Government eProcurement System

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Tender ID :	2021_CSIR_98671_1
Tender Ref No :	5511/220221/1772/EQPT
Tender Title :	High Perfomance Computing HPC Facility
Corrigendum Type :	BOQ

Corrigendum Document and BOQ List

Corr.No.	Corrigendum Title	Corrigendum Description	Published Date	Document Name	Doc Size(in KB)
1	For BOQ	Supply of High Performance Computing HPC Facility	07-Jan-2022 04:36 PM	5511Corrigendum123.pdf	1372.94
				BOQ_107438.xls	250.0

सीएसआईआर-कोशिकीय एवं आण्विक जीवविज्ञान केन्द्र

CSIR-CENTRE FOR CELLULAR & MOLECULAR BIOLOGY

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)

(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)

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File Ref: 5511/220221/1772/EQPT   January 07, 2022

CORRIGENDUM

SUB : PURCHASE OF HPC

REF: TENDER ID: 2021_CSIR_98671_1

Pre Bid Conference was held on 04.01.2022 as per tender conditions and during the Conference clarifications were given to the points raised by the Bidders. **The clarifications given during the Pre Bid Conference is attached.**

- Bidders are requested to go through the clarifications given and submit their Bids accordingly.

- Further, **the warranty period is also reduced from 05-years to 03-years**. Bidders are requested to note this reduction and quote their prices accordingly.

- Further, **cost of CAMC for 4th and 5th year (after 03-years warranty) shall also be quoted** separately which will be taken into account for evaluation.

Hence, following amendments are issued to the tender conditions.

AMENDMENTS TO TENDER TERMS

EXISTING

1.12. Bid Prices

1.12.1

The Bidder shall indicate on the appropriate price schedule form, the unit prices and total bid prices of the goods it proposes to supply under the contract, **AS PER BOQ ATTACHED.**

1.12.2

Prices indicated on the price-schedule form shall be entered separately in the following manner:

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(a) **For Goods manufactured within India -**

(i) The price of the goods quoted Ex-works including taxes already paid.

(ii) GST and other taxes, if any which will be payable on the goods if the contract is awarded.

(iii) The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.

(iv) Wherever applicable, the cost towards the installation, commissioning, spares, extended warranty, site preparation and training including any incidental services, if any.

For Goods manufactured abroad

(i) The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule form.

(ii) The charges for insurance and transportation of the goods to the port / place of destination both by Air/Sea.

(iii) The agency commission charges, if any.

(iv) Wherever applicable, the cost towards the installation, commissioning, spares, extended warranty, site preparation and training including any incidental services, if any.

AMENDED TO READ AS

1.12. Bid Prices

1.12.1

The Bidder shall indicate on the appropriate price schedule form, the unit prices and total bid prices of the goods it proposes to supply under the contract, **AS PER REVISED BOQ ATTACHED.**

1.12.2

Prices indicated on the price-schedule form shall be entered separately in the following manner:

(b) For Goods manufactured within India -

(i)   The price of the goods quoted Ex-works including taxes already paid.

(ii)   GST and other taxes, if any which will be payable on the goods if the contract is awarded.

(iii)   The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.

(iv)   Wherever applicable, the cost towards the installation, commissioning, spares, extended warranty, site preparation and training including any incidental services, if any.

(v)   **CAMC for 4th and 5th Year (after 3 years warranty period)**

For Goods manufactured abroad

(i)   The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule form.

(ii)   The charges for insurance and transportation of the goods to the port / place of destination both by Air/Sea.

(iii)   The agency commission charges, if any.

(iv)   Wherever applicable, the cost towards the installation, commissioning, spares, extended warranty, site preparation and training including any incidental services, if any.

v)   **CAMC for 4th and 5th Year (after 3 years warranty period)**

1.32 Evaluation and comparison of bids

EXISTING

1.32.7

The bids shall be evaluated on the basis of final landing cost which shall be arrived as under:

For goods manufactured in India

(i)   The price of the goods quoted ex-works including all taxes already paid.

(ii)   GST and other taxes, if any which will be payable on the goods if the contract is awarded.

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(iii)   Charges for inland transportation, insurance and other local services required for delivering & installing   the goods at the respective destinations.

(iv)   Wherever applicable, the cost towards the installation, commissioning, spares, extended warranty, site preparation and training including any incidental services, if any.

For Goods manufactured abroad

(i)   The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule form.

(ii)   The charges for insurance and transportation of the goods to the port / place of destination both by Air/Sea.

(iii)   The agency commission charges, if any.

(iv)   Wherever applicable, the cost towards the installation, commissioning, spares, extended warranty, site preparation and training including any incidental services, if any.

AMENDED TO READ AS

1.32.7

The bids shall be evaluated on the basis of final landing cost which shall be arrived as under:

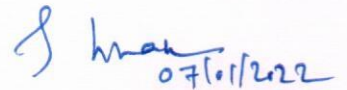### For goods manufactured in India

    i. The price of the goods quoted ex-works including all taxes already paid.

    ii. GST and other taxes, if any which will be payable on the goods if the contract is awarded.

    iii. Charges for inland transportation, insurance and other local services required for delivering & installing   the goods at the respective destinations.

    iv. Wherever applicable, the cost towards the installation, commissioning, spares, extended warranty, site preparation and training including any incidental services, if any.

    v. CAMC for 4th and 5th Year (after 3 years warranty period)

For Goods manufactured abroad

(i) The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule form.

(ii) The charges for insurance and transportation of the goods to the port / place of destination both by Air

(iii) The agency commission charges, if any.

(iv) Wherever applicable, the cost towards the installation, commissioning, spares, extended warranty, site preparation and training including any incidental services, if any.

(v) CAMC for 4th and 5th Year (after 3 years warranty period)

The modified BOQ prepared accordingly to quote for CAMC prices is hosted in CPP Portal which only shall be used for submitting the Financial Bid.

07/01/2022

[S. GNANAPRAKASAM]
Sr. Controller of Stores & Purchase

Bidder - M/s. NEC Corporation India Pvt Ltd

1.

	REFERENCE OF BIDDING DOCUMENT	File No. 5511/220221/1772/EQPT			
S. No.	Page No./Clause No./SubClause No.	Clause Particulars	NEC requested amendments	NEC Justification	CCMB's Response
1	Page No-74/ Terms & Condition: 8	Bidder should have executed at least 2 HPC Cluster projects (at least one cluster of the size 100TF CPU-CPU or CPU-GPU) during last 5 years in India using an architecture and technologies similar to this tender in premier Govt Indian academic and research institutions like IISc, TIFR, IISER, IIT, JNCASR or other govt education & research organizations' in India. Details/Proof (Purchase order, installation report) of the same must be submitted with technical bid.	"**Bidder** should have executed at least 2 HPC Cluster projects (at least one cluster of the size 100TF CPU-CPU or CPU-GPU) during last 5 years in **India/ Global** using an architecture and technologies similar to this tender in premier Govt Indian academic and research institutions like IISc, TIFR, IISER, IIT, JNCASR or other govt education & research organizations' in India or Global Details/Proof (Purchase order, installation report) of the same must be submitted with technical bid. "	As this is a Global Tender Enquiry (GTE) for Supply, Installation, Testing and Commissioning of High Performance Computing (HPC) Facility, Making it as requested will help in better and maximum participation of bidders/OEMs having relevant experience for similar HPC projects also by considering Global experience for the same.	**To ensure proper installation experience by bidder only required. However global experience is acceptable. Hence experience criteria is modified below as** "**Bidder** should have executed at least 2 HPC Cluster projects (at least one cluster of the size 100TF CPU-CPU or CPU-GPU) during last 5 years in **India/Global** using an architecture and technologies similar to this tender in premier Govt Indian academic and research institutions like IISc, TIFR, IISER, IIT,JNCASR or other govt education & research organizations' in India. Details/Proof (Purchase order, installation report) of the same must be submitted with technical bid.
2	Page No-70/ Terms & Condition: 9	Request you to kindly change this clause to " Bidder must have supplied 2 x PFS solutions (100TB or more) earlier in the past along with HPC Solutions during last 5 years in India using an architecture and technologies similar to this tender out of which 2 installations should have been done in premier Govt	" **Bidder/OEM** must have supplied 2 x PFS solutions (100TB or more) earlier in the past along with HPC Solutions during last 5 years in **India/ Global** using an architecture and technologies similar to this tender out of which 2 installations	As this is a Global Tender Enquiry (GTE) for Supply, Installation, Testing and Commissioning of High Performance Computing (HPC) Facility, Making it as requested will help in better and maximum participation of bidders/OEMs having	**Accepted.**

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		Indian academic and research institutions like IISc, TIFR, IISER, IIT, JNCASR or other govt education & research organizations' in India. Details/Proof (PO, installation report) of the same must be submitted with technical bid.	should have been done in premier Govt Indian academic and research institutions like IISc, TIFR, IISER, IIT, JNCASR or other govt education & research organizations' in India/Global. Details/Proof (PO, installation report) of the same must be submitted with technical bid.	relevant experience for similar HPC projects also by considering Global experience for the same.	
3.	Pag No - 69/ A.1. Master Node (1 No) & Storage Nodes (2 Nos):3Nos.	The OEM should have a minimum of 10 entries in the worldwide Top 500 Supercomputer list (https://www.top500.org/) consistently in each list published in the last three years from June 2017 onwards or should have a minimum of 5 entries in India Top Supercomputer list (http://topsc.cdacb.in) consistently in each list published in the last three years from July 2017 onwards. (Please provide documentary evidence)	Request you to kindly change this clase to as mentioned below: The **OEM/ BIDDER** should have a minimum of 10 entries in the worldwide Top 500 Supercomputer list (https://www.top500. org/) consistently in each list published in the last three years from June 2017 onwards or should have a minimum of 5 entries in India Top Supercomputer list (http://topsc.cdacb.in) consistently in each list published in the last three years from July 2017 onwards. (Please provide documentary evidence)	This will help maximizing the BID participation for this tender requirement.	Accepted

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	REFERENCE OF BIDDING DOCUMENT	File No. 5511/220221/1772/EQPT		
S. No.	Tender Clause		Required Amendment Points	CCMB's Response
1	4.2 Specifications for Master Node and All Compute Node			
	OEM	The OEM should have a minimum of 10 entries in the worldwide Top 500 Supercomputer list (https://www.top500.org/) consistently in each list published in the last three years from June 2017 onwards or should have a minimum of 5 entries in India Top Supercomputer list (http://topsc.cdacb.in) consistently in each list published in the last three years from July 2017 onwards. (Please provide documentary evidence)	Requesting you to kindly relax this point	CCMB requires a proven quality product for genomics research and it cannot be relaxed.
2	A.5. Storage system – PFS 300 TB usable – 1 No			
	Storage Quality Certification	The storage OEM should be in latest 2020 Gartner Leader Quadrant report.	Requesting you to kindly relax this point	Storage OEM should have a quality assurance because the loss of sample raw data cannot be afforded as it may not be possible to regenerate the original data and it cannot be made to store elsewhere. Since it is a global tender, international market research needs to be considered as a quality mark for the storage. Hence Gartner Leader Quadrant report cannot be relaxed.
3	Terms and Conditions –			

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8	Bidder should have executed at least 2 HPC Cluster projects (at least one cluster of the size 100TF CPU-CPU or CPU-GPU) during last 5 years in India using an architecture and technologies similar to this tender in premier Govt Indian academic and research institutions like IISc, TIFR, IISER, IIT, JNCASR or other govt education & research organizations' in India. Details/Proof (Purchase order, installation report) of the same must be submitted with technical bid.	Bidder should have executed at least 2 HPC Cluster projects (at least one cluster of the size 25TF CPU-CPU or CPU-GPU) during last 5 years in India using an architecture and technologies similar to this tender in premier Govt Indian academic and research institutions like IISc, TIFR, IISER, IIT, JNCASR or other govt education & research organizations' in India. Details/Proof (Purchase order, installation report) of the same must be submitted with technical bid.	At least 80 TF of cluster size is required
9	Bidder must have supplied 2 x PFS solutions (100TB or more) earlier in the past along with HPC Solutions during last 5 years in India using an architecture and technologies similar to this tender out of which 2 installations should have been done in premier Govt Indian academic and research institutions like IISc, TIFR, IISER, IIT, JNCASR or other govt education & research organizations' in India. Details/Proof (PO, installation report) of the same must be submitted with technical bid.	Bidder must have supplied 2 x PFS solutions (100TB or more) OR NAS Storage earlier in the past along with HPC Solutions during last 5 years in India using an architecture and technologies similar to this tender out of which 2 installations should have been done in premier Govt Indian academic and research institutions like IISc, TIFR, IISER, IIT, JNCASR or other govt education & research organizations' in India. Details/Proof (PO, installation report) of the same must be submitted with technical bid.	No change is allowed as both PFS and NAS follow different architecture and experience in PFS is only required for our HPC requirement.

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REFERENCE OF BIDDING DOCUMENT				
A.1 Maste Nodes (2 Nos) and Storage Nodes (2) Nos: 4 Nos				
	Description	Changes / Clarifications	Remarks	CCMB's Response
Ethernet ports -10G	2 x 10Gbps ports BaseT with cables	Please clarify - Switch to be used for connectivity for 10Gb BaseT ports. And also clarify the "10Gb BaseT Ports" are required on Master Node only or both Master and Storage Nodes	As "A.7 Management network switch: 1 No " requests for 48x 1Gb & 2x 10Gb SR SFP+ ports.	Required for both Master Node and Storage.
SAS port	12Gbps SAS HBA (Qty as required)	Please clarify - Is any requirement for connectivity to External SAS Storage? "12Gbps SAS HBA" is required for only Storage Nodes to connect to the Storage. Do Master Nodes need the "12Gbps SAS HBA"?	If specified offers levels play across all OEM's and helps department to do Apple-to-Apple Comparison between Bidders.	Yes, for future Requirement. connectivity to External SAS Storage Yes, Master Nodes need the 12Gbps SAS HBA

A.2. Compute Nodes (Model 1):16 Nos				
Parameters	Description	Changes / Clarifications	Remarks	
Memory / Slots	256 GB DDR4 RAM with DIMM slots supporting 3200 MT/s or higher	256 GB DDR4 RAM with DIMM slots supporting 3200 MT/s or higher, Balanced Memory Configuration	Balanced Memory offers the Optimal Performance required in the HPC Solution Workloads. If specified offers levels play across all OEM's and helps department to do Apple-to-Apple Comparison between Bidders.	Accepted as 256 GB DDR4 RAM with DIMM slots supporting 3200 MT/s or higher, Balanced Memory Configuration
Disks configured	2 x 480GB SSD SAS/SATA	Please Clarify - SSD Type RI/MU/ WI	If specified offers levels play across all OEM's and helps department to do Apple-to-Apple comparison between Bidders.	SSD Type SAS/SATA -MU

A.3. Compute Nodes (Model-II):2 Nos				
Parameters	Description	Changes / Clarifications	Remarks	
Memory / Slots	256 GB DDR4 RAM with DIMM slots supporting 3200 MT/s or higher	256 GB DDR4 RAM with DIMM slots supporting 3200 MT/s or higher, Balanced Memory Configuration	Balanced Memory offers the Optimal Performance required in the HPC Solution Workloads. If specified offers levels play across all OEM's and helps department to do Apple-to-Apple	Accepted as 256 GB DDR4 RAM with DIMM slots supporting 3200 MT/s or higher, Balanced Memory Configuration

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Parameters	Description	Changes / Clarifications	Remarks	
Disks configured	6 x 480GB SSD	Please Clarify - SSD Type SAS/SATA - RI/MU/ WI	If specified offers levels play across all OEM's and helps department to do Apple-to-Apple Comparision between Bidders.	SSD Type SAS/SATA -MU

A.4. Compute Nodes (Model-III):6 Nos

Parameters	Description	Changes / Clarifications	Remarks	
Memory / Slots	1 TB DDR4 RAM with DIMM slots supporting 3200 MT/s or higher	1 TB DDR4 RAM with DIMM slots supporting 3200 MT/s or higher, Balanced Memory Configuration	Balanced Memory offers the Optimal Performance required in the HPC Solution Workloads. If specified offers levels play across all OEM's and helps department to do Apple-to-Apple Comparision between Bidders.	Accepted as 1 TB DDR4 RAM with DIMM slots supporting 3200 MT/s or higher, Balanced Memory Configuration
Disks configured	2 x 480GB SSD	Please Clarify - SSD Type SAS/SATA - RI/MU/ WI	If specified offers levels play across all OEM's and helps department to do Apple-to-Apple Comparision between Bidders.	SSD Type SAS/SATA -MU

A.5. Storage PFS 300TB

Parameters	Description	Changes / Clarifications	Remarks	
Fast rebuilds	Storage must offer fast rebuild capability for replacing failed drives. Rebuilding 4TB or higher	Storage must offer fast rebuild capability for replacing failed drives. Rebuilding 4TB or higher capacity drive should be 24 hours or higher while system is live.	In real time scenario the "Rebuilding 4TB" takes more than 24 hours and is common across all OEM's.	Accepted as rebuilding 4 TB or higher capacity drive should be 24 hours or higher value while system is alive.

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Parameters	Description	Changes / Clarifications	Remarks	
Server Monitoring & Management	Server Monitoring & Management A. Solution should provide single console management of all servers from the same OEM for deployment, configuration, updates, monitoring & management. B. Hardware profile-based deployment and Policy template for single policy deployment to multiple servers simultaneously. C. Platform inventory, health status & alerts through single dashboard. D. Support for Restful API, SDK for programming languages like Python, power shell scripts etc. E. Should support customizable dashboard to show overall faults, health, performance utilization, inventory for all servers & unique dashboards for individual users. F. Support for telemetry streaming for analytics and Server configuration backup & restore etc. G. Should provide an online portal that can be accessible from anywhere. The portal should provide online access to the product configuration, support information and warranties contracts and status. H. Should support for HTML5 (Java free) graphical remote console and sharing to users simultaneously. I. Applications to access the server remotely using popular handheld devices based on Android or Apple IOS	In HPC Environment / HPC Setup we use the Cluster Management Software to manage the entire cluster from Single GUI. Clause / Section A8 requests for the "Open source web-based cluster management application". Requested features comes with additional Cost and not relevant in the HPC Solution Workloads.	Request you to delete this clause.	**All these are required** for Server Hardware monitoring and Management. Open source web-based cluster management application requires for creation and configuration of HPC cluster.

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	should be available. J. Real-time out-of-band (agent free) hardware performance monitoring & alerting, Predictive failure monitoring; Configurable thresholds; Monitoring for fans, power supplies, Memory, hard disks, NIC, CPU, RAID etc;			
29. Security Features	A. External USB port enable/disable; B. Remote management with SSL encryption, HTTPS, TLS encryption; C. Secure boot; System Erase; TPM; D. Immutable Hardware (Silicon) Root of trust; E. Cryptographically firmware updates	Security Features B. Remote management with SSL encryption, TLS encryption; C. Secure boot; System Erase; TPM; D. Immutable Hardware (Silicon) Root of trust; E. Cryptographically firmware updates	" The "A. External USB port enable/disable" can be offered by using third party software - AV / Host IPS, is not relevant to the HPC Setup, hence request you to delete the clause. Most of the Server support Management Software that uses industry-standard Secure Sockets Layer (SSL) and Transport Layer Security (TLS) encryption of HTTP data transmitted across the network. SSL or TLS encryption (up to 256-bit) ensures that the HTTP information is secure as it travels across the network. Latest Servers from all OEM's support TPM, please clarify its the clause is requesting for the TPM Module support on the Servers and does not request for the TPM Module to be configured with the Servers. The above requested changes / clarifications are related to HPC Solution and is common across all OEM's.	A. The External USB port enable/disable Clause is **deleted**. **B.** Remote management with SSL encryption, HTTPS, TLS encryption; - **Mandatory** C. Secure boot; System Erase; TPM-TPM module should be installed for Master nodes and TPM support should be there for other nodes. D. Immutable Hardware (Silicon) Root of trust E. Cryptographically firmware updates trust is required.

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