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प्लाज्मा अनुसंधान संस्थान INSTITUTE FOR PLASMA RESEARCH परमाणु ऊर्जा विभाग, भारत सरकार का एक सहायता प्राप्त संस्थान



An Aided Institute of Department of Atomic Energy, Government of India

इन्दिरा पुल के पास, भाट, गांधीनगर – 382 428 भारत दूरभाष: (079) 2396 2020/2021/2028 फैक्स: 91-079-23962277 वेब: <u>www.ipr.res.in</u> NEAR INDIRA BRIDGE, BHAT DIST. GANDHINAGAR - 382 428 (INDIA) Phone: (079) 2396 2000/2026/2332 Fax : 91-079-23962277 Web : <u>www.ipr.res.in</u>

ENQUIRY

ENQUIRY NO Date : IPR/EQF/18-19/220 : 06-03-2019

Due on : 04-07-2019 by 1:00 PM IST

Reminder-1 Dt: 11-04-2019 Reminder-2 Dt: 24-05-2019

Please send your offer in sealed envelope specifying Enquiry No, Date & Due Date, ALONG WITH your credentials for the following items which we are interested to import directly against Foreign Trade Policy 2015-2020.

Important Note:

Please note that e-mail quotations are not acceptable however you may send your queries (if any) to <u>importpurchase@ipr.res.in</u>

Please ensure your sealed quotation reaches this office not later than above mentioned due date and time.

Kindly go through the following documents properly before quoting which are available on the IPR web portal i.e., <u>http://www.ipr.res.in/documents/tender_terms.html</u> / attached herewith.

- 1) Instructions to the bidders & Terms and conditions (refer Form No: IPR-FP-01.V3)
- 2) Bidding format

GST for Goods and Services (IGST/CGST/SGST TAX BENEFITS): Please refer **clause no:** 14 of Form No: **IPR-FP-01.V3**

QUOTATION SHOULD BE ADDRESSED TO PURCHASE OFFICER ONLY

Sr No	Description	Quantity
1	Proton Exchange Membrane (PEM) fuel cell and associated accessories	1.0 Nos.
Note		

TDS deduction. 3.Unsigned quotations will not be considered.Quotation should be submitted duly signed with official seal on each and every page invariably. As per attached

Sd/-

Mr. D. Ramesh Purchase Officer-II

Information to Vendors: We are working towards a single platform for our future requirement. Hence, please refer IPR website i.e, http://www.ipr.res.in/documents/tenderseng.html for our future requirement.

Encl:

Technical specifications for Proton Exchange Membrane (PEM) fuel cell and associated accessories

1. Description:

The Reversible Polymer Electrolyte Membrane (PEM) Fuel Cell combines the functions of an electrolyzer and a fuel cell into one device. When applying an electrical current the device acts as an electrolyzer that produces hydrogen and oxygen from de-ionized water. When applying a load, the device behaves as a fuel cell and generates electricity from hydrogen.

2. Scope of supply:

- 1) PEM reversible fuel cell: 2 Nos.
- 2) Cables connectors and adapters: as required
- 3) Propeller with motor: 2 Nos.
- 4) Power supply: 1 Nos.
- 5) Silicon tubing: 4 m
- 6) Storage reservoir for H_2 and O_2 gas: 4 Nos.
- 7) Essential accessories: As required

3. Detailed specifications of scope of supply:

S.No	Item	Technical specifications		
1.	PEM reversible fuel cell			
		a) Fuel Cell Mode Specifications (per fuel cell):		
		i. Power: 0.15-0.2 W		
		 Output Voltage: The vendor must specify the output voltage of the fuel cell 		
		iii. Output Current: The vendor must specify the output current generated from the fuel cell		
		iv. The vendor should mention the amount of hydrogen to		
		be flown to generate the above mentioned power.		
		b) Electrolyser Mode Specifications (per fuel cell):		
		i. Input Voltage: The vendor should mention the input		
		voltage for the fuel cell in electrolyser mode		
		ii. Input Current: The vendor should mention the input		
		current for the fuel cell in electrolyser mode		
		iii. Hydrogen Production Rate: 6-7 mL/min		
		iv. Oxygen Production Rate: 3-3.5 mL/min		
2.	Required cables,	Vendor should give the details of cables, adapters and		
	connectors and adapters	connectors with quantity		
3.	Propeller with motor	Quantity: 2		
	-	The vendor should provide a motor with propeller to		
		demonstrate the generation of electricity from the fuel cell.		
		The vendor should provide the rating of the motor and		
	-	dimensions along with the quote.		
4.	Power supply for the	Quantity: 1		
	system	Input: 230 V ± 10% ; 50 Hz		

5.	Silicon tubing for the system	Quantity: 4 m
6.	Storage reservoir for H ₂ and O ₂ gas	Quantity: 4 (two for hydrogen and two for oxygen)
7.	Essential accessories	The vendor should provide all the essential accessories for the effective functioning of the system.
8.	Packing and Delivery	The vendor should take proper care and precaution in packing the items and delivering them safely to IPR, Gandhinagar.

Technical Compliance sheet for PEM fuel cell

2.	Required	Vendor should give the	
	cables,	details of cables, adapters	
	connectors	and connectors with	
	and	quantity	
	adapters		
3.	Propeller with motor	Quantity: 2	
		The vendor should provide	
		a motor with propeller to	
		demonstrate the	
		generation of electricity	
		from the fuel cell.	
		The vendor should provide	
		the rating of the motor and	
		dimensions along with the	
4.	Power	quote.	
4.	supply for	Quantity: 1	
	the system	Input: 230 V ± 10% ; 50 Hz	
5.	Silicon	Quantity: 4 m	
	tubing for		
	the system		
6.	Storage	Quantity: 4 (two for	
	reservoir for	hydrogen and two for	
	H ₂ and O ₂	oxygen)	
	gas		
7.	Essential	The vendor should provide	
	accessories	all the essential	
		accessories for the	
		effective functioning of the	
		system.	
8.	Packing and	The vendor should take	
	Delivery	proper care and precaution	
	-	in packing the items and	
		delivering them safely to	
		IPR, Gandhinagar.	

Bidder's Official Stamp and Sign:

Date: