INVITATION FOR EXPRESSION OF INTEREST FOR

a TURNKEY PROJECT
HIGH PERFORMANCE COMPUTING (HPC) SOLUTION
WITH DATA CENTER FACILITY

Ref. No. CMS/1314/233 (16/09/2013)
Version: 2.0 (01/10/2013)

by
CENTRE FOR MODELING AND SIMULATION
UNIVERSITY OF PUNE
PUNE - 411 007
INDIA

Notice inviting "Expression of Interest"(EoI) for High Performance Computing system with Data Center facility deployment at Centre for Modeling and Simulation, University of Pune.

1 Purpose of this Document

The Centre for Modeling and Simulation(CMS), University of Pune, plans to purchase a high-performance computing (HPC) cluster system with a data center facility for the needs of in-house scientific research in the area of computational material science. We are looking for a turn-key end-to-end solution complete with hardware, software, implementation and support.

The primary objective of the present call is to seek proposals in two part bid format (i. e. Technical bid and budgetary commercial bid in separate covers) from interested Original Equipment Manufacturers or System Integrators for the next generation IT infrastructure of University of Pune with following features:

Part-I: Supply and Configure a High Performance Compute cluster with necessary components.

Part-II: Build Data-Center to accommodate the proposed HPC system.

2 Scope of work

The scope of the procurement will cover the following tasks:

Part-I: HPC system

1. Supply and installation of compute and storage requirement based on benchmark suite with latest hardwares and softwares (see the section 2.1 for **minimum** requirements).
2. Supply and installation of latest standardized softwares, scientific libraries, compilers for HPC system.
3. Providing 24×7×4 (4 Hrs. response time) operational support for hardware by the OEM, and systems software and storage by the bidder for a period of THREE years post installation and acceptance.
4. The following applications will be used. The list is not exhaustive and may change.
   VASP, Wein2K, Quantum Espresso, SIESTA, ABINIT, Nanolab, TranSIESTA, GAMESS, Gaussian, MedeA-VASP, GROMACS, NAMD, LAMPS.

Part-II: Data Center facility

5. Building a data center facility to accommodate the proposed HPC system with flexibility and 20 percent scalability, UPS systems, diesel backup power systems, fire retardant system (that is, dry systems), security monitoring systems, Rodent Repellent System, mechanical systems (such as HVAC), maximum (peak) 15kW

to 20kW per Rack load, and of minimum tier II type. Either precision cooling or in row cooling solution will be preferred. We will provide RAW power and 750 sq. ft. room with approximate height of 12 ft.

6. Total space requirement or sq. ft / rack, total power consumption and separate cost of each component (mentioned above) need to be provided by the vendor.
7. Providing 24×7×4 operational support for a period of THREE years post installation and acceptance.
8. OEM need to give following information:
   Total number of racks required, total power requirement for the system and cooling, all details like cooling type etc.
9. The entire data center has to be implemented as a turnkey solution that includes electrical, mechanical, network, and some civil work. This also includes OEM racks, fire warning, access control system etc.
10. The scope of the work and technical specifications are not final and may evolve / modified during the process of tendering.

2.1 Technical Specifications:

1	**System Architecture**	Tightly integrated cluster with QDR / FDR Infiniband interconnect. Both blade and rack based architectures are acceptable.
2	**Compute Power**	A base system of at least 45 TFLOPS (only CPU i.e. without any accelerator (MIC) or GPU) of sustained compute power on HPL (turbo off). Vendor should provide an indicative budget of the proposed solution. The incremental cost along with all necessary hardware, licenses and software components with technical details for enhancing the system in a step of size 5 TFLOPS sustained HPL to scale the base system upto 70 TFLOPS should be provided. Proposed solution should have additional 4 nodes with latest NVIDIA GPU and 4 nodes with Intel Xeon Phi Accelerator in 1:1 (CPU:GPU or CPU:MIC) proportion.
3	**Processor**	64 bit processor Intel Xeon E5-2695 V2 series at 2.4 GHz clock speed (or higher) or AMD Opteron (Abu Dhabi) at 2.5 GHz (or higher) or Power7+ at 4.2 GHz (or higher) or equivalent.
4	**Interconnect Topology**	100% non-blocking QDR / FDR Infiniband interconnect or equivalent.

5	**Operating System**	64-bit Linux open source. Preferably latest version of ROCKS.
6	**Compute nodes**	The compute nodes should be either blade based with blade enclosure or chassis based with chassis enclosure designed for HPC solution. Node should be hot pluggable with RAS features.
7	**Memory**	At least 128 GB per node DDR3 at 1333 MHz or better (1600 MHz would be preferred) or 1066 MHz. 20 percent of total CPU nodes of a proposed solution should have 192 GB per node DDR3 at 1333 MHz or better (1600 MHz would be preferred) or 1066 MHz.
8	**HDD**	The compute node should have 1×300 GB SATA HDD for operating system.
9	**High Performance Linpack (HPL) Benchmarking**	Vendor should report the best HPL performance and efficiency on the base system proposed with turbo mode off.

Software and Implementation

10	**General Requirements**	The proposed HPC cluster system should be deployed with (a) an open-source Linux-based operating system with adequate device driver support; tools for cluster installation and management that support node-group and repository manager for deploying updates, patches, etc., or for quickly re-imaging new nodes with no interruption in uptime; (b) compilers, MPI, and code development tools; tools for monitoring cluster health, resource usage; and a job scheduler (c) installation/integration of user-specific scientific applications (see sec. 2); (d) integration of all software components so as to make the complete HPC cluster system fully functional and usable (e.g.,integration of the scheduler with MPI, any license managers, etc.).
11	**Operating System**	Open source Linux based HPC Operating system.

12	**Workload and Cluster Management**	Latest stable release of a reputed workload and cluster management software suite. Scheduling and cluster management software should support policy-based workload management, graphical cluster administration interface, monitoring and reporting tools, and a job scheduler etc.
13	**Compilers and MPI**	IntelR Cluster Studio XE 2013 or better for Linux OS - 5 Users floating Academic with 3 years Support (ESD) - Quantity 1
14	**Scientific Applications**	Installation, integration and any performance tuning of (a) standard numerical libraries (BLAS, LAPACK, ATLAS, FFTW), (b) All the packages mentioned in section 2 (source codes will be provided by us) and other standard open-source scientific tools/applications in consultation with the CMS's technical team.
15	**HPC Cluster Implementation**	End-goals of implementation are (a) the deployment of the HPC cluster system complete with hardware, OS, cluster ware and user-specified software, so that it is functional and usable for the end-user for scientific/computational research and (b) a clear demonstration of the same.

Login Nodes (2 units dedicated)

16	**Configuration**	2 dedicated units which will act as Master nodes of configuration: Dual socket servers with processor Intel / AMD / Power7+ (Equivalent to compute node). Minimum 128 GB DDR3-1600MHz or 1066 MHz RAM. At least 3 numbers of SATA, total raw capacity at least 3 TB with Hardware RAID 6 controller. BIOS with capability to boot from LAN (PXE boot) and USB. 2 × 1 GbE network ports with PXE boot capability. Al least 4 USB ports. DVD +/- RW drive Redundant and hot-plug power supply. 2 IB ports Vendor should ensure that both Master node should work in High availability mode to the important services like scheduler, cluster management, authentication services, monitoring compute node and kick start services.

Storage and Backup

17	**Storage and Backup**	Storage solution of at least 200 TB usable after hardware Raid 6 and post-formatting capacity. Based on open source parallel distributed file system commercially supported by vendor (Preferably Luster 2.0 or equivalent or above). Minimum IOR performance of aggregate 8 GB/sec (read and write at 50/50 ratio) from simultaneous read / write from any combination of head/ compute nodes using RAID for HOME and SCRATCH. Additionally 100 TB of storage system (preferably disk) for data backup with 2-4GB/s of write throughput separately for backup area. Complete details of solution, including details of MDS/OSS/OST/Storage controllers/software as applicable, details of redundancy, reliability and resilience, and details of access method and performance from head/compute nodes, to be provided in technical bid. **No single point of failure** in entire storage solution. Head Nodes / OSS to have Dual Rail Infiniband Interface QDR or above. The storage and file system should be scalable to 500TB and 20 GB/s of RW throughput.
18	**RAID Support**	6
19	**Individual Disk**	3 TB or higher capacity enterprise class SATA at 7200 RPM or better.
20	**Optional storage** (just for budgetary)	Storage solution with 200 TB usable capacity, same as mentioned above. Out of total space 100 TB with SAS with 8 GB/Sec write throughput and 100 TB with SATA with 4 GB/Sec write throughput.

Warranty and support and power requirements:

21	**Warranty**	24×7×4 operational support for a period of 3 years of comprehensive replacement warranty from the date of installation and commissioning.

22	**Training**	Two weeks of on site training on system administration, storage management and usage of the HPC server must be provided to CMS technical team
23	**Site requirements**	Detailed site preparation document should be given. Details of power consumption, heat dissipation and cooling requirements should be specified. Space requirement should be specified. Details of noise generation by the system should be given. Rough running cost needs to be provided.

3 Pre qualification for participation

Definitions:

VENDOR: shall mean the original Equipment Manufacturer (OEM) of HPC system.

BIDDER: shall mean a proprietary firm, a firm in partnership, a limited company (private or Public) or a corporation. It can be OEM or the singly authorized partner of an OEM, who will actually make a bid.

YEAR: shall mean the 'Financial Year'. (except for the warranty and support period)

SIMILAR WORK: shall mean supply, installation, testing and commissioning of at-least 60 node HPC cluster with a turnkey data center facility.

1. **Vendor Eligibility**: A OEM must satisfy the following requirements to be eligible to express interest.
   (a) International original equipment manufacturers (OEM) with proven track-record in building and supporting HPC cluster platforms for scientific research.
   (b) Continuous presence on `http://www.top500.org/` during last three years, with minimum 5 entries in the latest release of June 2013 list.
   (c) Adequate documented experience during last three years in setting up minimum 3 HPC clusters capable of at least 50 TFlops sustained performance and data center facility.

(d) Adequate support infrastructure in India (preferably in the Pune region).

(e) Adequate representation in India's scientific establishments.

2. **Vendor Representation**: An eligible vendor may designate, at their discretion and convenience, only one designated partners to,

   (a) represent the vendor during the process,

   (b) for implementing the HPC cluster system with data center facility and

   (c) for providing all post-implementation service and support.

   Vendor with more than one partner will be disqualified.

3. **Designated partners Eligibility**: A partner must satisfy the following requirements to be eligible

   (a) Designated partner must be provided with explicit authorization letters, in original, from the OEM, clearly stating that the bidder is an authorized dealer of OEM as well as they (OEM) would facilitate the bidder on regular basis with technology / products updates and extend support for the warranty period. In absence of such undertaking, the EoI document is liable to be rejected.

   (b) Partner should have experience of implementing and supporting minimum 3 Linux based HPC cluster systems during last three years in scientific establishments in India.

   (c) Out of these three HPC systems, at least one must be of size 20 TF (peak) or more and remaining two must be of size of at least 5TF (peak) or above, in government organizations. Partner needs to provide relevant PO (which must be in the name of partner), contract, installation report.

   (d) Partner should have experience of building and supporting data center facility. Adequate documented experience during last three years in setting up data center facility needs to be provided by the partner.

   (e) Partner needs to provide a document showing a minimum annual sales turnover of ₹ 50 Crores during the last three consecutive years.

   (f) Partner must have a sales and service office in Pune

4. **Single-Point-of-Contact Support**: We require a single point of contact with the vendor (OEM) for Hardware and purchase process, and with bidder for implementation, post-implementation and warranty support.

5. Participation in the EoI is an essential and necessary condition to participate in tendering process.

4 Benchmark Tests for Technical Evaluation

Technical evaluation of a proposed HPC cluster solution will be based on the results of a number of benchmark tests described below in Sec. 4.1. Our benchmark tests have been designed in consideration of the computational resource usage profile (i.e, heavy number-crunching by and large, with moderate to heavy I/O in spurts) of the actual tools that will be used for the scientific research using the proposed HPC cluster. The benchmarks upto 16 nodes should be run by the OEM only who is responding to this EoI. The benchmark done on less than 16 nodes by any other third party will not be accepted.

The HPC cluster system used for benchmarking must satisfy all other minimum requirements (Sec. 2.1). The benchmarking must be done with CPU only for all tools mentioned below.

Specifically, we need the following data for each of the benchmark tests described in Sec. 4.1:

1. The following results on 1, 2, 4, 8, 16, ... , N/3, N/2 Compute nodes (where N is the number of compute nodes proposed, Excluding nodes used for accelerator / GPU):
   - Run time, as provided by the Unix time command or equivalent.
   - Output generated by each of the runs (`stdout, stderr`, plus any output files). Please make sure that output files do not get overwritten across runs over different number of cores.
2. Complete and detailed configuration information (hardware configuration + software setup) of the HPC cluster that was used to run these benchmark tests.
3. Output (`stdout+stderr`) of the compilation sequence for the tools below.
4. Number of nodes and peak performance (TF) versus benchmark timings.

4.1 Benchmark Programs

4.1.1 VASP

VASP-5.3 (http://www.vasp.at/), The Vienna Ab initio Simulation Package (VASP) is a computer program for atomic scale materials modeling, e.g. electronic structure calculations and quantum-mechanical molecular dynamics, from first principles.

4.1.2 Quantum ESPRESSO

Quntum ESPRESSO (http://www.quantum-espresso.org/) is an integrated suite of Open-Source computer codes for electronic-structure calculations and materials modeling at the nanoscale. It is based on density-functional theory, plane waves, and pseudopotentials.

4.1.3 GROMACS

GROMACS (http://www.gromacs.org/) is a versatile package to perform molecular dynamics, i.e. simulate the Newtonian equations of motion for systems with hundreds to millions of particles.

P.S.: All input and README files for above packages are available on the URL: `http://cms.unipune.ac.in/announcements/2013-10-28-1459/`

5 Evaluation process

step 1: Interested bidders may express their willingness in writing by responding to all the points mentioned in section 2, 3 and 4 above with documentary evidence before 28 October 2013 at 15:00 hrs.

step 2: CMS shall review the proposal and call the bidders for a presentation or clarification if required.

step 3: CMS will short list the bidders based on section 2, 3 and 4 above.

step 4: Only the short listed bidders will be allowed to participate in the next stage of tendering process.

6 Instructions to Bidders

1. The instructions mentioned should be read carefully by the organizations before submitting the bid.
2. CMS may ask for clarification or further information to evaluate the EoI.
3. If any information sought in this document is missing or not clearly specified by the bidder, it will be assumed that the Organization is not in position to supply the information.
4. This document is not a Request for Proposal (RFP). After evaluation of EoI, the shortlisted bidders will be provided with full set of tender documents and they should furnish their proposal in two part bid system. i.e. Technical bid and Commercial bid in separate covers.
5. For all the proposed components bidder should give a budgetary proposal as well in a separate cover.
6. Bidder needs to provide an additional cost required to give additional 2 year comprehensive support for Hardware, software licenses, support for data-center and post-implementation support.
7. Please note that two parts mentioned in section 2 are integral parts and any bidder has to provide bid for both.
8. The CMS reserves the right to cancel the EoI process at any time without assigning any reason thereof. CMS will not be liable for any loss which may incur to any

bidder because of this cancellation.

9. An undertaking (self certificate) that the Organization has not been blacklisted by any Central/State Government Department/Organization is to be submitted.
10. Please note that all the pages of EoI documents should be signed with date and seal of the organization.
11. Bidder should have all the necessary statutory requirements like registration of Sales Tax, Service Tax, TIN, LST/CST, VAT, PF, ESI, PAN etc. Enclose proof thereof.
12. Solvency certificate (not older than twelve months) for Rupees One Crore issued by nationalized bank with which bidder holds the current account.
13. A bidder can submit only one bid.
14. A bidder may propose alternative options to the components in a same bid, if available.
15. One OEM can authorize only one authorized partner for the execution of this solution. Conversely, one partner can represent only one OEM for the execution of this job.
16. The bidder should have at least 1 installation of similar work in past 3 years.
17. Bidder should have an experience of the process required for Data Center ISO certification. After satisfactory installation, bidder may have to help CMS in getting the ISO certification done.
18. Canvassing in any form would disqualify the bidder from further participation.
19. All the submitted proposals will be scrutinized on the basis of documents and information furnished by the bidder.
20. CMS may obtain clarifications wherever required from the company or from the referred client list in the profile. Based upon the benchmarking, power efficiency, heat generation, scrutiny, officers of those companies / industries that fulfill the pre qualification criteria presentation / interaction on proposed methodology and other conditions as stated above would be shortlisted and that will be final binding on the bidders.
21. Bidder shall also comprehensively maintain the data center and other infrastructure for trouble free operations for a period of 3 years from the date of commencement (extendable for 2 more years).
22. Tender document for all above requirements will be issued only to technically and financially qualified potentials bidders.

7 EoI Documents:

EoI shall contain the following documents in techno-commercial format in addition of above mentioned

1. Covering Letter
2. Bidder's Information (Format A-1)
3. Certificate of Incorporation
4. Details of Similar works completed in last three years (Format A-2a)
5. Certificate of completed work from other customers (Format A-2b) and installation report(s).
6. Financial information (Format A-4)
7. Proposed project execution Methodology (In Applicant's Formant)
8. Authorization by OEM (in case OEM is not bidder) (Format A-5)
9. Proposed High Level Project plan for implementation of work for CMS (in Applicant's format)
10. Proposed solution details (Format A-3)
11. The benchmark details along with configuration of the system used.
12. Solvency certificate (not older than 12 months)
13. Single point of contact information from OEM and bidder (if bidder is not OEM)
14. Detailed information on key technical strengths in understanding the requirement.
15. Suggestions and views, if any for HPC and data center solution requirements of CMS.
16. Budgetary Proposal for proposed components (in separate cover). .
17. Last date of submission is **28 October 2013 at 15:00 hrs**.
18. Submission of EoI: EoI should be submitted in two separate sealed envelopes clearly marked "**EoI for High Performance Computing and Data Center solution: Technical bid / Budgetary Commercial bid**", and addressed to:

    The Director
    Centre for Modeling and Simulation
    University of Pune
    Pune 411 007
    Maharashtra
    INDIA
    Phone: +91-20-25690842

Please note:

1. All information called for in the enclosed forms should be furnished in same format. If any particulars are not applicable in case of the bidder, it should be stated as not applicable. However the bidder is cautioned that not giving complete information called for in the application format or not giving it in clear terms or making any change in the prescribed format or deliberately suppressing the information may result in the bidder being summarily disqualified. Applications received after last date will not be entertained.
2. The application should be typewritten / printed.
3. All the pages of the EoI document shall be numbered and submitted as a package with signed covering letter.

Interested firms may submit the EoI to Centre for Modeling and Simulation, University of Pune on or before 28 October 2013 at 15:00 hrs and be ready with technical presentation of their proposed design with all relevant technical specifications, installation schedule and company profile etc.. The date and time of same will communicated separately.

For any clarification the bidders are advised to contact

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FORMAT A-1

BIDDER INFORMATION

(on Bidders Letterhead)

Sr. No.	Description / Requirements	Response
01	Bidder's Legal Name	
02	In case of a consortium, legal name of each party:	
03	Bidder's actual; or intended Country of Registration / INC	
04	Bidder's Year of registration / INC (Attach photocopies of original documents of articles of incorporation or registration of firm	
05	Bidder's Legal Address in country of Registration / INC	
06	Bidder's Authorized Representative's Name:	
	Address:	
	Telephone / Fax Numbers:	
	Email Address:	
07	Is your organization blacklisted by any Central / State Government Department / Organization? (if yes provide details in a separate sheet)	
08	Type of the Bidder	OEM / SI
09	Number of Data-Centers more than 500 Sq. ft. size (provide the information as well as supporting documents of system installed in last three years)	
10	One Similar case with around 60 nodes of HPC and DC build at the same customer location	

11	**If bidder is SI**: 1. Number of HPC projects of size more than 20 TF carried out in past. Also provide info about projects with co-processor / Accelerators. (Provide the information as well as supporting documents of system installed in last three years) 2. Number of HPC projects of size more than 5TF and less than 20 TF carried out in last three years	
12	**If bidder is OEM**: Number of HPC projects of size more than 50 TF carried out in last three years	
13	Is it possible to visit the installation site in case desired. Please provide the contact details of customers with email address.	Yes / No
14	Experience in providing user support and help desk	
15	Facility of NOC to support remotely	
16	Number of trained staff in support the setup. Please provide the details of Engineers with their phone numbers	

Date of Submission: Signature of Bidder

FORMAT A-2a

DETAILS OF SIMILAR WORK COMPLETED IN LAST 3 YEARS

(Use similar format for each project separately)

Description / Requirements	**Response**
Name of Work	
Name of Customer	
Detailed Description of the Work	
PART I: • Details of HPC • Total number of compute nodes • Total number of CPU cores • Details of Accelerator / Coprocessor (if any) • Performance on HPL Benchmark using CPU cores (in TFlop/s) • Rpeak (TFlop/s) • Total Power consumption (kW) • Total Delivery (Flop/Wattage) • Storage Details	
PART II: • Total Power used in Data Centre (in kW) • Total IT Load (kW) • Total Non-IT Load (kW) • Capacity of Chillers/CRAC/PACS Units • Total Number of IT Racks • Maximum power density per rack (kW) • Cooling technology used • Kind of Security Systems Installed	
Power usage efficiency (total power / IT power)	
Approximate Value of Contract (In ₹ Crore)	
Location of the Work	
Duration of the job (months)	
Originally Planned Date of Completion	
Actual Date of Completion	
Name of Associate Contractors and functions performed (if any)	

Name of Senior professional staff of your firm involved and functions performed	
Customer Contact Person, Designation, Email and Phone Number	
Any Litigation/ Arbitration and Status Thereof	
In case of delay, the principal reason for the same	

Date of Submission: Signature of Bidder

FORMAT A-2b

CERTIFICATE OF COMPLETED WORK FROM PAST CUSTOMERS

(Furnish this information for each individual work from the CUSTOMERS referred in Forms A-2a for whom the work was executed)

1. Name of work / Project and Location

2. Agreement/Purchase Order Number

3. Estimated Cost

4. Tendered Cost

5. Date of Start

6. Date of Completion

   a) Stipulated date of completion

   b) Actual date of completion

7. Amount of compensation levied for delayed completion if any.

8. Performance on HPL Benchmark using CPU cores of HPC system (in TFlop/s)

9. Performance report

Quality of Work	Excellent/ Very good/ Good/ Fair
Resourcefulness	Excellent/ Very good/ Good/ Fair
Responsiveness	Excellent/ Very good/ Good/ Fair
Accessibility to Management when needed	Excellent/ Very good/ Good/ Fair

10. Name of Institute/ Chief Project Manager or Equivalent

11. Contact Details

12. Would you award work again to this Contractor Yes/ No

Date:
Place: (Seal of the Customer) Signature

FORMAT A-3

DETAILS OF SOLUTION PROPOSED

Sr. No.	Description / Requirements	Response
	PART-I: HPC system	
01	Total number of Compute node (without GPU/MIC)	
02	Processor Used (type, Frequency)	
03	Memory Configured	
04	Peak Performance (TFlop/s) (without GPU / accelerator machines)	
05	Performance with HPL (TFlop/s) (without GPU / accelerator nodes)	
06	Infiniband Configuration (type, total ports, switches, cables)	
07	GPU Cards details with number	
08	Intel Xeon Phi details with number	
09	The storage capacity (usable)	
10	Total HDD type with RAID-5/6 group details	
11	Total throughput expected (without backup HDD)	
12	Backup provision details	
13	File system details (type, total IO server required, total Metadata server required)	
14	Connectivity type front and back end	
15	Compute node dimensions with details	
16	Login node Details	
17	Total Power required (kW) (IT Load)	
18	Total Rack Space required (compute, storage, switches)	

Sr. No.	Description / Requirements	Response
PART-II: Data Center facility		
19	Total Cooling required (for proposed IT load)	
20	Details of Cooling technology proposed	
21	Total Non-IT Load (kW)	
22	Capacity of Chillers/CRAC/PACS Units (if used)	
23	Total Number of Racks (42U OEM)	
24	Total Number of additional Racks proposed	
25	Maximum power density per rack (kW) (excluding point 24)	
26	Kind of Security Systems proposed	
27	Total space required (inside/outside)	
28	Total Power required (IT and NON-IT)	
29	Details of UPS proposed	
30	Details about Generator proposed	
31	Power usage efficiency (total power / IT power)	
32	Over all Heat Generation	
33	Rough running cost of entire system (including Power, coolant etc.) (Per year) Bidder may consider unit rate per kW for power to ₹ 7	

Date of Submission: Signature of Bidder

FORMAT A-4

FINANCIAL DETAILS

2012-2013	2011-2012	2010-2011
Annual Turnover for Last 3 Years (in ₹ Crore)		
Annual Turnover from Similar Works for Last 3 Years (in ₹ Crore)		

Enclosures:

Audited Annual Financial Report 2012-2013 certified by Chartered Accountant

Audited Annual Financial Report 2011-2012 certified by Chartered Accountant

Audited Annual Financial Report 2010-2011 certified by Chartered Accountant

Date of submission : Signature of Applicant

FORMAT A-5

Letter of Authorization from OEM

Company Letterhead

[DATE]

To,
The Director,
Centre for Modeling and Simulation,
University of Pune,
Pune - 411 007,
Maharashtra, INDIA

Ref: Supply of Equipment / Software / Solution for the EoI (Ref # CMS/1314/233 dated 16/09/2013) for a turnkey project, "High Performance Computing (HPC) solution with data-center facility"

Madam,

We < *Name of the company OEM* > having registered office at < *Address of OEM* > who are established and reputed manufacturers/developers of < ..... > hereby authorize < *Name of the Bidder* > having it's registered office < *Address of Bidder* >, to bid negotiate and conclude the contract with you against the above mentioned EoI for the above equipment/software manufactured /developed by us.

We also hereby undertake the responsibility to provide successful implementation, operations and maintenance of the above mentioned equipment/software for the duration as mentioned in the < *Bidder's name* > contract with CMS for the project.

Yours faithfully,

For and on behalf of < *Name of the firm* >

[Signature]

Name:

Designation:

Date: