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EXPRESSION OF INTEREST (EOI) FOR PRE-QUALIFICATION OF BIDDERS FOR PHASE 2-DRIVER AND FINAL STAGE AMPLIFIERS FOR 2 SETS OF ITER ICRF SOURCES EOI No. I-I/EOI/HPA/PQ-01/2022-23 DATED 11-01-2023

The Expression of Interest (EOI) is invited for pre-qualification of Indian industries for the “**Phase 2-Driver and Final Stage Amplifiers for 2 sets of ITER ICRF Sources**”. The scope of work, scope of supply, technical specifications, pre-qualification criteria/essential eligibility criteria, pre-qualification process and schedule for pre-qualification is given in the EOI document.

The interested and eligible suppliers/manufacturers can download the EOI documents from ITER-India website <https://www.iterindia.in/index.php/tenders> and submit the pre-qualification documents as per EOI latest by **1:00 p.m. on 15-02-2023** to the 'Senior Purchase Officer' at the above address. The EOI documents will be opened on the same day at 2:30 p.m. in presence of attending bidders. **All further updates or amendments, if any, shall be notified and uploaded on the ITER India website only and no separate corrigendum would be published.**

12 cm (W) x 6 cm (H)

	EOI Document: Phase 2-Driver and Final stage amplifiers for 2 sets of ITER ICRF Sources. EOI No.: I-I/EOI/HPA/PQ-01/2022-23 dated 11 th January 2023	II-FN15QKT-v1_0
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Title	EoI Document to pre-qualify bidders for the tender for Phase 2-Driver and Final stage amplifiers for 2 sets of ITER ICRF Sources. EOI No.: I-I/EOI/HPA/PQ-01/2022-23
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Author	ITER-India
Contributors	ITER-India

Distribution list	Interested vendors, ITER-India, ITER Organization
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Written By	Reviewed By	Approved By
ITER-India	ITER-India	ITER-India

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1 Instructions to Bidders

1.1 Instructions and Information to the Bidders

This document has been prepared for the pre-qualification of Bidders to participate in the tender titled “Phase 2-Driver and Final stage amplifiers for 2 sets of ITER ICRF Sources”. In order to be considered for the pre-qualification, the Bidder should follow the instructions specified below.

- i. Bidders should carefully read the contents of this pre-qualification document to provide required information with sufficient details so that the capabilities of the applicant Bidder can fully be assessed.
- ii. **Bidders can submit registration form for pre-qualification meeting as per Annexure-1 through email (purchase@iterindia.in) on or before 24th Jan 2023.** ITER-India will hold pre-qualification meeting with registered bidders via on-line mode through MS Teams/off-line at ITER-India, Institute for Plasma Research, Block-A, Sangath Skyz, Bhat-Motera Road, Koteswar, Ahmedabad – 380005, Gujarat on 25th Jan 2023 – Time 10 am to 11:30 am to give explanation about the project, pre-qualification process and requirements. Link for on-line meeting will be shared with the registered bidders and information for same will be uploaded on our website. Clarifications required by Bidders will be addressed in the same meeting. The participating Bidders in the pre-qualification meeting will inform ITER-India about their queries 05 working days before the meeting.
- iii. Bidders should complete the pre-qualification documents as asked in this EoI and provide the required details, as given in prescribed formats. **Application and supporting documents for pre-qualification must be submitted by hand, by post or by courier so as to reach the Sr. Officer (Purchase & Stores), ITER-India by 1:00 pm on 15th Feb 2023.**
- iv. Late or delayed applications will not be received or considered.
- v. Delay due to late/failed delivery is the sole responsibility of the applicant Bidder.
- vi. All documents shall be in English Language only.
- vii. All documents and other information supplied by ITER-India, and submitted by the Bidder to ITER-India shall remain or become the property of ITER-India. Applicants must treat all information provided by ITER-India as strictly confidential. Bidder should not copy any part of the document or figures to use for any other purpose. ITER-India will not return any pre-qualification documents submitted by the bidders
- viii. All costs incurred by an applicant Bidder towards pre-qualification meet and preparing the documents shall be borne by the applicant Bidder, and ITER-India is not liable and accountable for such costs.
- ix. Submittals will be assessed to ascertain that the Bidder possesses the experience and has technical as well as financial capability to carry out the scope of the tender.
- x. Bidders will not be considered as pre-qualified, if they have a poor performance record such as: abandoning of works, not properly completing contracts, inordinate delays in completing contracts; adverse litigation history, poor quality of works, financial failure, etc. ITER-India reserves the right to approach past clients of the applicant Bidders to confirm the claims of the bidders.
- xi. ITER-India has discussed only major aspects of the evaluation process in this document. After evaluation, the list of pre-qualified Bidders will be announced at the discretion of ITER-India.
- xii. The information provided in this document is indicative and preliminary only. Firm and detailed information, specifications, scope of supply & work, applicable terms and conditions will be provided in the tender document. The tender document will be issued only to the pre-qualified bidders.

- xiii. In the event of a conflict between documents submitted by the applicant Bidder, the material contained in the original set only will prevail.
- xiv. Bidders will not be considered, if they make misleading or false representations in statements or attachments.
- xv. Bidders applying for pre-qualification should note that this pre-qualification is intended to provide preliminary information. The information contained herein shall not in any-way be construed as binding on ITER-India.
- xvi. ITER-India reserves the right not to proceed with the pre-qualification procedure at any time without notice or liability.
- xvii. ITER-India will notify successful pre-qualified Bidders and also intimate bidders who are not pre-qualified with reasons for such disqualification. It should be noted however, that ITER-India will not discuss any aspect of the evaluation process.
- xviii. Bidders are advised that ITER-India will not respond to enquiries or enter into communication concerning or relating to the selection process or to the pre-qualification procedure as otherwise described in the pre-qualification document.
- xix. ITER-India may ask the Bidders any further information or clarification in writing for review of pre-qualification proof submitted by the bidders.
- xx. Bidders will not be required to submit on their own, additional information or material subsequent to the date of submission and such material if submitted will be disregarded. The pages of the pre-qualification document submitted shall be numbered sequentially. General responses such as “included in brochure” without specific item reference and information without summaries are unlikely to achieve high assessment. It is essential that all pages of the submission should be uniquely numbered and used to cross reference the supporting documents.
- xxi. The Project Director, ITER-India reserves the right of selection or rejection of any or all Bidders.
- xxii. Submissions of EOI documents along with all Annexures 2 to 8 and documents for compliance to Essential Eligibility Criteria (EEC) shall be made in two sets of documents comprising one 'Original' set and one 'Copy' and a copy in pen drive latest by 1:00pm on 15th Feb 2023. Submissions should be addressed to,

Senior Officer (Purchase & Stores)
ITER-India, Institute for Plasma Research,
Block- A, Sangath Skyz, Bhat-Motera Road,
Koteshwar, Ahmedabad 380 005, Gujarat, India
Tel: + 91-79-2326 9656 / 9529
E-mail: purchase@iterindia.in

The opening of EOI documents at 2:30 pm on 15th Feb 2023 at the above address only will be in front of attending bidders. Bidders who wish to participate in the opening of EOI documents may depute their representatives (at their own cost) to ITER-India on the specified date and time. Those who are attending the EOI opening should produce an authorization letter, failing which he/she may not be allowed to participate in the tender opening

- xxiii. All envelopes shall be titled : “EOI No.: I I-I/EOI/HPA/PQ-01/2022-23 dated 11/01/2023 for Phase 2-Driver and Final stage amplifiers for 2 sets of ITER ICRF Sources” and clearly marked in English with following information:

Name of Applicant Bidder	:
Name of Contact Person	:
Contact Number (Tel, E-mail)	:
Copy Number (i.e. Original or Copy)	:

2 Pre-Qualification Process

The steps involved in the process of pre-qualification are as follows.

Step-I: “Expression of Interest” is published nationally.

Step-II: ITER-India will hold pre-qualification meet with the interested bidders to make the bidder understand the project, pre-qualification requirements and any clarifications desired by Bidders. This will be an interactive meeting where Bidders may also highlight the issues they feel necessary during their presentation.

Step-III: Bidders submit ‘Response to EOI’ as per the pre-qualification requirement to ITER-India following the pre-qualification meet. The documents and information must be in the format asked for.

Step-IV: Expert committee of ITER-India evaluate the ‘Response to EOI’ submitted by Bidders against the pre-qualification requirements. The evaluation process will be confidential.

Step-V: ITER-India declares the pre-qualified bidders and informs in writing the results of qualification/dis-qualification of bids based on the expert committee recommendations

2.1 Schedule for pre-qualification

The schedule for the pre-qualification process is presented in table-1 below.

Table 1: Schedule for pre-qualification

Sr. No.	Activity	Schedule
1	Expression of Interest is published nationally	T0 (11 th Jan 2023)
2	ITER-India will hold pre-qualification meeting with the interested bidders	25 th Jan 2023 – Time 10:00 am
3	Bidders submit documents as per the pre-qualification requirement to ITER-India	Latest by 1:00 pm on 15 th Feb 2023
4	Opening of EoI documents in front of attending bidders	2:30 pm on 15 th Feb 2023
4	Declaration of qualified Bidders by ITER-India	-----

NOTE:

If there is any change in the above specified dates, the same will be intimated to the participating bidders by ITER-India.

2.2 Pre-Qualification Criteria/Essential Eligibility Criteria (EEC)

Bids meeting the Essential Eligibility Criteria (EEC) shall only be considered as “Pre-qualified Bids” Bidder as mentioned in the EEC Table 2 means single company/ Industry/Firm. Bidder must submit two sets of self-attested copies of documents in support of eligibility criteria.

Table 2: Pre-Qualification Criteria/Essential Eligibility Criteria

Sr. No.	Pre-Qualification Criteria/Essential Eligibility Criteria	Documentary evidences to be submitted by the bidder	Details of documentary evidence submitted (To be filled by bidder)
1	The bidder shall have their own QMS (Quality Management system)/ISO 9001-2015 certification	QMS or valid ISO certificate	ISO certificate no. - ----- valid upto ---- -----
2	Bidder shall be a manufacturer, system integrator and shall have successfully executed at least one purchase order for ≥ 1.5 MW capability of RF source using cascaded stage of driver and final stage amplifiers, supplied by the bidder	1.Signed Contract/Purchase Order (un-priced) in last 14 years from the EoI date 2.Acceptance Note / Successful Contract completion certificate from the purchaser	PO no. with date (PO document and acceptance note/completion certificate to be submitted)
3	Bidder must have successfully supplied a cascaded system consisting of driver amplifier using Tetrode (≥ 125 kW) and final stage amplifier using Diacode (≥ 1.5 MW) for duration ≥ 2000 s in the frequency range of 35-65 MHz on matched load as well as on mismatched loads (VSWR $\geq 1.5:1$) with bandwidth of ± 1 MHz within 1 dB flatness on Matched load	Acceptance test report against the Purchase order (s) with system performance demonstrated at least two operating frequencies. The test report must be within last 8 years from the EoI date	Acceptance test report along with PO ref. -----and date ---- --
4	Financial average turnover in last 3 completed financial years shall not be less than INR 100 crores	Audited financial statements/balance sheet of last 3 completed financial years (2019-20, 2020-21 and 2021-22)	Audited financial statements/balance sheet for last 03 financial years along with Annexure 5
5	The bidder shall be Class I/Class II local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. (As per prevailing guidelines, minimum 50% & 20% local content require for qualifying as Class I & Class II local supplier respectively)	Make In India (MII) declaration as per Annexure 7 the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -	Make In India (MII) declaration as per Annexure 7

		India) order 2017 dated 04.06.2020.	
<p>2.2.1 Any bidder from a country that shares a land border with India¹, excluding countries as listed on the website of the Ministry of External Affairs², to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects (hereinafter called 'Restricted Countries') shall be eligible to bid in this tender only if Bidder is registered³ with the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). Bidders shall enclose the certificate in this regard as per Annexure 8.</p>			
<p>2.2.2 In Bids for Turnkey contracts, including Works contracts, the successful bidder shall not be allowed to sub-contract works to any contractor from such Restricted Countries unless such contractor is similarly registered. In such cases, the bidders shall enclose the certificate as per Annexure 8.</p>			
<p>2.2.3 If Bidder has proposed to sub-contract Services or incidental Goods directly/ indirectly from the vendors from such countries, such vendor shall be required to be registered with the Competent Authority. However, if Bidder procures raw material, components, and sub-assemblies from such countries' vendors, such vendors shall not require registration.</p>			
<p>2.2.4 "Bidder from such Restricted Countries" means: -</p> <ul style="list-style-type: none"> a) An entity incorporated, established, or registered in such a country; or b) A subsidiary of an entity incorporated, established, or registered in such a country; or c) An entity substantially controlled through entities incorporated, established, or registered in such a country; or d) An entity whose beneficial owner is situated in such a country; or e) An Indian (or other) agent of such an entity; or f) A natural person who is a citizen of such a country; or g) A consortium/ joint venture where any member falls under any of the above 			

2.3 General Information and Additional Information

The bidder needs to submit the General information as in Annexure – 2 and additional information as in Annexure- 3 and Annexure - 4 along with necessary evidences. General and Additional information from the bidders shall not form basis for pre-qualification Award of Contract

The proposed plan includes the following steps till the award of Contract.

Step-I: The bidders shall be pre-qualified among those who responded to the EOI, based on evaluation carried out by ITER-India.

Step-II: The tender document for the tender titled “Phase 2-Driver and Final stage amplifiers for 2 sets of ITER ICRF Sources”

shall be issued to the pre-qualified bidders

¹<https://mea.gov.in/india-and-neighbours.htm>

²<http://meadashboard.gov.in/indicators/92>

³<https://dipp.gov.in/sites/default/files/Revised-Application-Format-for-Registration-of-Bidders-15Oct2020.pdf>

- Step-III: Pre-bid meeting with the pre-qualified bidders to clarify the queries raised by them
- Step-IV: The tender will follow two- bid process; (a) Technical and commercial except price (b) Price bid
- The Bidder will submit the offers in the following formats in two separate envelopes
- [i] Technical and commercial except price
 - [ii] Price
- Step-V: Technical bid will be opened by ITER-India
- Step-VI: Technical bid will be evaluated to review the compliance with the technical specifications provided by ITER-India.
- Step-VII: Following the acceptance of technical bid mentioned in Step-VI, the price bid will be opened and evaluated by ITER-India.
- Step-VIII: Contract for “Phase 2-Driver and Final stage amplifiers for 2 sets of ITER ICRF Sources” will be awarded to the technically qualified and commercially lowest Bidder.

2.4 Contract duration

The scope of supply, installation and testing for Phase 2-Driver and Final stage amplifiers for 2 sets of ITER ICRF Sources needs to be completed around 4.5 years from the date of award of contract.

3 Technical Details

3.1 Introduction

ITER is a multinational project, which aims to demonstrate scientific & technical feasibility of fusion power. The ITER project is being jointly constructed at St. Paul lez Durance Cedex, France by the 7 Countries (European Union, Japan, China, India, Korea, Russia and USA). The Institute for Plasma Research (IPR) which is an aided scientific institute under DAE, Govt. of India, is nominated as a nodal agency for implementation & coordination of some of ITER-subsystems through its ITER-India empowered body. One of such subsystems is the Ion Cyclotron Heating & Current Drive (ICH&CD) Radio Frequency (RF) source.

The ITER ICH&CD system requires **1 (prototype) + 8 (bulk production) RF sources**, each providing 2.5 MW output power in CW mode (2000s) at 2 VSWR (for any phase of reflection coefficient) in the frequency range 36 – 60 MHz AND/OR 3.0 MW / 3600s / 40 - 55 MHz at VSWR 1.5 with any phase of reflection coefficient. However, measuring devices shall have capability to measure RF power up to 3 MW with VSWR 1.5.

Each RF source shall be made with two identical chains, along with a 3dB Hybrid combiner. ITER-India will be fully responsible to test full RF source (2.5MW/3MW) by combining two RF chains.

The RF chain shall be tunable for the frequency range of 35-65MHz. However, the operating frequency range shall be 36-60MHz to check the full performance at high power and 1dB bandwidth for ± 1 MHz at any centre frequency, as per the conditions for acceptance.

Each chain consists of low power RF section, high power tube-based amplifiers, related electrical power supplies and independent Local Control Unit.

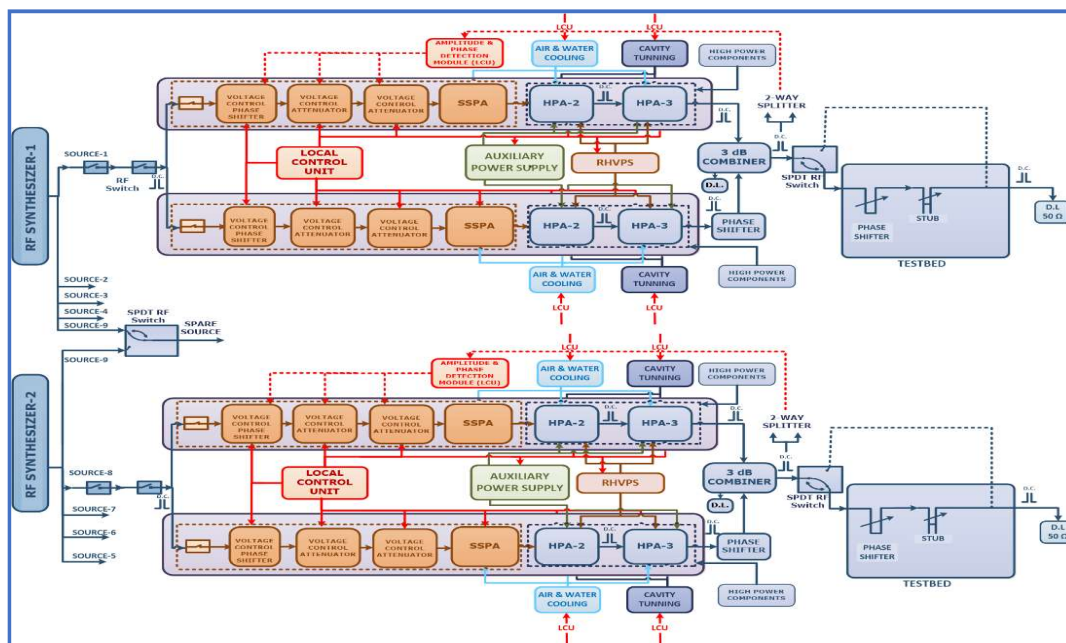


Fig. 1: Block diagram of 2.5 MW RF Source

The different phases of this project are as follows:

Phase 1: The tube qualification phase using single chain (R&D) experimentation - 1.5 MW / 2000s / 35- 65 MHz at VSWR 2.0 with any phase of reflection coefficient.

Phase 2: Prototype phase (2 no. of RF Source) - 2.5 MW / 2000s / 36 - 60 MHz at VSWR 2.0 with any phase of reflection coefficient AND/OR 3.0 MW / 3600s / 40 - 55 MHz at VSWR 1.5 with any phase of reflection coefficient.

Phase 3: Bulk production (3 no. of RF sources) - 2.5 MW / 2000s / 36 - 60 MHz at VSWR 2.0 with any phase of reflection coefficient AND/OR 3.0 MW / 3600s / 40 - 55 MHz at VSWR 1.5 with any phase of reflection coefficient.

Phase 4: Bulk production (4 no. of RF sources) - 2.5 MW / 2000s / 36 - 60 MHz at VSWR 2.0 with any phase of reflection coefficient AND/OR 3.0 MW / 3600s / 40 - 55 MHz at VSWR 1.5 with any phase of reflection coefficient.

ITER-India has completed R&D phase (**Phase 1**) in March 2019 and presently in a position to initiate the procurement activities related to **Phase 2**. ITER-India is seeking a suitable offer for Driver and Final stage amplifiers for ITER ICRF Sources under Phase 2 from the Bidder who qualifies as per the EEC given above.

This tender document issued will be for four sets of Driver Stage Amplifier (HPA2), Trombone & Final Stage Amplifier (HPA3) for four RF chains for Phase 2

All other components/sub-systems for all four RF chains for Phase 2 will be provided by ITER-India during the site acceptance testing at ITER-India site.

3.2 Scope of Work

Note: HPA2 and HPA3 will be identical to R&D phase in terms of RF characteristics. ITER-India do not anticipate any change or modification in design and major components related to cavities of HPA2 & HPA3. Design evolutions compared to R&D phase are requested in the Tender document. These evolutions are done for optimisation of amplifiers operation and do not impact the RF characteristics of the phase 1. Evolutions to be considered: cavity-Trombone motorization, sensors for piston end-of-stroke detection, EMC cavity seal, redesign of hydraulic routing for HPA2/HPA3, improve stiffness of mechanical structure, Trombone, BIT arc detector module, cavity support frame, reduction in air cooling circuits etc.

During Phase 2, Bidder need to

- 1) Fabricate, test at factory, test at ITER-India site: two new sets of HPA2, Trombone & HPA3 for first two RF chains, which will be used in prototype RF source.
- 2) Fabricate, test at factory, test at ITER-India site: similar one more new set of HPA2, Trombone & HPA3. This set will be used as a part of one RF chain of Unit 1 RF source
- 3) Set of HPA2, Trombone & HPA3 **supplied during Phase 1:** To submit evolved/optimized drawings as done in RF chains of prototype Unit. Supply the components for necessary modifications. ITER-India will carry out necessary modification in the supervision of Bidder during SAT of Unit 1. This component set will be used as a part of another RF chain of Unit 1 RF source
- 4) All the RF chains will be tested as per technical specifications table given below.
- 5) Implement the suppression methodology of parasitic oscillation in the amplifiers to ensure unconditionally stable operation during different operating scenarios.
- 6) Need to participate FDR, FRR and MRR as described below.

Note: ITER-India will be fully responsible to test full RF source (2.5MW/3MW) by combining two RF chains.

The fabrication of 1st RF chain of prototype RF source will be initiated only;

- After closure of final Design Review (**FDR**) by ITER Organization
- Go-ahead signal given by ITER-India.

There will be Fabrication Readiness Review (**FRR**) performed for components under this tender, by ITER-India after successful factory acceptance testing of 1st RF chain of the prototype RF source to continue the production of balance RF chains.

There will be Manufacturing Readiness Review (**MRR**) to get formal approval from ITER Organization after successful site acceptance testing the prototype RF source to freeze the design of balance RF source.

Note: As these components are ITER deliverables, the involvement of ITER Organization along with ITER-India during each technical activity is anticipated.

3.3 Technical Specifications for single RF chain

Table 3: shows the specifications for one complete RF chain.

Sr. no.	Specification	Level & Units	Remarks
1	Tunable Frequency Range	35-65 MHz	The system shall be tunable for the frequency band 35 – 65 MHz. Supplier shall provide data for tuning in the steps of 2MHz.
	Operating Central Frequency Range	36-60 MHz	The system performance shall be checked for full power, duration & bandwidth requirement as per Sr. no. 4.
2	System tuning	-Desirable is within 180s -Not more than 360s	At any operating frequency to any other operating frequency between 35-65MHz, automatic tuning time shall be less than 360* sec.
3	Frequency deviation over any central frequency (1dB bandwidth point)	±1MHz	1dB bandwidth point shall be demonstrated at 36 MHz, 40MHz, 42 MHz, 53MHz, 55MHz & 60 MHz with full output power of 1.6MW without changing the tube biasing or input RF power. RF power will be checked in 0.25MHz steps from the centre frequency. The stability of RF power during each step will be measured during the shot.
4	Constant output power with specified load conditions	1.6MW/3600s/ matched load	Matched load condition: 1.6MW constant RF Power shall be demonstrated at 36 MHz, 40MHz, 42 MHz, 53MHz, 55MHz & 60 MHz for 3600s duration without any break.

	Note: Maximum 10 kW input power to HPA2 shall be provided by ITER-India	1.5MW/2000s/VS WR 2 & 1.6MW/3600s/VS WR 1.75 Burn-in test with mismatch load of 1.6MW/3600s/VS WR 1.75	Mismatched load condition: Specified constant RF Power shall be demonstrated at 36 MHz, 40MHz, 42 MHz, 53MHz, 55MHz & 60 MHz for specified duration and VSWR conditions with a single pulse without any break Five serial pulses with 25% duty cycle (without any break) shall be demonstrated at specified constant power, for 42MHz & 53 MHz with 5 different phase angles between 0 to 180 degree.
5	Accuracy in output power measurement	Minimum 5%	For full scale power.
6	Max. Output harmonic level	-20 dBc	Measured on matched load.
7	Electrical efficiency	Minimum 65% (Matched) Minimum 45% (Mismatched)	Depending upon load conditions (Matched & Mismatched).
8	Pulse duration: ON time	Maximum 3600s	Depending upon power & VSWR
9	Duty cycle	25%	5 successive pulses of 3600s at 1.6MW on 42 MHz & 53MHz with a duty cycle of 25% on VSWR 1.75
10	Maximum VSWR	2	With any phase of reflection coefficient for the output power of 1.5MW.
11	Maximum Transient VSWR	2.5 (1s max.)	Output power (1.5MW) may be reduced. Bidder shall specify the limit of the absolute value of reflection power to initiate power down mode of the system.
12	The impedance of the coaxial lines interfacing with the amplifiers.	50 Ω	Input & output impedance of HPA2 and HPA-3 shall be compatible with 50 Ω coaxial lines.
	RF power of HPA2 on matched load	Minimum 125kW/3600s	HPA2 will tested on matched load in standalone mode.
13	Size of HPA3 output port	12"	
	Size of the HPA3 input port	6"EIA compatible	
14	Size of HPA2 input port	3"EIA compatible	-.
	Size of the HPA2 output port	6"EIA compatible	
15	Emergency RF power cut-off response	<10 μ s	-Wire burn test/fuse test is carried out for different power supplies as per tube data sheet to switch off the power

			<p>supply when OC is detected and wire/fuse shall not be burnt.</p> <p>Amplifier supplied by the Bidder shall support this cut-off response.</p> <p>Max anode voltage sustainable by the components linked to the overshoot in case of RF cut-off (from full power to zero) with all biasing parameters kept ON for the protection of the amplifier will be specified by the bidder</p>
16	RF radiation limit	<1mW/cm ²	It shall be within the limits recommended by the International Non-Ionizing Radiation Committee (INIRC). European directive 2013/35/UE referring to 1999/519/CE relating to workers' exposure to electromagnetic risks are applicable.
17	Max frequency modulation frequency (Response time)	1 kHz (1 mS)	Responsibility of ITER-India, but HPA shall support this requirement.
18	Full Power modulation range at the load	1kW-Full power With Max amplitude modulation frequency of 100Hz (Close-loop response time)	Responsibility of ITER-India, but HPA shall support this requirement.
19	Half Power to full power modulation range at the load	Half power-Full power With Max amplitude modulation frequency of 1000Hz	Responsibility of ITER-India, but HPA shall support this requirement.
20	Max phase modulation frequency (Close-loop response time)	10 kHz (at fixed reference/any frequency)	Responsibility of ITER-India, but HPA shall support this requirement.

*: under discussion with IO

4 List of Annexes

Annexure-1: Registration form for Pre-qualification meeting

Annexure-2: General information to be furnished by the bidders

Annexure-3: Additional Information

Annexure-4: Format for submission of Job Details

Annexure-5: Financial statement

Annexure-6: Format for the Submission of EOI Document

Annexure-7 – MII declaration

Annexure – 8 – Eligibility declaration



Annexure-1

Registration form for Pre-qualification meeting

From:

Name and address of Applicant Bidder
Name of Contact Person
Contact Number (Tel, E-mail)

To:

Sr. Officer (Purchase & Stores)
ITER-India, Institute for Plasma Research,
Block- A, Sangath Skyz, Bhat-Motera Road,
Koteshwar, Ahmedabad 380 005, Gujarat, India
Tel: + 91-79-2326 9656/9529
Email: purchase@iterindia.in

Subject: Registration for pre-qualification meeting

Dear Madam,

This is with reference to your EOI No.: **I-I/EOI/HPA/PQ-01/2022-23**. We understood the requirements of the project and intend to participate in the pre-qualification meeting. The following members will attend the meeting

- 1.
- 2.
- 3.

Signature

BIDDER STAMP

Name:

Position:

Address:

Tel:

Date:

This form as scan version duly filled in, signed and stamped shall reach to the Sr. Officer (Purchase & Stores) at the email id purchase@iterindia.in latest by 24th January 2023



Annexure-2

General information to be furnished by the bidders

1.	Name of the Bidder	
2.	Bidder's Proposal No. and Date	
3.	Name and designation of the officer of the Bidder to whom all references shall be made for expeditious co-ordination.	
4.	Postal Address, Telephone & Fax Nos. and e-mail Address of Registered Office	
5.	Address, Telephone Nos., Fax Nos. and e-mail ID of Office through which the proposed work (if entrusted) will be handled with name & designation of person-in-charge	
6.	Core Competence of business	
7.	Areas of other business activity, if any & place of such business	
8.	Any additional information which the tenderer considers relevant for evaluation of this tender	
9.	Bank details of the Bidder	
10.	GST Registration details of the bidder	
11.	PAN details of the bidder	
12.	MSME registration details with category (General/SC/ST/Women), if any	

- Legal status of the Bidder (attach copies of original document defining the legal status)
Individual/ Proprietary firm/ firm in partnership/ limited company or Corporation/ Any other (please specify)

Authorized signatory from Bidder

Bidder's stamp

Annexure-3 Additional Information

For all the projects listed below, the bidder is required to submit copy of contract showing the project details along with the certificates of status and attach copy of the necessary evidences. The format as in Annexure-4 needs to be used for submitting the details. ITER-India may contact the clients to verify project value/completion status, etc.

The responses of following should be submitted along with evidences

1. Experience in the past of supply, installation and testing of High Power RF Amplifiers
2. Experience in the past of supplying to ITER project
3. Key projects completed within India
4. Key international contracts executed
5. Projects under progress
6. Any other information considered necessary but not included above

Authorized signatory from Bidder

Bidder's stamp

Annexure-4

Format for submission of Job Details

- a) Work description/scope :
- b) Reference No. :
- c) Client :
- d) Name & designation of Officer-in-charge :
- e) Client address, city, country and pin code :
- f) E-mail address :
- g) Phone no. :
- h) Scheduled start date :
- i) Scheduled completion date :
- j) Actual start date :
- k) Actual completion date :
- l) Scheduled duration :
- m) Actual time taken :
- n) Copy of work order furnished : yes/no
- o) Completion certificate furnished : yes/no

Authorized signatory from Bidder

Bidder's stamp

Annexure-5

Financial statement

1. Annual turnover in last three accounting years (in lakhs, INR).

Financial Year	2019-20	2020-21	2021-22
India			

2. Bidder's statements of accounts (audited balance sheet) for last three years (profit/loss, assets/liabilities), auditor reports, and other financial data (Please attach copies)

The statement of account should include minimum of following:

- (a) The financial status of the Bidder
- (b) Audited statement by a certified accountant
- (c) All notes to the financial statements correspond to accounting periods already completed and audited

3. List of Banks that the Bidder deals with

Name of Bank	Address	Telephone no.	Name & designation of contact

Note: Please add rows to the table above as required

* Note: ITER-India may contact the listed bankers to confirm correctness of the information provided.

Authorized signatory from Bidder

Bidder's stamp

Annexure-6**Format for the Submission of EOI Document**

[On the letterhead of applicant Bidder with Name and address of applicant Bidder, name of contact person, contact number (Tel, E-mail)]

To:

Senior Officer (Purchase & Stores)
ITER-India, Institute for Plasma Research,
Block- A, Sangath Skyz, Bhat-Motera Road,
Koteshwar, Ahmedabad 380 005, Gujarat, India
Tel: + 91-79-2326 9656
E-mail: purchase@iterindia.in

Subject: Submission of documents applicable for the pre-qualification requirement associated with the tender titled “Phase 2-Driver and Final stage amplifiers for 2 sets of ITER ICRF Sources”

Ref: EOI No.: I-I/EOI/HPA/PQ-01/2022-23

Dear Sir,

1. Being duly authorized to represent and act on behalf of _____ (herein after referred to as “the Applicant Bidder”) and having reviewed and fully understood all of the pre-qualification requirements and information provided by ITER-India, the undersigned hereby applies for pre-qualification process for the tender titled ‘High Power RF Amplifiers’.
2. This application is made by me/us on behalf of Bidder in the capacity of Prime Contractor duly authorized to receive the tender document, if pre-qualified
3. We have submitted all the requisite details as per ‘Additional information’ and other certificates & proofs as applicable to Essential eligibility criteria, as per the formats issued by ITER-India
4. We have furnished all information and details necessary for pre-qualification and have no further pertinent information to submit
5. ITER-India and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this pre-qualification application, e.g. towards finance, resources, experience and competence of applicant Bidder
6. We hereby confirm that we have read and understood all the stipulations given in this pre-qualification document and decision of ITER-India with regard to our pre-qualification shall be final and binding on us
7. The undersigned declare that the statements made and the information provided in the duly completed pre-qualification forms are complete, true and correct in every details

Signature

Bidder’s stamp

Name:

Position:

Address:

Tel:

Date:

List of Enclosures:

Annexure-7

Certificate from statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of Local Content, in line with PPP-MII order, if applicable [to be submitted on the letter head of the issuer.]

Make In India (MII) order Certificate

In line with Government Public Procurement Order No. P-45021/2/2017-PP (BE-II) dated 04.06.2020 as amended from time to time and as applicable on the date of submission of tender/enquiry, we hereby certify that we M/s _____ are Class I local supplier/ Class II local supplier and quoted item/service against ITER-India EoI No. I-I/EOI/HPA/PQ-01/2022-23 Dated 11.01.2023 has/have local content i.e., ____%. Details of location at which local value addition will be made as follows: _____.

We also understand, false declarations will be in breach of the code of integrity under rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Thanking You

Signature with date:

Name:

Designation:

Official Seal

We, M/s _____, the Statutory Auditor(s) / Cost auditor (applicable in the case of companies) of M/s _____ (to specify name of bidder) / M/s _____ a practicing cost accountant or practicing chartered accountant (applicable in respect of bidders other than companies) of M/s _____ (to specify name of bidder), have verified and certify that the Local Content is _____ percentage [specify the percentage of Local content] as defined under the PPP-MII Order, for the items/Service offered against EoI No. I-I/EOI/HPA/PQ-01/2022-23

For and on behalf of,

Date:

Authorized Signatory

(With Company Seal & Signature)

Name of the Statutory/Cost Auditor or Practicing Cost/Chartered Accountant (as applicable):

Firm Reg No:

Membership No.



Annexure – 8

Eligibility Declaration (On company letter head) (Along with supporting documents, if any)

EoI No: I-I/EOI/HPA/PQ-01/2022-23 dated 11.01.2023

Title:

Bidder's Name: _____ (Address and contact details)

Bidder's Offer No. _____ Date: _____

Restrictions on procurement from Bidders from a country or countries, or class of countries under Rule 144(xi) of the General Financial Rules 2017.

We have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries, and solemnly certify that we fulfil all requirements in this regard and are eligible to be considered. We certify that:

- (a) *we are not from such a country or, if from such a country, we are registered with the Competent Authority (copy enclosed). and;*
- (b) *we shall not subcontract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.*

Penalties for false or misleading declarations:

We hereby confirm that the particulars given above are factually correct and nothing is concealed and also undertake to advise any further changes to the above details. We understood that any wrong or misleading self-declaration by us would be violation of Code of integrity and would attract penalties as mentioned in this tender document, including debarment.

(Signature with date)

(Name and designation) Duly authorized to sign Bid for and on behalf of

(Name & address of the Bidder and Seal of Company)