



Indian Institute of Science (IISc)
Bangalore - 560012

Supercomputer Education and Research Centre (SERC)
IISc

Notice Inviting Tender (NIT) under
Two-Cover Bid System

for

**Appointment of Consultant for Creation of a Data Centre for
a 8.5 PFlop Supercomputer in SERC, IISc
[Local Tender]**

Enquiry or Tender No:

[IISc/Appointment/SERC/2025/DataCentreConsultant/1](#)

Date: [January 28, 2025](#)

Chair

Supercomputer Education and Research Centre (SERC)

Indian Institute of Science (IISc)

Bangalore – 560012, India

Email: tender.serc@iisc.ac.in

Contents

1. Preamble	2
2. Design Activity.....	3
2.1 Electrical system	3
2.2 Cooling system	3
2.3 BMS system.....	3
2.4 Civil system	3
3. Details engineering- DC consultant should submit.....	4
4. Tendering and technical support	4
5. Exclusions	4
6. DC Consultant Eligibility Criteria	4
7. General Terms and Conditions.....	5
8. Technical Bid – Terms and Conditions	6
9. Commercial Bid – Terms and Conditions.....	6
10. Payment Terms	6
11. Important Dates	6
12. Annexure A - Undertaking.....	8
13. Annexures 1-4	9

1. Preamble

The Supercomputer Education and Research Centre (SERC) in Indian Institute of Science (IISc) invites bids for design consultant for data center infrastructure design for creation of a data center for hosting a supercomputing about 8.5 PFlops.

Indian Institute of Science (IISc) Bangalore is going to establish Data Center of capacity 8.5 PF with CPU + GPU combination. The location of this Data Center will be in IISc Bangalore campus in SERC building. Approximate compute power for above combination will be around 500-550 KW. Cooling for compute will be as follows: for some compute will be on room cooling and some compute will be on Direct contact liquid cooling (DCLC), so cooling is hybrid. DCLC nodes will be with maximum TDP presently available with CPU manufacturer.

IISc Bangalore needs a design consultant for data center infrastructure design for Electrical system, UPS system, Hybrid cooling system, I BMS system etc.

Scope of Work for Data Center (DC) Consultant

1. Understand the Electrical, Cooling, Raised floor, civil and I- BMS requirement.
2. Understand the existing infrastructure set up including Electrical, cooling and I- BMS.
3. Design of Data center as per requirement in available space.

2. Design Activity

2.1 Electrical system

1. Electrical Distribution from main LT Panel.
2. Work out the UPS rating along with Battery. Existing we have the UPS available feeding existing Data Center. Detailed calculations considering existing maximum IT load and new requirement load and workout on new UPS requirement or existing rating are sufficient.
3. Electrical distribution for UPS Input and Out Put panel along with distribution to each rack. DC consultant to design the electrical distribution to rack either by Cable or by Bus Bar system.
4. Earthing schematic including equipotential earthing.
5. Design and Internal Illumination system as per NBC.
6. Work out on use of existing transformer for new requirement. This includes calculation as well as schematic.
7. Work out on existing DG set, synchronization panel to suit for new requirement. This includes calculation as well as schematic.

2.2 Cooling system

1. Cooling system will be either room cooling by In row-Dx based or Chilled water based /PAC/PAHU /RDHX and some racks will be of hybrid means CPU will be cooled by DCLC and rest hardware by air cooling. DC consults to select appropriate cooling technology to suit the requirement with lower CAPEX and lower PUE.
2. Work out on use of existing chiller system + pumps + thermal storage tank for new requirement. This includes calculation as well as schematic. Justify if existing chillers are not sufficient then only new system will be designed for this requirement. This includes but not limited to Design, Schematic, Detailing, drawing and specifications.
3. DC consultant to use as much as existing infrastructure including Dry cooler, chiller, thermal storage tank, pump etc.
4. Design of DCLC system with high TDP processor includes working out on Dry cooler either existing or new , sizing of Dry cooler , operational mode of Dry cooler i.e. either Dry mode or Adiabatic Mode considering ASHRAE n=20 ambient condition data, flow rate to be worked out, DCLC cooling distribution unit either rack based or standalone, working on CDU rating, flow rate, temperature etc. DCLC System will be either single phase or two phase. Such system will be finalized after details discussions.

2.3 BMS system

1. This will included but not limited to – All I BMS requirement for Data center as Fire alarm, Fire Suppression, Water Leak Detector, Rodent Repellent, VESDA, CCTV, Access control etc. System.

2.4 Civil system

1. This will include but not limited to – Feasibility of exiting raised floor tile for UDL, Point Load, Rolling Load if not feasible design and new raised floor system, False ceiling, entry and exist requirement and other ascetical and fire related requirement as fire rated Vision glass, fire rated partition, fire rated MS/Glass door etc.
2. If required structural strengthen same is not part of this Scope.

3. Details engineering- DC consultant should submit

1. Design calculations for Electrical and Cooling System
2. DC drawings including DC layout, UPS Layout, Electrical SLD etc.
3. P & ID and Piping Drawing
4. Sectional Drawing

4. Tendering and technical support

1. DC consultant should submit Tender technical specification of all the components including Electrical, UPS, Battery, Cooling system, DCLC system, LT panels, Bus Bar etc. along with technical bidders' eligibility criteria.
2. IISc will float the tender. DC consultant should be available for pre-bid meeting, if any, to answer the technical queries from the Bidder. DC consultant if required should prepare the technical corrigendum and submit to IISc.
3. Technical Bid Evaluation is part of scope of DC consultant. If required DC consultant should be available for technical presentations from Bidder.
4. Once Bidder on board - shop drawing approval, approval on technical data sheet etc. are needed from the DC consultant.
5. During execution support for technical issues if any by visiting the site or assist remotely.
6. Periodic (almost weekly) online meetings with the bidder along with IISc for monitoring and ensuring timely progress is required from the DC consultant.
7. Periodic site visits (at least once a month) to monitoring and ensuring timely progress is required from the DC consultant.
8. Coordination with the SERC infrastructure team.
9. DC consultant should be available during ISAT testing and technical hand over process.
10. Checking, commenting and approval on as build drawing is part of scope.

5. Exclusions

1. Coordination with any team of IISc other than the SERC infrastructure team is not part of scope.
2. Getting execution done or Project management Work is not in the scope of work.
3. Any kind of liaising work internal or external is not part of scope of work.

6. DC Consultant Eligibility Criteria

Consultancy firm / freelancing individual/agency should have experience in the field of the following

1. Consultancy firm / freelancing individual/agency should have completed Consultancy work as per above for minimum five data centers in the last five financial years with minimum per rack density of 30 KW and minimum number of compute racks should be five per site. Such data center must be cooled either by Rear Door Heat Exchanger, In Row, PAC, PAHU. Each of such data centers should have minimum total compute power requirement of 100 KW. Five projects from same Client at different locations or five projects from five different clients will be accepted.
2. Consultancy firm / freelancing individual/agency should have completed Consultancy work of minimum two data centers in last three financial years with hybrid cooling -room cooling + DCLC cooling with minimum of 500 nos. of cold plate, with minimum 10 nos. of rack and at least one cooling distribution unit. These two Data centers should be in up and running condition in Indian ambient conditions. DCLC cooling system should be working on adiabatic dry cooler and Consultancy firm / freelancing individual/agency must have designed this system.
3. Consultancy firm / freelancing individual/agency should have completed Design, Details engineering, tendering and technical support during execution and ISAT testing for minimum three data centers in the last five financial years with at least 90% of DCLC cooling system. Such data center should have minimum 150 KW - server heat load. Per rack heat load should be more than 40 KW.

4. Design, Detail Engineering for Cooling architecture, Electrical architecture, BMS architecture, Civil Design as Raised floor, false ceiling etc. for High Processor compute Data Center (HPC).
5. Vendor should have experience in preparing schematic drawings for Electrical scheme, SLD drawing, Cooling Drawing, P & ID Drawing, plan elevation, equipment positioning drawing, layout drawings in 2 D CAD format.
6. Vendor should have expertise in drafting the tender technical specifications for various equipment in the projects as Electrical- Panel, UPS, Battery, Dry cooler, PAC, PAHU, In Row, RDHX, Chiller etc., I- BMS- Fire Alarm system, Fire suppression system, CCTV, Access control etc.
7. Vendor should have expertise in doing design calculations for electrical scheme as fault level, cooling as heat load with reference to the latest IEC/IS/IEEE /ASHARE etc. standards.
8. The Selected Consultant through this tender cannot participate in the subsequent datacenter tender as a bidder.
9. Consultancy firm / freelancing individual/agency should submit supporting documents for the above requirements.

7. General Terms and Conditions

1. Offer must be submitted under TWO-BID system i.e., “Technical bid” and “Price (Financial) bid” as hard copies in two separate sealed envelopes. These two bids must be enclosed in a larger envelope superscribed as “Bid Submission for Data Consultant for SERC” within the stipulated period to the indicated mailing address. In addition, **soft copy of only the technical bid** must be sent by email to tender.serc@iisc.ac.in within the stipulated time.
2. The vendors may communicate to the committee through the email ID provided in the first page, which will be the official email for the purpose of this tender. However, the communications from the committee will be made only in pre-bid clarification meeting and through email including corrigendum and short fall requests. While the committee may consider the emails from the vendor, the committee will respond/communicate by email from only the official email ID when absolutely necessary. In all other circumstances, no responses or communications will be made by the committee via email or any other means.
3. Any clarifications required by the committee will be sought in shortfall requests via email. The shortfall requests will precisely point to the tender clauses that are not met by the technical bid. It is the bidder’s responsibility to address the shortfall by submitting an adequate and satisfactory shortfall response. No clarifications by email or any other means will be sought or given by the committee.
4. Delayed and/or incomplete tenders are liable to be rejected.
5. The Technical Bid and the Commercial Bid should be duly signed by the authorized representative of the bidder.
6. The bidders are requested to go through the Terms and Conditions detailed in this document, before filling out the tender. Agreeing to the terms and conditions of the tender document (by signing all pages of the copy of a tender document) is a mandatory requirement.
7. A tender, not complying with any of the above conditions is liable to be rejected.
8. **Cancellation of Tender:** Notwithstanding anything specified in this tender document, the purchase committee, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights
 - a. to accept OR reject any tender.
 - b. to accept any tender in full or in part.
 - c. to reject the tender, offer not confirming to the tender terms.
 - d. to cancel the tender at any time without assigning any reason whatsoever.
9. **Disputes and Jurisdiction:** Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

8. Technical Bid – Terms and Conditions

1. The technical bid should contain all the information pertaining to Sections 1-6. Bids without the specific information will be automatically disqualified.
2. No price information must be mentioned in the technical bid. Bids which include price information in the technical bids will be automatically disqualified.
3. Technical bids will be opened first. IISc may seek clarifications after opening of technical bids.
4. The technical evaluations will be made only based on the technical bids and the shortfall responses submitted by the bidder.

9. Commercial Bid – Terms and Conditions

1. Price bids of only technically qualified vendors will be considered. Commercial bid shall be opened for the technically qualified bidders after the technical evaluation.
2. The hardcopy commercial bid of the successful bidder, after the commercial bid opening stage, should contain among other things, unit prices, payment terms, etc. as per requirements of IISc mentioned in the tender document. All such conditions must be in line with the tender. In case of any deviation or conditional offer, the bid may be treated as non-responsive and not be considered for evaluation.
3. This is a **local tender**. Prices should be quoted only in INR (Indian Rupees) and will be with GST only.
4. The component of tax, and any other statutory levies should be shown separately and not included in the total amount, to enable IISc to avail any exemption.
5. Proposals should contain the name and contact details, viz., phone, fax, and email of the designated person to whom all future communication will be addressed. The contact details should also be mentioned on the overall envelope.
6. Prices should be quoted in detail, for all the subsystems given in the Technical Specifications part of the tender. Further, bid and **price validity should be for three months** from the date of opening of the technical bids.
7. IISc will place the purchase order only on the successful bidder as per the decision of IISc. In this regard, decision of IISc will be final and binding.

10. Payment Terms

1. 40% payment on Collecting all site-related information, submission of schematic design, technical specifications, drawings etc. for Tender/RFP. 40% payment on submission of the technical evaluation of bids. 10% payment after installation of the Data Centre. 10% payment after ISAT completion.
2. Travel and accommodation: After appointment of DC consultant, if required IISc will arrange Air travel to and fro as well as accommodation in campus. For air travel the ticket will be given from nearest airport and the distance should be more than 500 kms. Most of the meetings will be in ON LINE mode.
3. Payment will be subject to deduction of TDS as per rules / laws and any other deduction as per PO terms.

11. Important Dates

1. Release of tender: January 28, 2025.
2. Last date for sending queries: February 3, 2025, 5 PM IST. Queries may be sent to tender.serc@iisc.ac.in.
3. Release of corrigendum to the tender based on the queries, if necessary: February 4, 2025, 5 PM IST.

4. Start date for submission of the bid: February 5, 2025, 10 AM IST.
5. Last date for submission of the bid: February 19, 2025, 5 PM IST.
 - a. Hard copy submission: The bid in the form of an envelope containing the hard copies of both the technical and commercial bids, in two sealed envelopes, should be submitted and reach the below-mentioned mailing address by the same date, 6 PM IST. Note that the hard copy of the technical bid should exactly match with the soft copy submitted.
 - b. Soft copy submission: **Soft copy of only the technical bid** must be sent by email to tender.serc@iisc.ac.in by the above-mentioned time. **No soft copy of commercial bid should be submitted.** Soft copy submission of commercial bid at any stage before the opening of the hard copy commercial bid will lead to disqualification of the bid.

Mailing address:

Chair
Supercomputer Education and Research Centre (SERC)
Indian Institute of Science (IISc)
Bangalore – 560012
India

12. Annexure A - Undertaking

Date:

To:
The Chair
Supercomputer Education and Research Centre
Indian Institute of Science
Bangalore – 560012, India

Subject: Undertaking as per GFR – 2017, Rule 170(iii)

Dear Sir,

We/I, the undersigned, offer to carry out the project as per tender at IISc, Bangalore, in response to your Tender No **IISc/Appointment/SERC/2025/DataCentreConsultant/1**. We/I hereby submit my/our proposal for the same, which includes Technical bid and the Financial Bid. As a part of the eligibility requirement stipulated in the said tender document, we/I hereby submit a declaration as given below:

1. We/I will not withdraw or amend or modify or impair or derogate my/our bid partly or fully or any condition of it after tender opening, during the period of tender validity (six months from the date of opening of the technical bid),
2. In case, we/I are/is declared as successful bidder and an order is placed on us/me, we/I will submit the acceptance in writing within 7 days of placement of order on us.
3. In case of failure on our/my part to deliver/provide service as per the order's terms and conditions within the stipulated period, we/I are/is aware that we/I shall be declared as ineligible for the said tender and /or debarred from any future bidding process of IISc or any Government entity for a period of minimum one year.
4. The undersigned is authorized to sign this undertaking.

Yours sincerely,

Authorized Signatory:

Name and Title of Signatory:

e-mail:

Mobile No:

13. Annexures 1-4

Annexure 1

Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Details of the Bidder

Sl. No	Items	Details
1.	Name of the Bidder	
2.	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3.	Registration No/ Trade License, (attach attested copy)	
4.	Registered Office Address	
5.	Address for communication	
6.	Contact person- Name and Designation	
7.	Telephone No	
8.	Email ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

Signature of the Bidder

Name

Designation, Seal

Date:

Annexure 2

Declaration regarding experience

To,
The Chairperson,
Attn: Prof. Sathish Vadhiyar
Supercomputer Education and Research Centre
Indian Institute of Science
Bangalore – 560012, India

Ref: Tender No: IISc/Appointment/SERC/2025/DataCentreConsultant/1

Dated: January XXX, 2025

Appointment of Consultant for Creation of a Data Centre for a 8.5 PFlop Supercomputer in SERC, IISc

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that I/my company / firm have/has ----- years of experience in supplying and installing the items mentioned in the tender.

(Signature of the Bidder)

Printed Name

Designation, Seal Date:

Annexure 3

Declaration regarding track record

To,
The Chairperson,
Attn: Prof. Sathish Vadhiyar
Supercomputer Education and Research Centre
Indian Institute of Science
Bangalore – 560012, India

Ref: Tender No: IISc/Appointment/SERC/2025/DataCentreConsultant/1

Dated: January XXX, 2025

Appointment of Consultant for Creation of a Data Centre for a 8.5 PFlop Supercomputer in SERC, IISc

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that I/my company/ firm am/is not currently debarred / blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I am competent to make this declaration.

Or

I declare the following

Sl.No	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long
-------	---	--	--------	-----------------------------

(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully
(Signature of the Bidder)

Name
Designation, Seal
Date:

Annexure 4

Declaration for acceptance of terms and conditions

To,
The Chairperson,
Attn: Prof. Sathish Vadhiyar
Supercomputer Education and Research Centre
Indian Institute of Science
Bangalore – 560012, India

Ref: Tender No: IISc/Appointment/SERC/2025/DataCentreConsultant/1

Dated: January XXX, 2025

Appointment of Consultant for Creation of a Data Centre for a 8.5 PFlop Supercomputer in SERC, IISc

Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to me/my company. I further certify that I'm an authorized signatory and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name

Designation, Seal

Date: