Failure to comply this clause during tendering process will disqualify all such bidders from process of evaluation of bids.

3.3 Alternative Bids shall not be considered.

### **4 COST OF BIDDING**

The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Documentation Charges, Bank charges, all courier charge

### **[A] BIDDING DOCUMENTS**

### **5 CONTENTS OF BIDDING DOCUMENTS**

5.1 The contents of Bidding Documents / Tender Documents are those stated below, and should be read in conjunction with any 'Addendum / Corrigendum and Clarification(s)'

➤ Section-I : DETAILED INVITATION TO OFFER NOTICE

- Section-II : DEFINITIONS
- Section-III : INSTRUCTIONS TO BIDDERS
- Section-IV : GENERAL INSTRUCTIONS TO BIDDER
- Section-V : SCOPE OF WORK-RELATED SPECIFIC INFORMATION
- Section-VI : ANNEXURE

5.2 The Bidder is expected to examine all instructions, forms, terms & conditions in the Bidding Documents. The "Request for Proposal [RFP] & Invitation for Bid (IFB)" together with all its attachments thereto, shall be considered to be read, understood and accepted by the Bidders. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will be at Bidder's risk and may result in the rejection of his Bid.

## **6 CLARIFICATION OF TENDER DOCUMENTS**

- 6.1 A prospective Bidder requiring any clarification(s) of the Bidding Documents may notify MAHAPREIT in writing by email at MAHAPREIT mailing address indicated in no later than 02 (two) days prior to pre-bid meeting (in cases where pre-bid meeting is scheduled) or 05 (five) days prior to the due date of submission of bid in cases where pre-bid meeting is not scheduled. MAHAPREIT reserves the right to ignore the bidders request for clarification if received after the aforesaid period. MAHAPREIT may respond in writing to the request for clarification. MAHAPREIT's response including an explanation of the query, but without identifying the source of the query will be uploaded on MAHAPREIT's tendering web site / communicated to prospective bidders by e-mail.
- 6.2 Any clarification or information required by the Bidder but same not received by the Employer is liable to be considered as "no clarification / information required".

## **7 AMENDMENT OF BIDDING DOCUMENTS**

- 7.1 At any time prior to the 'Bid Due Date', Employer may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by addenda/ corrigendum.
- 7.2 Any corrigendum thus issued shall be integral part of the Tender Document and shall be hosted on the websites. Bidders have to take into account all such corrigendum before submitting their Bid.
- 7.3 The Employer, if consider necessary, may extend the Bid Due Date in order to allow the Bidders a reasonable time to furnish their most competitive bid considering the addenda/corrigendum issued thereof.

---

## **[B] – PREPARATION OF BIDS**

### **8 LANGUAGE OF BID:**

The bid prepared by the Bidder and all correspondence, drawing(s), document(s), certificate(s) etc. relating to the Bid exchanged by Bidder and MAHAPREIT shall be written in English language only. In case a document,



certificate, printed literature etc. furnished by the Bidder in a language other than English, the same should be accompanied by an English translation duly authenticated by the Indian Chamber of Commerce, in which case, for the purpose of interpretation of the Bid, the English translation shall govern.

## 9. DOCUMENTS COMPRISING THE BID

### 9.1 E-TENDERING:

Bidders are requested to refer instructions for participating in e-Tendering (Annexure-I to Section III), All pages of the Bid must be signed by the "authorized signatory" of the Bidder holding Power of Attorney.

9.1.1 **PART-I: "TECHNO-COMMERCIAL BID"** comprising all the above documents mentioned in respective section along with copy of Declaration for Bid Security, copy of Power of Attorney the MAHAPREIT's e-tendering portal. Bidder must upload copy of EMD.

### 9.1.2 **PART-II: PRICE BID**

The Prices are to be filled strictly in Price bid format of the bidding documents and provision mentioned in E-tendering portal.

## 10 BID PRICES

10.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole works as described in Bidding Documents, based on the rates and prices submitted by the Bidder and accepted by the MAHAPREIT. The prices quoted by the Bidders will be inclusive of all taxes except **GST (CGST & SGST/UTGST or IGST)**

10.2 Prices quoted by the Bidder, shall remain firm and fixed and valid till completion of the Contract and will not be subject to variation on any account unless any price escalation/variation is allowed elsewhere in the Tender Document.

10.3 The Bidder shall quote the prices in 'figures' & words. There should not be any discrepancy between the prices indicated in figures and the price indicated in words.

10.4 Quoted prices should be inclusive of all taxes and duties, except **GST (CGST & SGST or IGST or UTGST)**. Please note that the responsibility of payment of **GST (CGST & SGST or IGST or UTGST)** lies with the Bidder only.

## 11 BID CURRENCIES:

Bidders must submit bid in Indian Rupees only.

## 12 BID VALIDITY

**12.1** Bids shall be kept valid for period specified in 120 days from the final Due date of submission of bid'. A Bid valid for a shorter period may be rejected by MAHAPREIT as 'non-responsive'.

**13** **EARNEST MONEY DEPOSIT –** Rs. 10,00,000/- (Ten Lac Rs.)

**14** **PRE-BID MEETING**

**14.1** The Bidder(s) or his designated representative are invited to attend a Online/Offline "Pre-Bid Meeting" which will be held at address specified.

**14.2** Purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage and give hands-on e-tendering.

**14.3** Text of the questions raised and the responses given, together with any responses prepared after the meeting, will be uploaded on MAHAPREIT e-tendering website. Any modification of the Contents of Bidding Documents that may become necessary as a result of the Pre-Bid Meeting shall be made through the issue of an Corrigendum.

**14.4** Non-attendance of the Pre-Bid Meeting will not be a cause for disqualification of Bidder.

**15** **FORMAT AND SIGNING OF BID**

**15.1** The original and all copies of the Bid shall be typed or written in indelible ink [in the case of copies, photocopies are also acceptable] and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder (as per POA). The name and position held by each person signing, must be typed or printed below the signature. All pages of the Bid except for unamendable printed literature where entry(s) or amendment(s) have been made shall be initialed by the person or persons signing the Bid.

**15.2** The Bid shall contain no alterations, omissions, or additions, unless such corrections are initialed by the person or persons signing the Bid.

**15.3** In case of e-tendering, signed documents to be uploaded.

**16** **ZERO DEVIATION AND REJECTION CRITERIA**

**16.1** ZERO DEVIATION: Deviation to terms and conditions of "Bidding Documents" may lead to rejection of bid. MAHAPREIT will accept bids based on terms & conditions of "Bidding Documents" only. Bidder may note MAHAPREIT will determine the substantial responsiveness of each bid to the Bidding Documents. For purpose of this, a substantially responsive bid is one which conforms to all terms and conditions of the Bidding Documents without deviations or reservations. MAHAPREIT reserves the right to raise technical and/or commercial query(s), if required, may be raised on the bidder(s). The response(s) to the same shall be in writing, and no change in the price(s) or substance of the bids shall be sought, offered or permitted. The substance of the bid includes but not limited to prices, completion, scope, technical specifications, etc. Bidders are requested to not to take any

deviation/exception to the terms and conditions laid down in this "Tender Documents", and submit all requisite documents as mentioned in this "Tender Documents", failing which their offer will be liable for rejection. If a bidder does not reply to the queries in the permitted time frame then its bid shall be evaluated based on the documents available in the bid.

**16.2 REJECTION CRITERIA:** Notwithstanding the above, deviation to the following clauses of Tender document shall lead to summary rejection of Bid:

- (a) Firm Price
- (b) Earnest Money deposit as applicable
- (c) Specifications & Scope of Work
- (d) Schedule of Rates / Price Schedule / Price Basis
- (e) Duration / Period of Contract/ Completion schedule
- (f) Period of Validity of Bid
- (g) Price Reduction Schedule
- (h) Contract Performance Security
- (i) Guarantee / Defect Liability Period
- (j) Arbitration / Resolution of Dispute/Jurisdiction of Court
- (k) Force Majeure & Applicable Laws
- (l) Any other condition specifically mentioned in the tender document elsewhere that non-compliance of the clause lead to rejection of bid

Note: Further, it is once again reminded not to mention any condition in the Bid which is contradictory to the terms and conditions of Tender document

## [C]– SUBMISSION OF BIDS

### **17**     SUBMISSION OF BIDS

**17.1** The bids shall be submitted through e-tender mode in the manner specified elsewhere in tender document. No Manual/ Hard Copy (Original) offer shall be acceptable.

### **18**     DEADLINE FOR SUBMISSION OF BIDS

**18.1** The bids must be submitted through e-tender mode not later than the date and time specified in the tender documents/BIDS.

### **19**     MODIFICATION AND WITHDRAWAL OF BIDS

**19.1** Modification and withdrawal of bids shall be as follows:-

The bidder may withdraw or modify its bid after bid submission but before the due date and time for submission as per tender document

## BID OPENING AND EVALUATION

**20 EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS**

MAHAPREIT reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the ground for MAHAPREIT's action.

**21 BID OPENING**

**21.1 Technical Bid Opening :**

MAHAPREIT will open bids, in the presence of bidders' designated representatives who choose to attend, at date, time and location stipulated in the Bid Document. The bidders' representatives, who are present shall sign a bid opening register evidencing their attendance.

**21.2 Priced Bid Opening:**

21.2.1 MAHAPREIT will open the price bids of those bidders who meet the qualification requirement and whose bids is determined to be technically and commercially responsive. Bidders selected for opening of their price bids shall be informed about the date of price bid opening. Bidders may depute their authorized representative to attend the bid opening. The bidders' representatives, who are present shall sign a register evidencing their attendance and may be required to be present even on a short notice.

21.2.2 The price bids of those Bidders who were not found to be techno-commercially responsive shall not be opened.

**22 CONFIDENTIALITY**

Information relating to the examination, clarification, evaluation and comparison of Bids, and recommendations for the award of a Contract, shall not be disclosed to Bidder(s) or any other persons not officially concerned with such process.

**23 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS**

**23.1** The employers' determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid:-

- (a) Meets the "Bid Evaluation Criteria" of the Bidding Documents;
- (b) Has been properly signed;
- (c) Earnest Money Deposit;
- (d) Is accompanied by the required documents;
- (e) Is substantially responsive to the requirements of the Bidding Documents; and
- (f) Provides any clarification and/or substantiation that the Employer may

require to determine responsiveness.

**23.2** A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bidding Documents without material deviations or reservations or omissions for this purpose employer defines the foregoing terms below:-

- a) "Deviation" is departure from the requirement specified in the tender documents.
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirement in the tender documents.
- c) "Omission" is the failure to submit part or all of the information or documentation required in the tender document for evaluation of bid.

**23.3** The employer shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation, reservation or omission.

If a Bid is not substantially responsive, it may be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the of material deviation, reservation, or omission.

## **24** EVALUATION AND COMPARISON OF BIDS

### **24(i) Evaluation Criteria :**

#### **RIGHT OF FIRST REFUSAL (ROFR)**

a. Right of first refusal (ROFR), also known as first right of refusal, is a contractual right to enter into a business transaction. The Tender Clause regarding the "Right of First Refusal" (ROFR) can be considered to facilitate Channel Partners (Knowledge/Capex Partner) to secure a new work of Pilot Project or carry out left over work in any bid even though other than L1 at the rate of L1 by assigning the new work of Pilot Project or abandoned work by the L1 even though the Tender Process was concluded. Further if any Channel Partners (Knowledge/Capex Partner) with these right declines to enter a contract, then MAHAPREIT would be free to invite fresh offers by calling new Tender to complete the balance work.

Channel Partners (Knowledge/Capex Partner) who has participated in the tender process and more so, despite the express terms in the tender documents, validity whereof has not been challenged, the Channel Partner (Knowledge/Capex Partner) shall acquire a "Right of First Refusal"; in the tender process in respect of L1 or to complete the additional/increased scope of work in any particular bid or to complete the portion of work withdrawn from the L1 contractor & to be assigned to the Channel Partners.

Channel Partners (Knowledge/Capex Partners) will have absolute Right of First Refusal when in numbers regarding outsourcing of Service Maintenance

Contract according to specified terms & upon exercise of such ROFR by the Channel Partners (Knowledge/Capex Partners) then MAHAPREIT can invite offers by calling Tenders for outsourcing of Service Maintenance Work.

ROFR shall be considered, where the difference in the quote between the lowest and the quote of the CP is not more than 10%(ten percent). Further, selected channel partner bidder, if more than one in this specific range of consideration, then the process of reverse bid / auction, shall be followed by submission of revised commercial bid through e-Tendering process. However, number of eligible bidders participated in reverse bidding, shall not be more than 50% (Fifty percent) or 3 bidders in any bid, whichever is higher.

b) Negotiations:

Negotiations shall be with the L1 bidder only as per the CVC Guidelines except there shall be no bar in respect of operationalization of ROFR clause and where in the tender document, a specific condition is provided. However, in the process of e Tendering any further negotiations shall be held with L1 only either in e Tendering or with e-Reverse Bid post e- Tendering.

4.8.2 MAHAPREIT reserves the right to place order to bidder at the rate of L1 bidder which is decided after final negotiations as per clause **24(i) a&b** MAHAPREIT reserves the right to accept/reject any bid in part or in full or all the bids without assigning any reasons thereof.

Bid shall be evaluated as per evaluation criteria mentioned in bidding documents on lowest bid.

In case of a tie at the lowest bid (L1) position between two or more bidders, the order/LoA will be placed on the bidder who has higher/ highest turnover in last audited financial year.

#### **AWARD OF CONTRACT :**

#### **25 AWARD**

Subject to all terms and conditions of RFP/Tender documents MAHAPREIT will award the Contract to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest if bidder, is determined to be qualified to satisfactorily perform the Contract.

- 26** MAHAPREIT will place the Contract directly on the successful bidder from whom the bid has been received & evaluated and will not place order on other entities such as subsidiary, business associate or partner, dealer/distributor etc. of the Bidder NOTIFICATION OF AWARD
- 26.1** Prior to the expiry of 'Period of Bid Validity', Notification of Award for acceptance of the Bid will be intimated to the successful Bidder by MAHAPREIT by E - mail /Letter. The Notification of Award will constitute the formation of a Contract. The detailed Letter of Acceptance shall be issued thereafter incorporating terms & conditions of Tender Document, Corrigendum, Clarification(s), Bid and agreed variation(s)/acceptable deviation(s), if any. MAHAPREIT may choose to issue Notification of Award in form of detailed Letter of Acceptance without issuing notification of Award and in such case the Contract shall enter into force on the date of detailed Letter of Acceptance only.
- 26.2** Contract period shall commence from the date of "Notification of Award" or as mentioned in the Notification of Award. The "Notification of Award" will constitute the formation of a Contract, until the Contract has been effected pursuant to signing of Contract Agreement.
- 26.3** Upon the successful Bidder's / Contractor's furnishing of 'Contract Performance Security / Security Deposit', MAHAPREIT will promptly discharge his 'Earnest Money Deposit / Bid Security'.
- 26.4** The Order/ contract value mentioned above is subject to Price Reduction Schedule clause.
- 26.5** MAHAPREIT will award the Contract to the successful Bidder, who, within 'fifteen [15] days' of receipt of the same, shall sign and return the acknowledged copy to MAHAPREIT.

## **27** SIGNING OF AGREEMENT

- 27.1** The successful Bidder/Contractor shall be required to execute an 'Agreement' in the proforma given in this Bidding Document on a 'non-judicial stamp paper' of appropriate value [cost of the 'stamp-paper' shall be borne by the successful Bidder/Contractor] within 'fifteen [15] days' of receipt of the Acceptance Letter by the successful Bidder/Contractor failure on the part of the successful Bidder/Contractor to sign the 'Agreement' within the above stipulated period, shall constitute sufficient grounds for forfeiture of EMD.

## **28** CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT [CPS/SD]

- 28.1** Within 30 days of the receipt of the notification of award from MAHAPREIT, the successful bidder shall furnish the Performance Security (PS) in accordance with of General Conditions of the Contract. The PS shall be in the form of either Banker's Cheque or Demand Draft or Bank Guarantee or Letter of Credit and shall be in the currency of Contract
- 28.2** The contract performance security shall be for an amount equal to 10%

towards faithful performance of the contractual obligations and performance of equipment. Contract/order value shall be exclusive of **GST (CGST & SGST/UTGST or IGST)**.

Bank Guarantee towards PS shall be from any Indian scheduled bank or a branch of an international bank situated in India and registered with Reserve bank of India as scheduled foreign bank. Failure of the successful bidder to comply with the requirements of this article shall constitute sufficient grounds for consideration of the annulment of the award and forfeiture of the EMD.

- 28.3** The PS has to cover the 10 % entire contract value including extra works/services also. While remitting such online transaction, the bidder must indicate “**Security Deposit/ Contract Performance Security against Contract no. \_\_\_\_\_ (contractor to specify Contract No.)**” under remarks column of such transaction of respective bank portal. The contractor/vendor shall be required to submit the successful transaction details to the dealing officer immediately through email/letter.

#### **28.4 Complies under various Labour Laws**

The Contractor has to fully comply with all applicable Labour Laws and Regulations passed, modified and notified from time to time by the Central, State and Local Government agencies/authorities.

#### **29 INCOME TAX & CORPORATE TAX**

- 29.1** Income tax deduction shall be made from all payments made to the contractor as per the rules and regulations in force and in accordance with the Income Tax Act prevailing from time to time.
- 29.2** Corporate Tax liability, if any, shall be to the contractor's account.

#### **30 DISPUTE RESOLUTION MECHANISM**

#### **31 MUTUAL DISCUSSIONS**

In the event of a dispute or difference of any kind whatsoever shall arise between the Parties in connection with or arising out of this Agreement or the breach, termination or validity hereof, the Parties shall endeavor to resolve such dispute in good faith in the first instance within 30 (thirty) days of the notice of such a dispute by mutual discussions between the Parties.

#### **32. ARBITRATION**

In the event of failure to resolve dispute/ differences related to Contract/Agreement and relating to interpretation of the clauses therein the parties are hereby agreed for its resolution / Adjudication etc. by referring it to the **Institutional Arbitration** established /recognized by the State Govt/Central



Govt. and the dispute can be get resolved within the framework of the **Arbitration Act 2015** and in terms of rules and regulations of such institutional arbitration such as **Mumbai** center of Arbitration etc.

**33. Banning for Future business :**

**a. After execution of contract and during Defect liability period (DLP)/ Warranty/Guarantee Period:**

If an agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after execution of contract and during Warranty/Guarantee Period, the agency shall be banned for future business with MAHAPREIT For a period ONE YEAR from the date of issue of banning order. Further, the Contract cum Performance Bank Guarantee (CPBG)/Contract Performance Security (CPS) submitted by agency against such order (s)/ contract (s) shall be forfeited

**b. After expiry of Defect liability period (DLP)/ Warranty/Guarantee Period**

If an agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after expiry of Defect liability period (DLP)/ Warranty/Guarantee Period, the agency shall be banned for future business with MAHAPREIT for a period ONE YEAR from the date of issue of banning order.

**34. TERMS AND PROCEDURES OF PAYMENT :**

- a. Payment will be made as per bill raised by bidder with in 60 days subjected to all quality checks and confirmation by onward purchaser.
- b. Bidder shall supply 100% capacity of green hydrogen production. Penalty will be imposed on shortfall in supply and as per forward purchaser Agreement.
- c. Penalty will be imposed on Quality as per onward purchaser quality norms. Tax liability will be as per bidding document.

**35. PRICING MECHANISM.**

- a. Bidder shall quote a firm price in INR. This price will be firmed for first 2 years. At the end of 2<sup>nd</sup> year, the Hydrogen gas price will be reviewed and decided mutually based on onward purchase contract done by MAHAPREIT for next two years and so on. The new price depends on cost of input supply RE power from distribution and transmission companies/Energy exchanges. The bidder shall provide breakup of cost of hydrogen generation per Kg. along with price bid submitted. Bidder shall pass on any incentives

and discounts provided by Govt. policy time to time. In future after first two years if any price indexation (National/International) applicable to Green Hydrogen adopted by MNRE, Govt. companies or MoP Govt. of India will be applicable for review pricing.

- b. MAHAPREIT will assist to establish Carbon Credit Mechanism for Carbon credit trading. Amount received through such mechanism will be shared in the ratio of 50:50.
- c. Any price variation as per Govt. of India /Onward purchase contract will be applicable.
- d. MAHAPREIT will decide the Marketing margin and administrative charges while executing onward selling Contract with probable purchasers.

**SECTION-V**  
**SCOPE OF WORKS**

**@ 0.4 TPD/1 MW ELECTROLYSER -TO PRODUCE GREEN HYDROGENSCOPE OF  
WORK AND TECHNICAL SPECIFICATIONS**

**1. Project Information**

**1.1 Introduction**

MAHAPREIT intends to set up 1 MW @ 0.4 Ton per day (TPD) Green Hydrogen production unit, based on electrolysis of water from Developer/Trader/Manufactures etc. on BOO basis OPEX Model along with logistic arrangement within 100 KM.

**MAHAPREIT INTRODUCTION**

**1.2 Location**

Bidder shall declare specific location in the vicinity of Fertilizers and Refineries plant in Maharashtra state.

**1.3 Technology**

The generation of Green Hydrogen shall be based on electrolysis of water using any Advance technology Electrolyzer.

**1.4 Plant input Parameters: (Recommended)**

<b>S. No.</b>	<b>Description</b>	<b>Value</b>
1.	Power	Grid Power, 3 Phase, 6.6kV and 415 V
2.	Quality of Input Water for Hydrogen Production (Demineralized Water)	Silica : < 0.02 mg/l Iron ( As Fe) : Below Detectable Limit (<0.03mg/l) Total Hardness : Below Detectable Limit Conductivity :1-2 uS/cm pH value : 6.8-8
3.	Cooling Water	pH :7-8 Turbidity : <20 NTU Conductivity :600-1800 uS/cm Chorides: 300 ppm (max) Cooling water Supply Pr/Temp :4.0 Kg/33°C Cooling water Return Pr/Temp:2.5 Kg/44°C

All above are indicative parameters, bidder can select input parameters as per technology adopted.

**1.5 Plant capacity & design Consideration:**

S. No	Description	Value
1.	Electrolyzer Technology	Any advance Technologies
2.	Hydrogen -Design Capacity	@0.4 TPD ( 20 Kg/hr)*
3.	Hydrogen pressure	Minimum 30 barg
4.	Hydrogen Purity	Minimum 99.999 Vol%
5.	Moisture in Hydrogen	<2 PPMV
6.	Oxygen content in Hydrogen	<1 PPMV
* Guaranteed Capacity		

**2. Scope of Package**

**2.1 Scope of Supply & Services**

- a. The scope of the proposal shall include Design, Engineering, Fabrication, Packing, Forwarding, Supply, Transportation and handling, Custom duty (and any other duties), Freight, Insurance, Unloading, Construction, Erection, Commissioning, Testing, PG Test including mandatory spares obtaining all Statutory approvals, and Training in line with the specifications provided in this document. All supporting packages and utilities mentioned under the heading, ‘Terminal Points’ required for the Hydrogen Generation Plant shall be provided also by the bidder.

Any items or works though not specifically mentioned in this specification but needed to complete the equipment & systems to meet the intent of the specification shall also be in the scope of work. Broad scope of supply and services are following:

1. Basic Engineering of the plant including preparation of plant definition manuals.
2. Detailed design of all equipment and associated system (s) including civil, structure steel works including in bidder’s scope.
3. Providing engineering, equipment sizing & performance data, instruction manuals, as built drawing for approval of MAHAPREIT and other information. This also include:
  - i) General Layout
  - ii) General arrangement plan
  - iii) Foundation Drawing with individual load point
  - iv) Structural design and drawings

- v) Process flow drawing with mass and energy balance
  - vi) Thermal load data
  - vii) Water balance
  - viii) Electrical Schematics/SLD, design Calculation, Datasheets, power & Control wiring diagram
  - ix) Cable sizing and Schedules etc.
  - x) Pipeline & instrumentation diagram (PD)
  - xi) Equipment Sizing and data sheet
  - xii) One set of installation, operation & Maintenance Manual of system with detailed description.
4. Bidder shall carry out design of process and auxiliary systems, controls, equipment sizing, equipment / selection, material selection etc., with the 'Manufacturer', in a manner which ensures safe and automated plant normal / emergency operation alongside plant startup and plant shutdown - and obtain approval / acceptance of MAHAPREIT. Bidder shall submit all engineering drawing and documents including (i) Operation & Control Philosophy, (ii) Drawings and Documents pertaining to Design and Engineering, (iii) Datasheets, (iv) Manufacturing & Field Quality Plan and its compliance, Calibration & Test certificates (Minimum 2 set of Hard copy & 1 set of Soft copy of final drawings & documents).
  5. Submission of list of Bill of quantity (BOQ), Mandatory Spares, Startup & Commissioning spares & consumables.
  6. Supply of items listed in BOQ as per the indicated specifications including Mandatory Spares, Startup & Commissioning spares & consumables.
  7. Packing, loading, transportation and unloading of material including all clearances.
  8. Receipt, storage, and preservation of equipment at the site.
  9. Civil, mechanical, electrical and C&I, erection including conducting all field tests.
  10. Conduct of all shop and field tests.
  12. Compliance of all statutory requirements.
  13. Labor permit till the completion of the project.
  14. Performance Guarantee tests after completion of initial continuous trial operation of 3 days duration including supply and calibration of PG/PT or other Test instruments etc.
  15. In situ Training (Minimum Six (6) days) for 10 persons encompassing design, O&M, troubleshooting etc., for Hydrogen Generation Plant.
  16. For all bought out items, individual guarantee/ warranty of equipment may be passed on to MAHAPREIT
  17. Separate Safety officer and personal protective equipment for all working personnel as per the requirement of MAHAPREIT, which shall be finalized prior to the commencement of field work.
  18. Geo Technical Investigation and Soil Bearing Test (SBT), if required, shall be in scope of bidder.
  19. Bidders are advised to obtain latest Meteorological data OF Land vicinity and use the same for design of Hydrogen Generation Plant.
  20. Major equipment shall broadly conform with the relevant International/National standard of design, engineering & workmanship and shall be capable of performing the required duties in a manner acceptable bidder. The Quality plan of major equipment shall be finalized during detailed

- engineering.
21. Plant should be design & built to meet all safety/environment/regulatory requirement required by SWM 2013 rules, factory Act, PESO, Electricity Act, CPCB/ MPCB, and/or all other applicable & relevant guidelines by authorities.
  22. The list of codes and regulations given in this document is not exhaustive. The bidder shall provide a list of all codes and standards that the bidder shall use in their designs; this shall be submitted to MAHAPREIT for approval.
  23. The manufacturers/ supplier shall list out the products and components producing Toxic e- waste and other waste as may be specified. It shall have an Extended Producers Responsibility(EPR) so that after the completion of the lifecycle, the materials are safely recycled/ disposed of by the Manufacturer/ supplier and for this, the Manufacturer/supplier along with procurer must establish recycling/ disposal unit or as may be specified.
  24. **All above are General guidelines to bidders for installation of Plants as Green Hydrogen Technology emerging in India.**

It is not the intent to specify herein all aspects of engineering and construction. The Bidder shall be responsible for providing all materials, equipment and services, specified or otherwise (unless specifically excluded) which are required to fulfill the intent of ensuring operability and the reliability of the complete system covered under this specification.)

## **2.2 General Guidelines**

- a) Bidder should satisfy himself the quantities and nature of work, materials necessary for completion of the work and their availability, means of access to site and enable himself to prepare bid and see site conditions of operation at his own cost. No consequent extra claims on any misunderstanding or otherwise shall be allowed by the MAHAPREIT.
- b) Bidders are requested to carefully examine and understand the specifications and seek clarifications, if required, to ensure that they have understood the specifications. Bidder's offers should not carry any sections like clarifications, interpretations and/or assumptions. However, if the bidder feels that, in his opinion, certain features brought out in his offer are superior to what has been specified, these may be highlighted separately.
- c) Bidder shall submit logistic arrangement along with cost of logistic with in 100 Km.

## **2.3 Facilities Provided by MAHAPREIT**

- a) MAHAPREIT will assist in making availability of Construction power and construction water may provided at one point @ cost as per electricity/water distribution rates. Requirement shall be indicated in bid. However, the same shall be mutually agreed upon before site work is mobilized.
- b) Though it is responsibility of bidder, MAHAPREIT will assist for getting statutory clearance, leasing of land or land acquisition or may provide land for the project depends on availabilities.
- c) MAHAPREIT will establish marketing network with onward purchaser like Oil and Refineries Companies.
- d) MAHAPREIT may provide funding/Debt. support for the project if mutually agreed by bidder. Separate MoU will be signed with successful bidder with acceptable

terms and conditions.

- e) MAHAPREIT will assist for connectivity of Renewable Energy (RE) including Open access supply on priority and also assist for such connectivity issues of distribution and transmission companies.
- f) MAHAPREIT will assist to establish Carbon Credit Mechanism for Carbon credit trading.

**3. Performance Guarantee (PG) :**

Bidders shall provide the performance guarantees i.e. Hydrogen production and Hydrogen Quality for the proposed facilities in response to the Technical Specifications. Bidder shall meet the following specification, failing which the bidder will be rejected.

S. No.	Description	Value
1.	Hydrogen Production	Minimum 20 Kg/hr *
2.	Hydrogen Pressure	Minimum 30 barg
3.	Hydrogen Purity	Minimum 99.999 Vol%
4.	Moisture in Hydrogen	<2 PPMV
5.	Oxygen content in Hydrogen	<1 PPMV
* Guaranteed capacity		

- a) PG Test shall be carried out to demonstrate the Hydrogen Production Capacity while simultaneously meeting the quality of Hydrogen as mentioned above
- b) PG Test shall be carried out after completion of 'Trial Operation'.
- c) Successful completion of trial run shall be considered as completion of commissioning activities.
- d) PG Test duration shall be at least 72 continuous hours.
- e) Bidder shall provide the PG Test procedure for approval of MAHAPREIT.
- f) PG test shall be carried out as per the approved PG Test procedure. PG test procedure shall be submitted and finalized within the mutually accepted date from the date of Notification of Award.
- g) The Bidder shall be responsible for providing all material, equipment, and manpower, specified or otherwise, which are required to carry out PG Test.
- h) There shall be no incentive / reward in case of positive performance deviation i.e when tested capacity of distillate generation is more than the guaranteed capacity.
- i) In case it is found that the equipment/system has failed to meet the guarantees, the Contractor shall carry out all necessary modifications and/or replacements to make the equipment/system comply with the guaranteed requirements at no extra cost to the Employer and re-conduct the



performance guarantee test(s) with Employer's consent. In case the specified performance guarantee(s) are still not met, Employer will accept the equipment/system/plant after levying liquidated damages.

Bidder shall provide the detailed information about the consumption of utilities, chemical, adsorbents. as per Annexure A.

### 3.1 Guarantee Test:

1. The Guarantee Test (and repeats thereof) shall be conducted by the Contractor as specified in the Technical Specifications or the relevant part thereof to ascertain whether the Facilities or the relevant part can attain the performance Guarantees specified in the Contract Documents.
2. The Bank Guarantee shall be extended for any subsequent period, if required, such that the same remains valid till the Successful Completion of the aforementioned Guarantee Test.

### 3. Plot Plan & Terminal Points

As decided by MAHAPREIT in coordination with bidder.

#### Terminal Points (TP) Chargeable to Bidders/To be arranged by bidders

- (i) **TP1, Water:** Bidder shall be arrange water supply for hydrogen generation and cooling purpose at battery limit of Hydrogen Generation Plant. Further distribution as per the requirement of hydrogen generation plants shall be in the bidder scope.
- (ii) **TP2, Nitrogen/Air:** The instrument air/service air/nitrogen shall be arranged at battery limit of the Hydrogen Generation Plant. Further distribution shall be in the bidder's scope.
- (iii) **TP3, Electrical:** Bidder shall arrange RE power 3 phase 6.6 kV and 415 V AC power supply of adequate rating to feed 0.5TPD Hydrogen Generation Plant. Any other voltage level, if required for the system, shall be arranged by the Bidder system from plant switchgear to Hydrogen Generation Plant HT/LT switchgear shall be under the bidder's scope. Battery limit will be mutually decided.

The terminal point has been summarized below along with the description of its tapping point.

Sr.No.	Resource point
TP 1	DM water
	Service/ Cooling water
	Fire water

TP 2	Instrumentation Air
	Service air
	Nitrogen
TP 3	Electrical: HT/LT, 3- Phase

#### 4. General Operational Criteria and Conditions: (Guidelines)

1. The Hydrogen Generation plant shall be designed for continuous duty with 100% capacity.
2. The Hydrogen Generation plant shall be designed to operate in Indian Environmental condition.
3. The Hydrogen Generation plant shall have the flexibility to operate in part load.
4. The Hydrogen Generation Plant shall have the capabilities and controls for its complete operation from remote panel.
5. The Hydrogen Generation Plant shall be equipped with all required protections to safely shutdown/trip the plant in any case of exigencies and emergencies with respect to operation of Hydrogen Generation plant and safety of equipment and persons.
6. The Hydrogen Generation System/Process should comply with all relevant National and International standards for safe and reliable operation of Hydrogen Generation system.

5. Equivalent standards to ISO 22734 will be accepted. However, bidders shall provide the documentation to substantiate.

#### 6. Details of the Equipment:

##### 6.1 Electrolyzer:

1. The system may be containerized/non-containerized., including, ventilation, lighting and H2 leak detection system.
2. The Electrolyzer to be designed to operate at part load of normal capacity without any disconnection, interruption of operation and shall produce the hydrogen gas of specified purity and dryness.
3. All measuring instruments, controller and control valves required for automated remote and safe operation shall be provided.
4. Appropriate Safety devices are to be provided for Hydrogen Generation System for safe release of Hydrogen, pressure build up etc.
5. Hydrogen leak detection system:  
Hydrogen leak detection and interlock system shall be provided in generator and hydrogen filling area for alarm and trip of hydrogen generation plant.  
Provision for Emergency Shut Down (ESD) tap-off facility to be provided so that MAHAPREIT can install the ESD at Power block control room (PBCR) through OFC cable connection, for remote shutdown of the hydrogen generator.
6. To be designed so that it can be dismantled, cleaned and reassembled easily. (Bidder to provide cleaning procedure).
7. Proper sealing shall be provided by Bidder while crossing the wall to avoid any leakage to the Rectifier room. (if non-containerized).
8. System to separate the H2 gas from the H2-water mixture and O2.
9. Hydrogen gas cooler (if required).

10. Deionization system and two numbers of circulation pump for water circulation in electrolyzer system.
11. PLC based control system having provision for display and monitoring the efficiency, power consumption, quantity and quality of hydrogen generated.
12. All necessary software and licenses to be provided for the proper functioning and troubleshooting of logic/graphic/hardware.

#### **6.2 Rectifier:**

1. Adequate numbers/rating of rectifiers to cater to the load of each of the Electrolyzer.
2. The rectifier equipment shall be complete in all respect with rectifier transformer, thyristor converter, electronic control and annunciation, filter choke, etc. mounted in the suitable panel.
3. Relevant IS/IEC standards shall be applicable for Rectifier Assembly for Hydrogen Generation Plant.

#### **6.3 Feedwater tank:**

One number feed water storage tank of adequate capacity shall be provided for minimum 6-8 hrs normal requirement of hydrogen gas generation on a continuous basis at the rated capacity

#### **6.4 De-oxy units:**

1. The suitable automatic operation based de-oxy unit shall be provided to remove the oxygen as impurity.
2. The de-oxy unit should have accessories and necessary equipment to provide the mentioned purity.
3. The operation of De-oxy System shall be automatic and should be appropriately interfaced with PLC.

#### **6.5 Drying system for Hydrogen gas**

1. The suitable Hydrogen Dryer with a standby shall be provided to remove moistures from Hydrogen
2. The operation of Drying System shall be automatic and should be appropriately interfaced PLC command.

#### **6.6 Flushing/Purging System**

The system shall be provided with necessary connection with proper isolation devices, valves, manifold piping to enable purge the system with nitrogen for commissioning (if required) and each maintenance work.

### **7. Mechanical Requirements:**

Intent of this section is to prescribe requirements which are 'technology neutral', but at the same time, which has bearing on life, reliability and availability of the plant. Other 'technology specific' requirements, shall be finalized during the stage of 'detailed engineering' with the approval/acceptance of MAHAPREIT. (Suggested)

#### **7.1 Gas Leak Detection and Control system:**

- a. All the leak detection sensors provided with individual equipment (Electrolyzer, Compressor, storage tank, Fuel cell) shall be integrated to central control system

with appropriate automated control sequence for safe and quick shutdown of the system.

- b. As per the applicable NFPA/PESO guidelines H2 leak detection sensors may be provided in the pipeline or other section, which may be susceptible to leakage.

## 8. Electrical Requirement

### 8.1 General:

The Bidder's scope shall include design, manufacture, engineering, inspection & testing at supplier's works, packing, forwarding to site, unloading, storage, erection, testing & commissioning of the Electrical equipment/system and works as required for putting into successful operation of the Hydrogen Generation Plant covered under this specification. The Electrical system shall be complying below mentioned standards or equivalent. The list is indicative but not exhaustive, other relevant standards which are not mentioned here and if their compliance shall be required for safe, secure, reliable and desired operation of Hydrogen Generation system shall be equally applicable.

IS-13408(Part-1)	Code of practice for the selection, installation and maintenance of electrical apparatus for use in potentially
IS-2189	Code of practice for selection, installation and maintenance of automatic fire detection and alarm system.
IS-5572	Classification of hazardous areas (other than mines) having flammable gases and vapours for electrical installations.
IS 5780/IEC 60079-11	Electrical apparatus for explosive gas atmospheres - Intrinsic safety 'I'
IS-6381/IEC 60079-7	Electrical apparatus for explosive gas atmospheres Increased safety type "e"
IS/IEC 60079-15	Electrical apparatus for explosive gas atmosphere - Part-15 Construction, test and marking of type of protection "n" electrical apparatus
IS/IEC 60079-0	Electrical apparatus for explosive gas atmospheres - General
IS/IEC 60079-1	Equipment protection flameproof enclosures "d"
IEC 60529	Degrees of Protection Provided by Enclosures (IP Code)

The Electrical scope shall be as described briefly in following clauses but not limited

to it. Bidder shall make all provision required according to the design and for satisfactory and safe operation of the system.

- i) The electrical supply extension system from the identified feeder to Hydrogen Generation Plant switchgear shall be under the bidder's scope. Any other voltage level, if required for the system, shall be arranged by the Bidder.
- ii) Any other power, control, instrumentation and special cables, if required shall be under the Bidder's scope.
- iii) Cable support system and laying & termination of all cables along with necessary termination arrangements and other accessories such as, trays, conduits, pipes, JBs, etc shall be in bidder's scope
- iv) Construction power if required by the Bidder that should be clearly indicated in the bidder's offer including its KVA rating.
- v) Grounding/Earthing system for Hydrogen Generation Plant and equipment are under Bidder's scope.
- vi) Motors along with canopy, couplings and coupling guards for all rotating pumps and blowers are covered under this package. All motors shall be provided with cable glands, cable box and lugs suitable for termination of required size of power cable.
- vii) Suitable HT (If required) and LT switchgear shall be supplied for Hydrogen Generation Plant for the distribution of power to various equipment and, auxiliaries of Hydrogen Generation plant as per specification provided by MAHAPREIT during the stage of detailed engineering of Hydrogen Generation Plant.
- viii) Any kind of distribution of power supply to various drives, auxiliaries through MCCB, MCB, isolators, AC/DC fuse boards, etc as required for Hydrogen Generation Plant and equipment shall be in bidder's scope.
- ix) Any components of HT and LT switchgear assembly required for Hydrogen Generation Plant or any other component/equipment etc. which shall be required for the extension of electrical supply shall be under the bidder's scope.
- x) The all required controls and protections as per the system requirement for individual equipment and overall Hydrogen Generation Plant electrical system shall be under the bidder's scope.
- xi) The formation of cable trench/tray shall be required for cable laying shall be under bidder's scope.
- xii) Proper Earthing and Lightning protection shall be provided Hydrogen Generation plant.
- xiii) The plant safety and equipment safety shall be the responsibility of the Bidder.
- xiv) The Bidder should ensure safety of personnel working on the electrical system.

## **8.2 Motors:**

- i) All the equipment, material and systems shall, in general, conform to the latest edition of relevant National and international Codes & Standards, especially the Indian Statutory Regulations.
- ii) Relevant/Suitable IEC/IS standards shall be applicable for various type and size of motor.
- iii) The Single phase/Three phase /DC motors shall be supplied for the Pumps and Blowers of Hydrogen Generation Plant as per the system requirement. The motors shall be finalized during detailed engineering as per the requirement Hydrogen Generation system.
- iv) The Single phase/Three phase /DC motors shall be operating in highly

chemical and explosive environment. The type of such specific motors shall be decided during detailed engineering.

- v) For the purpose of design of equipment/systems, an ambient temperature of 50 deg C and relative humidity of 95% (at 40 deg C) shall be considered. The equipment shall operate in a highly polluted environment.
- vi) AC motors shall be suitable for rated frequency of 50 Hz with a variation of +3% & - 5%, and  $\pm 10\%$  combined variation of voltage and frequency unless specifically brought out in the specification.
- vii) Bidder shall provide fully compatible electrical system, equipment's, accessories, and services.
- viii) The responsibility of coordination with other agencies and obtaining all necessary clearances shall be of the Bidder.

### **8.3 Earthing & Lightning Protection:**

- i) All electrical equipment, HT, and LT switchgear panel shall be earthed to suitable size GI strip through suitably sized finned copper braiding/copper flexible cable suitably lugged on either end. The earthing scheme for equipment and Hydrogen Generation plant shall be finalized during detailed engineering as per the requirement of system.
- ii) The earthing layout and scheme for equipment and plant shall be finalized during detailed engineering as per the requirement of the system. Double earthing as per the relevant IS and IE rule shall be provided by the bidder on motors and electrical equipments. Earthing shall be as per IS 3043 and its latest amendments if any..
- iii) Suitable Lightning protection of Hydrogen Generation plant shall be provided, and it shall be under bidder's scope. The Lightning protection scheme for Hydrogen Generation plant shall be finalized during detailed engineering as per the requirement of system

### **8.4 LT Switchgear**

- i) LT Switchgear for distribution of supply to the various equipment of Hydrogen Generation plant shall be supplied by successful bidder.
- ii) Final scheme, components of switchgear assembly and number of feeders in LT switchgear shall be finalized at the stage of detailed engineering.
- iii) Relevant IS/IEC standards shall be applicable for LT switchgear for Hydrogen Generation Plant.

### **8.5 HT Switchgear (if applicable)**

- i) HT Switchgear for distribution of electrical supply to various HT equipment present in Hydrogen Generation plant shall be supplied by successful bidder.
- ii) Final scheme, components of switchgear assembly and number of feeders in HT switchgear shall be finalized at the stage of detailed engineering.
- iii) Relevant IS/IEC standards shall be applicable for HT switchgear for Hydrogen Generation Plant.

### **8.6 Illumination & Lighting System:**

- i) Adequate lighting arrangement with suitable illumination level for the equipment and Hydrogen Generation plant shall be done by bidder.

- ii) The lighting scheme and determination of illumination level shall be finalized during detailed engineering as per the requirement of system.

#### **8.7 Energy meter:**

- Two numbers of CT operated communication electronic energy meter shall be provided measuring for total energy consumption of hydrogen grid plant.
- Meter should have data recording and network communication capability with the plant PLC. It shall have accuracy class 0.5S and one minute power frequency withstands test voltage 2.0 KV (rms) Energy meter calibration certificate to be provided.

### **9 Control & Instrumentation:**

The contractor shall provide all systems requirements and correctly interface with main process. The basic design requirements to achieve this factor are as below.

#### **9.1 Basic C&I design requirement.**

##### **a. A centralize control system:**

A centralized control system for safe operation of the plant with dual processor (main processing unit and memories, one for normal operation and one as a hot (bump less) standby) PLC based Control & instrumentation system for control, monitoring & operation of associated drives & system.

- i. Intrinsically safe and flame proofing fitting should be provided wherever required for safe operation or meeting norms of PESO guidelines and other relevant and applicable standards.
- j. The above-mentioned requirements are functional in nature. However, the Bidder shall be responsible for providing all Hardware, Software and equipment, specified or otherwise (unless specifically excluded) which are required to fulfill the intent of ensuring operability and the reliability of the complete system covered under this specification.
- k. All critical interlocks shall be based on 2 out of 3 logic only
- l. Maintenance Support: Long term support for the systems such as PLC, field instruments etc shall be at least 10 years from the date of commissioning.
- m. If the bidder is supplying the operator workstation (OWS) for the control and monitoring then The Operator Workstation (OWS) shall be running on latest Windows based licensed Operating System along with the long-term support from Microsoft for the security and related patch updates.
- n. All Instrument related systems shall be powered from 110 VAC UPS and its derived power for field instruments. The loss of Grid supply should not have any interruption/interference on the working of main and fire protection control system.

##### **9.2 Control & power supply scheme.:**

The power systems for the PLC and the OWS (operator Work station) should have the necessary modules that can work on variable power supply between 100-240 V AC. UPS power supply shall be provided by bidder. Any other requirement including distribution shall be in the scope of bidder. The bidder shall also furnish all required hardware/equipment/Cubicles/JBs for conversion, distribution and/or stabilization of UPS power etc.

### **10 Civil Requirements (Guidelines)**

All civil works including building & foundation of equipment shall be under the bidder's scope. Bidders to note that complete grouting of the equipment, fixing etc. shall be also in the scope of the bidder. (As per requirement) Bidder shall furnish all applicable civil inputs details during detailed engineering.

### 11 Quality Assurance

The contractor shall submit manufacturing and field quality plan indicating the practice and procedure along with relevant supporting documents for MAHAPREIT approval immediately on award of contract.

### 12 Site Location:

State : MAHARASHTRA

Nearest Important To : Bidder shall declare specific location in the vicinity of Fertilizers and Refineries plant near Mumbai in Maharashtra state.

Nearest Railway Station :

Nearest Port : Mumbai

Nearest Airport : MUMBAI

### 13. Technical Specifications

Electrolyser Hydrogen shall be produced by electrolysis of water using the power drawn from the Solar PV power plant. The electrolyser shall comply with the following international standards or equivalent Indian standards.

Standard Title ISO 22734: 2019 Hydrogen generators using water electrolysis - Industrial, commercial, and residential applications

ISO 14687:2019 Hydrogen fuel quality - Product specification  
Hydrogen Storage

The hydrogen produced by Electrolyser shall be stored in the suitable storage devices complying with following applicable international standards or equivalent Indian standards and all the applicable safety regulations including but not limited to the following.

Standard Title ISO 16111:2018 Transportable gas storage devices - Hydrogen absorbed in reversible metal hydride

ISO 11114-1:2020 Gas cylinders - Compatibility of cylinder and valve materials with gas contents - Part 1: Metallic materials

ISO 11114-2:2013 Gas cylinders - Compatibility of cylinder and valve materials with gas contents - Part 2: Non-metallic materials



ISO 11114-4:2017 Transportable gas cylinders - Compatibility of cylinder and valve materials with gas contents - Part 4: Test methods for selecting steels resistant to hydrogen embrittlement Gas Cylinders Rules, 2016 as amended time to time.

#### **14. Safety**

The proposed hydrogen-based system shall follow all the applicable safety standards and regulations including but not limited to the following.

Standard Title	ISO/TR 15916:2015	Basic considerations for the safety of hydrogen systems
	ISO 26142:2010	Hydrogen detection apparatus - Stationary applications Explosives Rules, 2008 as amended time to time

**SECTION-VI**  
**ANNEXURES**

## 1.0 CHECK LIST

We confirm that we have gone through the bid document and as instructed therein we hereby submit the following documents to form the bid.

SN.	Name of the document	Annexure	Nature of document	Whether submitted Yes/No.
<b>Pertaining to TECHNICAL PART of bid specification</b>				
1	General Financial & Commercial Particulars of Bidder/Each Member of the Consortium (Annexure 1)	1	Mandatory	
2	Technical Qualification Data (Annexure 2)	2	Mandatory	
3	Division of Responsibility (Annexure 3)	3	If Applicable	
4	Power of Attorney to be provided by the Bidding Company/ Lead Member in favor of its representative as evidence of Authorized Signatory's authority along with Board resolution / power of attorney, in favor of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s) (Annexure 4)	4	If Applicable	
5	Memorandum of Agreement in case of Consortium (Annexure 5)	5	If Applicable,	
6	Proforma for undertaking by authorized Indian representative. (To be submitted on the letter head of the Indian Representative) ( Annexure 6)	6	If Applicable,	
7	Undertaking	8	Mandatory	
8	Format of Covering Letter	9	Mandatory	
<b>Pertaining to Commercial Part</b>				
9	Price Bid (ANNEXURE 7 )	7	<b>Online only</b>	
10	Details of Technical specifications to be submitted by Bidders	10	<b>Mandatory</b>	
11	Format for Undertaking. JOINT UNDERTAKING	11	<b>Mandatory</b>	
12	UNDERTAKING (To be submitted along with bid)	12	<b>Mandatory</b>	

**ANNEXURE 1:**  
**GENERAL, FINANCIAL & COMMERCIAL PARTICULARS**

**(To be submitted by Bidder/Each Member of Consortium on their Letter Head)**

1. Name of the Bidder :
2. Registered office address :
3. Telephone :
4. E-mail :
5. Nature of business & working experience  
in years in the same business :
6. Person to be contacted :
7. Nature / status of firm :
  - a. (Whether sole proprietary/
  - b. Partnership/Private Limited/
  - c. Public Limited/ Public Sector)
8. Do you anticipate any change in the : No/Yes
  - a. Ownership during proposed period of  
Work
  - b. If yes, define scope and effect thereof :
9. Financial detail (Enclosed 1 copy each of )
  - a. Balance sheets and profit & loss :  
Account for the past 3 years  
2018-19,19-20 & 20-21
  - b. Income tax clearance certificate  
for past three years. :
  - c. Service tax certificate
  - d. Turnover & Net worth certificate for year :  
FY 2018-19 19-20, 20-21 from C.A.
  - e. Company Registration Certificate :
10. Share capital at the time of formation :
  - i. Authorized
  - ii. Paid-up

- 11. Share capital at present :
  - a) Authorized :
  - b) Paid-up
  
- 12. Name & address of bankers :

Certified that the above information is true and factual.

Date:.....

Place:.....

(Signature of the Authorized Representative of Bidder)

Name .....

Designation .....

Seal of Company.....

**ANNEXURE 2:  
TECHNICAL QUALIFICATION DATA  
(To be submitted on letter head of the bidder)**

**1. Name of the Bidder:**

1 MW Electrolyzer Hydrogen Generation Plant proposal include Design, Engineering, Fabrication, Packaging, forwarding, supply, transportation and handling, insurance, unloading, construction, erection, commissioning, Testing, Performance Guaranty Test including mandatory spares obtaining all statutory approvals and Training for the staff as per the Scope of Work mentioned.

Sr No.	Name of the Project Bids	Name of the Bidder/ Consortium Member	Description of Experiences	Scope of Work	Order details & amount	Experience Certificate Attached Yes / No
1	2	3	4	5	6	7

**Note:**

1. Please attach documentary proof for Col. No 5, 6, 7 of the Concerned Authority.
2. Regarding Col. No.7, documentary evidence from the client, for satisfactory completion shall be enclosed. The experience without experience certificate shall not be considered for evaluation. The experience certificate should contain valid communication address & working contact numbers certificate provider. Certificates without this information will be considered invalid and shall not be considered for evaluation.
3. Certified that the above information is true and factual.

Date:.....

Place:.....

(Signature of the Authorized Representative of Bidder)

Name .....

Designation .....

Seal of Company.....

**Note :**

All Certificates provided should be in English ONLY. In case the Utility/owner is unable to provide the certificate in English then bidder/consortium must submit the English translated copy of the certificate by authorized translator along with the original copy and must submit affidavit on non-judicial stamp paper Rs. 500/- that the information(translation) is true & correct.

**ANNEXURE 3**  
**DIVISION OF RESPONSIBILITY**  
 (To be submitted on Letter Head of the Bidder)

Sl.No.	Name of the JV/Consortium partner	Position/Status in JV/Consortium*	Responsibility & Task Assigned for this project
1			
2			
3			

\*Bidder must indicate its status Lead Bidder or Consortium Partner.

Date:.....

Place:.....

(Signature of the Authorized Representative of Bidder

Name .....

Designation .....

Seal of Company.....

**ANNEXURE 4  
POWER OF ATTORNEY**

(to be provided by the bidding company/ lead member in favor of its representative as evidence of authorized signatory's authority.)

(To be on non-judicial stamp paper of Rs 500/- Foreign companies submitting bids are required to follow the applicable law in their country)

KNOW ALL MEN BY THESE PRESENTS, that we, (Name of the Bidder/Lead Member of consortium), a Company/ Corporation/ Firm organized and existing under and by virtue of the laws of (Name of bidder's country) and having its registered office and principal office at [ ] (address of the bidder) do hereby irrevocably constitute, appoint, and authorize -----  
-----

(Name and residential address) who is presently employed with us and holding the position of --

-----, as our true and lawful attorneys to do in our name and on our behalf prepare, make, sign and submit the bid proposals and other documents, certificates, undertakings and papers to be executed and delivered by us, and to do all such acts, deeds and things as are necessary or required in relation to the tender issued by the MPBCDC LTD/MAHAPREIT vide Bid Specification No -----for selection of the Bid Advisory Services firm.

AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said attorneys pursuant to and in exercise of the powers conferred by this power of attorney and that all acts, deeds and things done by our said attorneys in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

**Signed by the within named**

\_\_\_\_\_[Insert the name of the executant company] through the hand of

Mr. ....

**duly authorized by the Board to issue such Power of Attorney Dated this**

**..... day of .....**

**Accepted**

Signature of Attorney

(Name, designation and address of the Attorney)

**Attested**

(Signature of the Executant)

(Name, designation and Address of the Executant)



**Signature and stamp of Notary of the place of execution**

Common seal of      has been affixed in my/our presence pursuant to Board of Director's Resolution dated.....

WITNESS

1. Signature.....  
Name .....  
Designation .....  
Occupation .....

2. Signature .....  
Name .....  
Designation .....

**Note:**

(1) The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.

(2) Also, wherever required, the executant(s) should submit for verification the extract of the chartered documents and documents such as a Board resolution / power of attorney, in favour of the Person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).

## ANNEXURE 5

### PROFORMA FOR MEMORANDUM OF AGREEMENT

(On Non-judicial stamp paper of Rs.500/-)

This Memorandum of agreement (MOA) entered into between the following parties on this day of Between A Private Limited Company having its Head Office at India (hereinafter referred to as the which expression shall include the successors and permitted assignees) on the FIRST PART. And MAHAPREIT having its Office at (hereinafter referred to as the which expression shall include the successors and permitted assignees) on the OTHER PART.

Is desirous of submitting a Tender to MPBCDC Ltd/MAHAPREIT for 1 MW Electrolyzer Hydrogen Generation Plant proposal include Design, Engineering, Fabrication, Packaging, forwarding, supply, transportation and handling, insurance, unloading, construction, erection, commissioning, Testing, Performance Guaranty Test including mandatory spares obtaining all statutory approvals and Training for the staff as per the Scope of Work mentioned.

### AGREEMENT

- 1 It has been agreed that ----- will be quoting for the above Tender as the Lead Member duly supported by --.
- 2 All expenses incurred for tendering and visits during tender stage would be borne by the respective companies individually.
- 3 All contractual liabilities shall be shared by both the companies on a back-to-back basis depending on the scope of services. The scope of services for each of Consortium Members are:
  - a. Scope of Services of ----- (Lead Member) are ----
  - b. Scope of Services of -----(Other Member of the Consortium) are --
- 4 In the event this tender being converted to a firm order, a detailed agreement would be made between the two companies spelling out exact technical responsibilities of both parties based on the split of work indicated herein.

And -----undertake to each other that they shall keep all information, exchanged between the parties regarding the project, totally confidential and shall not use or disclose any such information obtained from the other under the present MOA except with the express written consent of the other. Such information shall not be used for the party's own business purposes or disclosed to any third person.

AS WITNESS this Agreement has been signed by the duty authorized representative of the parties.

*Signature and stamp of Notary of the place of execution*

For and on behalf of  
Signature of the Authorized Representative  
.....  
(Official Address)

Name .....  
Designation .....  
Seal of Company.....

For and on behalf of  
Signature of the Authorized Representative  
.....  
(Official Address)

Name .....  
Designation .....  
Seal of Company.....

**ANNEXURE 6:  
PROFORMA FOR AUTHORISATION OF INDIAN REPRESENTATIVE**

**(To be submitted on the letter head of the bidder/lead member)**

Date:

To

The Managing Director,  
B – 501 PINNACLE CORPORATE PARK,  
NEXT TO TRADE CENTER,  
BKC (EAST) MUMBAI 400051

**Subject:** Notification of invitation of bids date-----

Dear Sir,

This has reference to the bid proposal No.\_\_(Bid Reference)\_\_\_\_\_Date \_\_\_\_\_submitted by us, M/s.\_\_\_\_\_(Bidder)\_\_\_\_\_in response to bid specification No.\_\_\_\_\_ you for 1 MW Electrolyzer Hydrogen Generation Plant proposal include Design, Engineering, Fabrication, Packaging, forwarding, supply, transportation and handling, insurance, unloading, construction, erection, commissioning, Testing, Performance Guaranty Test including mandatory spares obtaining all statutory approvals and Training for the staff as per the Scope of Work mentioned.

We, hereby authorize M/s.\_\_\_\_\_(Indian Representative)\_\_\_\_\_as Indian Representative of us for the purpose of liaison of the contract and receiving payment thereof, against proposal No.\_\_\_\_\_(Bid Reference)\_\_\_\_\_Dated\_\_\_\_\_on the terms and conditions as are set forth in the supply contract to be executed amongst [ ] and MPBCDC LTD/MAHAPREIT in accordance with of the Bid Specifications, pursuant to the bid being awarded to [ ] .

Thanking you,

Yours faithfully,

(Signature of the Authorized Signatory of the Bidder)

(Name)

(Designation)

**ANNEXURE 7**  
**PRICE SCHEDULE (PRICE BID):**  
 (To be submitted online Only)

**Name of the project:** Selection of bidder developer/Manufacturer for 1 MW Electrolyzer green Hydrogen Generation Plant proposal include Design, Engineering, Fabrication, Packaging, forwarding, supply, transportation and handling, insurance, unloading, construction, erection, commissioning, Testing, Performance Guaranty Test including mandatory spares obtaining all statutory approvals and Training for the staff as per the Scope of Work mentioned on Build-own-Operate Basis Opex Model.

**Bid Specification No.** -----

Name of Bidder: \_\_

S. No.	Description	Fixed Price in INR per Kg
1	1 MW Electrolyzer Hydrogen Generation Plant proposal include Design, Engineering, Fabrication, Packaging, forwarding, supply, transportation and handling, insurance, unloading, construction, erection, commissioning, Testing, Performance Guaranty Test including mandatory spares obtaining all statutory approvals and Training for the staff as per the Scope of Work mentioned. Please submit logistic arrangement within 100 KM along with cost of logistic in Rs/KM	
	<b>Total</b>	<b>Rs.</b>

Total in words: for Rs. ....

We confirm that

1. Bidder shall quote a firm price in INR. This price will be firmed for 2 years. At the end of 2<sup>nd</sup> year, the Hydrogen gas price will be decided mutually on the basis of onward purchase contract done by MAHAPREIT for next two years and so on. The new price depends on cost of input supply RE power from distribution and transmission companies/Energy exchanges. The bidder shall provide breakup of cost of hydrogen generation per Kg. Bidder shall pass on any incentives and discounts provided by Govt. policy time

to time. In future after first two years if any price indexation applicable to Green Hydrogen adopted by MNRE, Govt. companies or MoP Govt. of India will be applicable.

2. The price quoted by the bidder inclusive of all taxes & duties except GST
3. The evaluation of all techno-commercially acceptable bids, to arrive at the lowest evaluated bid, shall be carried after considering total quoted lumpsum price for complete system excluding Goods & Service Tax (GST).

Note: In case any unregistered bidder is submitting their bid, their prices will be loaded with applicable GST (CGST & SGST/UTGST or IGST) during evaluation of bid.

1. All Indian Taxes & Duties including Income Tax shall be borne as applicable.
2. The Prices will remain valid for a period of 120 days from the date of opening of the price bid.
3. The offer submitted is irrevocable and unconditional without any deviations.
4. I/We agree to all the Terms and conditions and accept Scope of Work & terms & conditions as mentioned in the Bid Document and undertake to perform the duties to the satisfaction of the MAHAPREIT.

Date:.....

Place:.....

(Signature of the Authorized Representative of Bidder) Name .....

.....

(Official Address)

Designation .....

Seal of Company.....

**ANNEXURE 8**

**UNDERTAKING**

(To be given by the Bidder on the Letter head)

I/We of M/s

.....  
Bidder for consultancy work  
of.....

.....with the Executive Director MAHAPREIT B-501 Pinnacle Corporate Business Park BKC(East), Mumbai 400051 do hereby undertake that I/we agree to unconditionally accept all the terms and conditions mentioned in the tender documents.

Further we have noted that after unconditionally accepting the tender conditions in its entirety, it is not permissible to put any remarks/conditions in the Price Bid and the same has been followed in the present case. In case this provision of the tender is found violated at any time after opening of Envelope, I/we agree that the tender shall be summarily rejected and MAHAPREIT shall, without prejudice to any other right or remedy, be at liberty to forfeit the full said earnest money absolutely.

Signatures of the Consultant/Architect  
Or Authorized Person  
(Name of Firm with seal)

**ANNEXURE 9**  
**FORMAT OF COVERING LETTER**  
*(On Letterhead of Firm)*

Date:

To  
The Managing Director,  
B – 501 PINNACLE CORPORATE PARK,  
NEXT TO TRADE CENTER,  
BKC (EAST) MUMBAI 400051

**Sub: E-Tender for -----**

Dear Sir,

We enclose herewith the Particulars and Details of the Firm, Techno-Commercial bid and price bids in connection with the above assignment.

We also state as follows:

- a. We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.
- b. The prices quoted by us in the price bid are valid for 120 days from the date of opening of price bid. We confirm that this proposal will remain binding upon us.
- c. Prices have been arrived independently without consultation, communication, agreement or understanding (for the purpose of restricting competition) with any competitor.
- d. We agree to bear all costs incurred by us in connection with the preparation and submission of the offer and to bear any further pre-contract costs.
- e. We understand that MAHAPREIT is not bound to accept the lowest or any proposal or to give any reason for award, or for the rejection of any proposal.
- f. I confirm that I have authority of (name of the firm) to submit the proposal and to negotiate on its behalf.

Thank you,  
Signature

(Name of Authorized Signatory) and Membership No. Name of Firm.



## ANNEXURE 10

### # Details of Technical specifications to be submitted by Bidders

#### ATTACHMENT-1

#### Setting up @ 1 MW Electrolyzer (@400 Kg/day Hydrogen Plant)

Manufacturer:

Make/Model No:

The details of technical specification data (Production & Consumption) are following :

S. No.	Description	Value
<b>Products at Battery Limit</b>		
1.	Hydrogen Production (kg/hr)	
2.	Oxygen Production (Kg/hr)	
3.	Others, if any (kg/hr)	
<b>Utility Requirement</b>		
4.	Total Power Consumed (MW)	
5.	Cooling Water (m3/h)	
6.	DM Water (m3/h)	
7.	Nitrogen (Nm3/h) – Normal	
8.	Nitrogen (Nm3/h) – Peak	
9.	Instrument Air (Nm3/h)	
10.	Others, if any Please Specify	
<b>Adsorbents/Chemicals/ Catalyst</b>		
<b>First Charge</b>		
11.	Adsorbents/ Catalyst 1 (Name / Quantity / Life)	
12.	Adsorbents/ Catalyst 2 (Name / Quantity / Life)	
13.	Adsorbents/ Catalyst 3 (Name / Quantity / Life)	
<b>Continuous Consumption</b>		
16.	Chemical 1 (Name / Quantity)	
17.	Chemical 2 (Name / Quantity)	
18.	Chemical 3 (Name / Quantity)	
19.	Chemical 4 (Name / Quantity)	
20.	Chemical 5 (Name / Quantity)	

Bidder to also provide composition of the Hydrogen & Oxygen produced, along with impurities level.

**ANNEXURE 11**  
**Format for Undertaking.**  
**JOINT UNDERTAKING**

**FORM OF JOINT UNDERTAKING TO BE PROVIDED BY CONTRACTOR AND  
MANUFACTURER ALONGWITH BID**

**(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)**

**FORM OF JOINT UNDERTAKING TO BE EXECUTED BY THE BIDDER /  
CONTRACTOR MEETING THE REQUIREMENTS OF CLAUSE A(ii) of BEC,  
Section III AND THE MANUFACTURER WHO MEETS THE REQUIREMENT OF  
CLAUSE A (i) of BEC, Section III FOR SUCCESSFUL PERFORMANCE OF THE  
CONTRACT.**

The UNDERTAKING executed this ..... day of .....Two thousand.... by  
M/s

.....a Company incorporated under ..... having its  
Registered Office at

..... (hereinafter called the "Bidder/Contractor", which  
expression shall include its successors, administrators, executors and permitted  
assigns) and M/s

.....a Company registered under the .....having its  
Registered Office at

.....(hereinafter called the "Manufacturer", which expression shall include its  
successors, administrators, executors and permitted assigns) in favour of MAHAPREIT, A  
Government of Maharashtra Subsidiary, incorporated under the Companies Act, 1956,  
having its Registered Office at 501 B/ Pinnacle Corporate Park, BKC, Mumbai, INDIA  
(hereinafter called "MAHAPREIT " or "Employer" which expression shall include its  
successors, administrators, executors and assigns).

WHEREAS, the MAHAPREIT invited Bids for Design, Engineering, Fabrication, Packing,  
Forwarding, Supply, Transportation and handling, Custom duty (and any other duties),  
Freight, Insurance Unloading, Storage, Construction, Erection, Testing, Commissioning,  
PG Test , Training, obtaining all statutory approvals for ProtonExchange Membrane(PEM)  
Electrolyzer /PEM Stack / AEM (Anion Exchange Membrane)/Alkaline Electrolyser based  
Hydrogen Generation Plant in linewith the technical specifications for Setting up of 0.4 TPD  
H2 Generation Plant AND WHEREAS vide clause **A(ii) of BEC, Section-III** of of bidding  
documents, it has been specified that bidder who meets the required experience vide  
clause **A(ii) of BEC, Section-III** shall also have an Agreement ason the date of Techno-  
Commercial bid opening with Manufacturer who meets the criteria and furnish a Joint  
Undertaking as per the requirement of clause **A(ii) b of BEC, Section-III**.

WHEREAS M/s..... (Bidder) is submitting its proposal in response to the Invitation for Bid by the Employer bearing No. .... dated for Setting up of 0.4 TPD Hydrogen Generation Plant.

AND WHEREAS M/s..... (Bidder) meets the requirements specified at clause **A of BEC, Section-II** and have an Agreement as on the date of Techno Commercial bid opening with M/s..... (hereinafter referred to as Manufacturer) who meets the requirements as specified in BEC. The Bidder and the Manufacturer are required to jointly execute and furnish along with the bid an irrevocable Deed of Joint Undertaking and be jointly responsible and bound unto the Employer for successful performance of the Contract. **NOW THEREFORE, THIS DEED WITNESSETH AS UNDER:**

That in consideration of the Award of the Contract by the Employer to the Contractor, we the Manufacturer of Proton Exchange Membrane (PEM) Electrolyzer/PEM Stack /AEM (Anion Exchange Membrane)/Alkaline Electrolyser based Hydrogen Generation System based Hydrogen Generation System and the Contractor, do hereby declare and undertake the following:

1. That we shall be jointly responsible to the Employer for the execution and successful performance of the complete Package and for performance of all the contractual obligations, as specified under the said contract(s).
2. Without prejudice to the generality of the Undertaking in paragraph 1 above, the manner of achieving the objective set forth in paragraph 1 above shall be as follows:
  - a. We the Manufacturer shall be fully responsible for the complete Package. Further, the Manufacturer shall depute their technical experts from time to time to the Contractor's works / Employer's project site as required by the Employer and agreed to by Contractor / Manufacturer to facilitate the successful performance of the Contract as stipulated in the aforesaid Contract and if necessary, the Manufacturer shall advise the Contractor for suitable modifications of design and implement necessary corrective measures to discharge the obligations under the contract.
  - b. In the event the Manufacturer and Contractor fail to demonstrate guaranteed parameters as specified in the contract, the Manufacturer and the Contractor shall promptly carry out all the corrective measures related to engineering services at their own expense and shall promptly provide corrected design to the Employer.
  - c. Implementation of the corrected design and all other necessary repairs, replacements, rectification or modifications to the Package work and payment of financial liabilities and penalties and fulfillment of all other contractual obligations as provided under the

Contract shall be the responsibility of the Contractor.

- d. In the event the Contractor fails to complete the project, MAHAPREIT shall have the right to carry-out unfinished work through technology provider or any other agency at the bidder's risk and cost.
- 3. We, the Contractor and the Manufacturer do hereby undertake and confirm that this Undertaking shall be irrevocable and shall not be revoked till ninety (90) days after the end of the contract period and further stipulate that the Undertaking herein contained shall terminate after ninety (90) days of satisfactory completion of contract. In case of delay in completion of contract, the validity of this Deed of Joint Undertaking shall be extended by such period of delay. We further agree that this Undertaking shall be without any prejudice to the various liabilities of the Contractor including Contract Performance Security as well as other obligations of the Contractor in terms of the Contract.
- 4. Any dispute that may arise in connection with this Deed of Joint Undertaking shall be settled as per arbitration procedure/rules mentioned in the Contract Documents. This Deed of Joint Undertaking shall be construed and interpreted in accordance with the Laws of India and the Courts of Mumbai shall have exclusive jurisdiction.
- 5. We, the Manufacturer and the Contractor agree that this Undertaking shall form an integral part of the Contract. We further agree that this Undertaking shall continue to be enforceable till its validity.
- 6. That this Joint Undertaking shall be operative from the effective date of the Contract.

IN WITNESS WHEREOF, the Manufacturer and the Contractor through their authorized representatives, have executed these presents and affixed common seal of their respective companies, on the day, month and year first mentioned above.

For (Contractor) M/s .....	Witness:
(Signature of the Authorized Representative)	1
Name:	Signature Name & Address
Designation:	
Common Seal of the Company	
For (Manufacturer) M/s .....	Witness:
(Signature of the Authorized Representative)	1
Name:	Signature Name & Address
Designation:	
Common Seal of the Company	

**Note: Power of Attorney of the person signing on behalf of Manufacturer and Bidder is to be furnished by Bidder.**

**ANNEXURE 12**

**UNDERTAKING  
(To be submitted along with un-priced bid)**

I/We hereby undertake that I/We have completely understood the terms & conditions of the Tender including minimum resources required to be deployed and the cost involved thereof in deployment of resources.

I/We further undertake to ensure all compliances of the tender conditions. Any non-compliance may be construed as deficiency in the performance of the contract. If such non-compliance is noticed MAHAPREIT is at liberty to take action in line with the tender conditions including termination of the contract.

Signature of Bidder.....

Name of Bidder.....