

भारतीय उष्णदेशीय मौसम विज्ञान संस्थान  
INDIAN INSTITUTE OF TROPICAL METEOROLOGY  
(पृथ्वी विज्ञान मंत्रालय, भारत सरकार का एक स्वायत्त संस्थान)  
(An autonomous Institute under the Ministry of Earth Sciences, Govt. of India)  
पाषाण ,पुणे - 411008  
PASHAN, PUNE - 411008

अभिव्यक्ति सूचना / EXPRESSION OF INTEREST NOTICE

निदेशक ,भारतीय उष्णदेशीय मौसम विज्ञान संस्थान, डॉ .होमी भाभा मार्ग ,पाषाण ,पुणे - 411008 (भारत) निम्नलिखित की आपूर्ति , प्रवर्तन ,संस्थापन एवं संतोषप्रद निरूपण हेतु निर्माताओं/आपूर्तिकारों एवं उनके प्रत्यायित विक्रय एजेंटों से अभिव्यक्ति की रुचि आमंत्रित करते हैं :

Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, Pashan, Pune - 411008 (India) invites Expression of Interest (EOI) from Manufacturers / Suppliers and their accredited selling agents for the supply, installation, commissioning, integration and satisfactory demonstration of the following.

क्रम सं. Sr. No.	निविदा सूचना सं. EOI Notice No.	विवरण / Description
01.	पीएस/125/01/2021 PS/125/01/2021	पृथ्वी विज्ञान मंत्रालय, भारत सरकार के विभिन्न संस्थानों में स्थापित किए जाने वाले" उच्च प्रदर्शन कंप्यूटिंग एचपीसी " सोल्युशंस की आपूर्ति, स्थापना, कमिशनिंग और संतोषजनक डेमोनस्ट्रेशन <b>SUPPLY, INSTALLATION, COMMISSIONING, AND SATISFACTORY DEMONSTRATION OF "HIGH PERFORMANCE COMPUTING (HPC) SOLUTIONS TO BE INSTALLED AT VARIOUS INSTITUTES OF MINISTRY OF EARTH SCIENCES GOVT. OF INDIA "</b> .

अभिव्यक्ति की रुचि से पूर्व बैठक (ऑनलाइन)

Pre-EOI Discussion Meeting (through Online)

ऑनलाइन मोड पर ईओआई प्रस्तुत करने की अंतिम तिथि

Last date of submission of EOI on online mode

ऑनलाइन निविदा खोलने की तिथि

Opening of EOI online

16 :जुलाई 2021 को 11 00 बजे

: 16<sup>th</sup> July 2021 at 1100 hrs.

:3 अगस्त 2021 को 1200 बजे

: 3<sup>rd</sup> August 2021 at 1200 hrs.

:3 अगस्त 2021 को 1500 बजे

: 3<sup>rd</sup> August 2021 at 1500 hrs.

संस्थान को किसी निविदा या सभी पसंद की अभिव्यक्ति को बिना कारण बताए निरस्त करने का अधिकार है। विस्तृत विवरण एवं बोलियों के प्रस्तुतीकरण हेतु कृपया वेबसाइट <https://moes.euniwizarde.com> देखें। संभावित बोलीदाताओं की जानकारी के लिए निविदा विवरण भी इस संस्थान की वेबसाइट <http://www.tropmet.res.in> एवं सरकार का सेंट्रल प्रोक्यूरमेंट पोर्टल (सीपीपी) <http://www.eprocure.gov.in> पर भी उपलब्ध है।

The Institute reserves the right to reject any or all EOI without assigning any reason thereof. For details and submission of bids please visit website <https://moes.euniwizarde.com> .For the information of the prospective bidders, the EOI details are also available on this Institute's Website: <http://www.tropmet.res.in> and Government's Central Procurement Portal (CPP) <http://www.eprocure.gov.in>.

Sd-

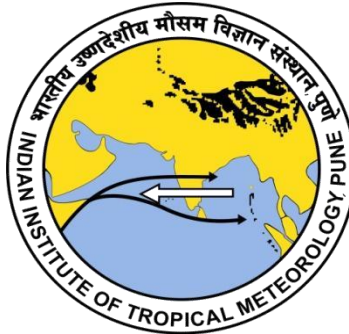
प्रशासनिक अधिकारी, कृते निदेशक  
Administrative Officer, for Director  
ईमेल/Email :psu.iitm@tropmet.res.in

- For <https://moes.euniwizarde.com> instructions kindly refer Annexure- "B"

**INVITATION  
FOR  
EXPRESSION OF INTEREST  
FOR**

**HIGH PERFORMANCE COMPUTING (HPC) SOLUTIONS AT  
OPERATIONAL & RESEARCH INSTITUTES OF MINISTRY OF  
EARTH SCIENCES, GOVERNMENT OF INDIA**

**No:PS/125/01/2021/EOI**



**INDIAN INSTITUTE OF TROPICAL METEOROLOGY  
(AN AUTONOMOUS INSTITUTE UNDER MINISTRY OF EARTH SCIENCES,  
GOVERNMENT OF INDIA)  
DR. HOMI BHABHA ROAD, PASHAN, PUNE - 411 008  
MAHARASHTRA, INDIA**

## **1.0 ABOUT MINISTRY OF EARTH SCIENCES (MoES) & ITS UNITS**

The **Ministry of Earth Sciences** (MoES) is mandated to provide the nation with best possible services in forecasting the monsoons and other weather/climate parameters, ocean state, earthquakes, tsunamis and other phenomena related to earth systems through well integrated programmes. The Ministry also deals with science and technology for exploration and exploitation of ocean resources (living and non-living) and plays nodal role for Antarctic/Arctic and Southern Ocean research. The various Units under the Ministry of Earth Sciences are: India Meteorological Department (IMD), National Centre for Medium Range Weather Forecasting (NCMRWF) Noida, Indian Institute of Tropical Meteorology (IITM) Pune under the Atmospheric Sciences, National Centre for Earth Science Studies (NCESS) Thiruvananthapuram, National Centre for Seismology (NCS) under the Geosciences and Seismology sectors; National Institute of Ocean Technology (NIOT) Chennai, National Centre for Polar and Ocean Research (NCPOR) Goa, Indian National Centre for Ocean Information Services (INCOIS) Hyderabad, National Centre for Coastal Research (NCCR) Chennai, and Centre for Marine Living Resources and Ecology (CMLRE) Kochi under the Ocean Science and Technology sectors. MoES aims to create a framework for understanding the complex interactions among key elements of the Earth System, namely ocean, atmosphere, and solid earth, by encompassing national programmes in ocean science, weather, climate, environment, and seismology. Improved and reliable forecast of weather and climate requires routine operations as well as research & development using very high-resolution dynamical models with high complexity (e.g., coupled ocean-atmosphere-biosphere-cryosphere models). Operations of these models and the necessary R & D to improve them will be possible only if Peta scale HPC facilities are acquired and established.

The following compute intensive major programs are being undertaken at various MoES organizations.

- **Atmosphere and Climate Research – Modeling, Observing Systems & Services (ACROSS)**
- **Ocean Services, Modeling, Application, Resources and Technology (O-SMART)**
- **Polar and Cryosphere Research (PACER)**
- **Seismology and Geoscience (SAGE)**
- **Research, Education, Outreach and Training (REACHOUT)**

The practical impact of weather, climate and ocean prediction on the world's population and economy drives this community's usage of high-performance computing (HPC).

HPC requirement at MoES institutions increases from year to year as new programmes are initiated and existing programs are upgraded.

Understanding the Earth's climate and its variability has been a challenge for several centuries. Several complex processes take place in Earth's climate system. To understand the climate variability, prediction and its changes is one of the major goals of MoES.

In order to model the climate system, scientists worldwide use dynamical models for solving physical/chemical/biological equations. To simulate one day weather, the scientists integrate/solve model equations which run into the order of (depending on model) 5-10 Teraflops with a resolution of 110x110 km. Simulations and prediction are expected to be more accurate if one uses high resolution models. Scientists at MoES use very high resolution (12 km) models to simulate and predict ocean, atmospheric systems individually as well as a coupled system.

Hence, considering the need for high computational power, MoES regularly augments its computational resources in a phased manner. Majority of MoES Institutions have access to HPC infrastructure since 2009.

Since managing HPC systems at different constituent units is a herculean task, MoES decided in 2014 that it will manage and Augment HPC facility at two Institutions, viz. IITM, Pune and NCMRWF, Noida for use of all units of MoES.

## **1.1 ABOUT IITM PUNE AND HPC SYSTEMS AVAILABLE:**

The Indian Institute of Tropical Meteorology (IITM), Pune is an autonomous body under Ministry of Earth Sciences (MoES), Govt. of India. IITM is country's premiere research Institute to generate scientific knowledge in the field of meteorology and atmospheric sciences that has potential application in various fields such as agriculture, economics, health, water resources, transportation, communications, etc. It functions as a national Centre for basic and applied research in monsoon meteorology. For more details, please visit <http://www.tropmet.res.in>.

IITM is presently having two high performance computing systems namely Aaditya and Pratyush

**1.1.1 Aaditya:** The Aaditya HPC is Highly Parallel Supercomputing System built on IBM System X technology. The compute performance is more than 790Tera Flops with Intel Sandy bridge Processors. There are 2384 compute nodes with each node have 2 number of 8 core Processors (Intel Xeon E5-2670 2.6GHz cache 20MB) and the Memory is 4 GB DDR3 per core and 64 GB per node. The total RAM/Memory of the cluster is more than 150 Tera bytes.

The System is having 6 Peta bytes disk-based storage solution built on IBM GSS technology with read and write performance of about 100 Gigabytes per second and the Tape Storage solution is based on Tivoli Storage 3500 tape library (Two Libraries) with

Tivoli Storage Manager for automatic backup and restore and HSM functionalities. The Tape Library is scalable up to 100 Petabytes just by adding LTO6 Tape cartridges.

The Operating environment is with Red Hat Enterprise Linux as Operating System, GPFS as the cluster Parallel file system, IBM XCAT as cluster administration and Management tool, UFM (Mellanox Unified Fabric Manager) for Fabric Management, Platform Load sharing facility (LSF) as the job scheduler and all other software, such as compilers, debuggers, profilers, MPI libraries, development environment are based on Intel Cluster Studio and IBM Parallel and Scientific Computation Environment.

**1.1.2 Pratyush:** The latest HPC at IITM, Pune “Pratyush” is a Cray-XC40 LC [Liquid Cooled] System with 3315 compute nodes running Intel Xeon Broadwell E5-2695 processors with a peak performance of 4,006 TFLOPS and a total system memory of 414TB. The system is composed of 18 compute cabinets and uses Cray’s Aries NOC with Dragonfly Interconnect network topology. In addition, the system consists of 16 Intel KNL 7210 accelerator nodes with a peak performance of 42.56TFLOPS and a total memory of 1.5TB.

The System is having an 8 Peta bytes disk-based storage solution. The system has Spectra Logic TFinity tape library with 48 LTO-7 Drive for data backup of 24 PiB

The entire system operates on Cray’s customized Linux OS, called Cray Linux Environment. The cluster supports architecture specific compilers from Cray as well as Intel and open-source GNU compilers. System also hosts architecture specific parallel libraries like OPENMP, MPI, libsci, Intel Cluster software etc. Applications like GFS, WRF, ROMS, CFS, NCUM are available on the system for weather forecasting. To facilitate users with parallel program development, DDT parallel debugger and profiler is enabled on the system. The system uses PBS Pro as Workload Manager.

Both Aaditya and Pratyush are installed in two separate Data centers respectively in two adjacent building located in the same campus.

## **1.2 ABOUT NCMRWF NOIDA AND HPC SYSTEMS AVAILABLE:**

**1.2.1 BHASKARA:** The Bhaskara HPC is Highly Parallel Supercomputing System built on IBM System X technology. The compute performance is more than 350 Tera Flops with Intel Sandy bridge Processors. There are 1052 compute nodes with each node have 2 number of 8 core Processors (Intel Xeon E5-2670 2.6GHz cache 20MB) and the Memory is 4 GB DDR3 per core and 64 GB per node. The total RAM/Memory of the cluster is more than 67 Tera bytes.

The System is having a 3 Peta Bytes disk-based storage solution built on IBM GSS technology with read and write performance of about 100 Giga Bytes per second and the Tape Storage solution is based on Tivoli Storage 3500 tape library with Tivoli Storage Manager for automatic backup and restore and HSM functionalities.

The Operating environment is with Red Hat Enterprise Linux as Operating System, GPFS as the cluster Parallel file system, IBM XCAT as cluster administration and

Management tool, UFM (Mellanox Unified Fabric Manager) for Fabric Management, Platform Load sharing facility (LSF) as the job scheduler and all other software, such as compilers, debuggers, profilers, MPI libraries, development environment are based on Intel Cluster Studio and IBM Parallel and Scientific Computation Environment.

**1.2.2 MIHIR:** The latest HPC at NCMRWF Noida “MIHIR” is a Cray-XC40 LC [Liquid Cooled] System with 2320 nodes running Intel Xeon Broadwell E5-2695 processors with a peak performance of 2.8 Peta FLOPS and a total system memory of 290TiB. The system is composed of 13 Compute cabinets and uses Cray’s Aries NOC with Dragonfly Interconnect network topology. In addition, the system consists of 12 Intel KNL 7210 accelerator nodes with a peak performance of 31.92TFLOPS and a total memory of 1.1TB.

The System is having 5.6 Peta bytes disk-based storage solution. The system has Spectra Logic TFinity tape library with 48 LTO-7 Drive for data backup of 16 PiB

The entire system operates on Cray’s customized Linux OS, called Cray Linux Environment. The cluster supports architecture specific compilers from Cray as well as Intel and open-source GNU compilers. System also hosts architecture specific parallel libraries like OPENMP, MPI, libsci, Intel Cluster software etc. Applications like GFS, GEFS, WRF, ROMS, CFS, NCUM, NEPS are available on the system for weather forecasting. To facilitate users with parallel program development, DDT parallel debugger and profiler is enabled on the system. The system uses PBS Pro as Workload Manager.

Both Bhaskara and Mihir are installed in 2 Data centers at NCMRWF Campus.

## **2.0 USAGE OF HPC**

Weather prediction requires solving numerically, mathematical model representing the dynamical and physical processes occurring in the Earth system. These models contain complex, non-linear and time dependent partial differential equations. Solving them numerically needs huge number of computations, which cannot be executed on single computer. So, these computations are carried out in parallel on many processors that are available in Pratyush, Mihir, Aaditya and Bhaskara HPCS. The forecast models are run on hundreds of processors and produce significant output data for analysis. The output data for single forecast account for Terabytes in size and their analysis further requires use of many processors. After data analysis, the forecast products/ results are released in the form of figures, tables, or graphs to be understood by public.

### **DELIVERABLES by HPCS**

The HPCS are used extensively to produce forecast related to the following activities:

- **Seasonal and Extended Range Prediction**
- **Air pollution forecast over Indian cities**

- **R&D activities to improve forecast**
- **Thunderstorm observation / forecast**
- **Long-term climate projections**
- **Weather forecast (short and medium range)**
- **Tsunami early warning**
- **Small scale simulations for cloud microphysics**
- **Ocean state forecast**

Some of the above activities are being carried out by using following numerical models

- **Climate Forecast System (CFS)**
- **Global Forecast System (GFS)**
- **Global Ensemble Forecast System (GEFS)**
- **Weather Research & Forecast (WRF)**
- **IITM Earth System Model (IITM-ESM)**
- **Global Ocean Data Assimilation (GODAS)**
- **Modular Ocean Model (MOM)**
- **Direct Numerical Simulation (DNS)**
- **ECHAM6 model: Global Climate Model**
- **Large Eddy Simulation (LES) from WRF**
- **Regional Ocean Model System (ROMS)**
- **Wave Watch III(WWIII)**
- **NCMRWF Unified Model (NCUM) – Global & Regional**
- **NCMRWF Unified Model Ensemble Prediction System (NCUM-EPS) – Global & Regional**
- **Advanced Circulation Model (ADCIRC)**
- **Simulating Waves Near shore model (SWAN)**
- **HYbrid Coordinate Ocean Model (HYCOM)**

### **PURPOSE OF THIS EOI**

The purpose of this EOI is to shortlist Prospective bidders for issue of RFP. Participation and qualifying in the EOI is an essential and necessary condition to participate in further tendering process.

IITM, Pune on behalf of MoES is entrusted as the nodal Institute for implementation of High-Performance Computing (HPC) System to enable simulation for improved weather and climate prediction.

This EOI is for augmentation of computing power of around 15-20 Peta Flops compute (including some percentage for accelerators, the ratio will be determined after obtaining the EOI responses) and storage in the ratio of 1:3 (CPU: Disk). The total capacity will be distributed among MoES Institutes at two sites. Site wise distribution details shall be made available in the RFP document.

The above computing power in Petaflop is only an indication of peak performance requirement of HPC system based on the theoretical peak of the existing MoES HPC

systems. Exact requirement and selection of the systems shall be based on actual performance of the HPC systems while running a basket of benchmark suite of weather and climate models within a specified time and producing accurate results as mentioned in the final tender document which will follow after successful completion of EOI process. Therefore, actual peak performance of the systems may vary according to system architecture, memory and IO bandwidth, and interconnect speeds etc.

### **3.0 SCOPE OF WORK FOR PROPOSED PROCUREMENT**

- a) For the purpose of this EOI, “vendor” or “tenderer” or “bidder” means the tenderer who is Original Equipment Manufacturer (OEM) of HPC system. While OEMs may take support from System Integrators, the final Sales, Support and Services must be provided directly by OEM.
- b) Supply and installation of **compute & storage requirements based on benchmark suite as per RFP** for different Institutes under MoES with the latest hardware, software and best practices of building Top HPCS across the globe suited for weather, climate, and earth system modeling applications.
- c) Supply and Installation of latest Standardized Software, Scientific Libraries, compilers for High Performance Computing Systems at different Institutes of MoES.
- d) Providing 24x7 on site operational support for hardware, System software, application software, Storage, Maintenance, Systems Administration by the Original Equipment Manufacturer of HPC system for a period of three years post Installation and Acceptance as warranty support. The bidder should also provide comprehensive AMC and support similar to warranty for a further period of three years.
- e) The bidder should deploy domain application specialists at each site of MoES for tuning, porting and optimization of application programs /models during the contract period. The number of such specialists will vary with the sites.
- f) Providing onsite and on system training to all concerned users at periodic interval (at least once in 6 months) as per the Service Level Agreement (SLA) and RFP details.
- g) Supply and Support of any intermediate latest software, scientific libraries, compilers etc. for smooth running of weather, ocean, and earth system applications at regular intervals as and when the versions get upgraded periodically and without compromising the stability of the HPC system at no extra cost.
- h) It is highly desirable that all the software licenses that are supplied within the scope of work are right-to-use perpetual licenses for an unlimited number of concurrent users and should be supported by respective OEMs in the name of respective MoES Institutes. For e.g.: compilers, libraries, parallel file system etc.
- i) Supply and Installation of an additional AI/ML System which is at least 2 percent



(out of which 50% CPU and 50% Accelerator) of the total capacity as a standalone system with the provision to update with latest technologies in terms of processor, interconnect, storage, software, etc. at least two times during the warranty period and two times during the AMC period

- j) The bidder should collaborate (with MoES institutes) and periodically (once in 6 months at least) produce results in improvising the performance and scalability of MoES HPC applications with emerging technologies and practices.
- k) For setting up the data center needed to host the proposed HPC solution. MoES will provide the physical civil structure, electricity, power and provide details on other infrastructure available with each of the two MoES sites. The bidder must supply and effortlessly integrate the necessary additional infrastructure in terms of DG Power, UPS, BMS, necessary cooling, entire data center ecosystem as per the requirements of their proposed HPC solution. The vendors are encouraged to use the existing infrastructure, if the same is useful for the proposed solution and serviceable up to next 5 years.

#### **4.0 Pre-qualification criteria for Participation**

All the below criteria should be complied individually and collectively and should be supported by duly certified documents authenticating these aspects without which the proposal shall not be considered.

- a) For the purpose of this EOI, “vendor” or “tenderer” or “bidder” means the tenderer who is Original Equipment Manufacturer (OEM) of HPC system. While OEMs may take support from System Integrators, the OEM will be solely responsible for QOS with respect to final Sales, Support and Services.
- b) The bidder must have executed supply/system integration (minimum 3 Peta Flop Rpeak CPU only on a single/two cluster) of similar (architecture similar to be quoted in this bid) HPC solutions in the past 3 years including HPC systems running operational weather, climate, ocean, and earth system models.

Duly certified documents authenticating the above aspect should be enclosed in the bid document such as acceptance certificate, installation report, institute profile where such system was installed and reference from the institute etc. without which the proposals shall not be considered.

- c) The bidder should provide documentary evidence from their client showing minimum 95% uptime over a period of minimum 1 year for a system size of not less than 1 Petaflop Rpeak CPU only on a single cluster.

The bidder should submit duly certified logs, supporting letter from the buyers for authenticating above aspect.

- d) The bidder should have been in existence for at least five years. Bidder should have well established service/support center in India with trained manpower having minimum educational qualification as BE/MCA or equivalent/master's in science along with at least 2 years of work experience in HPC environment, Diploma with 5

years' experience) for maintaining the solution and applications at various ESSO-MoES Institutes. Bidder should provide details on technical support structure available with them.

- e) The bidder must be a legal entity incorporated / established under appropriate Law. The bidder should submit duly certified Certificate of Registration of Incorporation authenticating above aspects. Details of Service/ support centers in India may also be submitted (like address, manpower details, PAN Number, GST Number, Indian Nationalized Bank Account etc.). For services and support provided, payments will be made only in INR.
- f) The bidder should have experience in running and supporting the global atmospheric, oceanic and earth system models on at least 1Peta Flop system operationally for at least one year.

The bidder should submit duly certified supporting letter from the buyers for authenticating above aspect

- g) The bidder should have executed at least one collaborative contract with weather forecasting organization nationally/internationally. The collaborative works carried out should be demonstrated through published literature or technical documents available in public domain.
- h) Bidder should not have been blacklisted during last 3 years by any Central / State Government Department/Organization. An undertaking (self-certificate) is to be submitted in the form as per Annexure-1.
- i) The bidder should run the benchmark suite provided along with this EOI and then demonstrate the results as per the details given in this document.
- j) As per O.M. F.No 6/18/2019-PPD (Public Procurement No.1 and Public Procurement No.2 ) dated 23<sup>rd</sup> July 2020 and subsequent amendments the bidder must comply with the registration required regarding sharing a land border with India in order to be eligible to bid in procurement.

## **5.0 Benchmark Tests**

A benchmark suite has been prepared and is available with the EOI to be collected on a USB device along with the readme, which contains the instructions for running these benchmarks. The interested bidder should bring a device and collect the benchmark suite from, the Purchase Section of IITM, Pune **on or before 10th July 2021, 1700 hrs**. There are a set of programs which each bidder has to run. The minimum size of the benchmarking system should be 1 Peta flops. The bidder should provide the purchaser with the outputs along with relevant logs.

This is only to demonstrate the bidders' capability to port and run the benchmarks and use this information to finalize the Request for Proposal. The benchmarks should be

run by the OEM only who is responding to this EOI. Benchmark submitted by any third party will not be accepted. MoES may request for demonstration of successful porting and running of the applications on OEM's HPC system.

The List of Benchmark programs to be demonstrated is as per below table (Peak Capacities and wall clock times are for information only).

Processor Details (Used by MOES): Intel Xeon Broadwell E5-2695 v4 2.1 GHz 18Core CPU

Sr. No.	Model (Resolution)	#Nodes (#cores)	Peak TF of the code	Wall Clock Time in hh:mm:ss	Memory per node	Files Size (All inputs/ Output/ logs etc)	Duration of Simulation
1.	CFSV3 (38 km AGCM and 0.125 OGCM)	72N [648]	87.3 TF	04:20:46	128 GB	467G	16days
2.	INCOIS_MOM5.1 (14 km, L42)	70N [2500 C]	84.6 TF	00:46:48	128 GB	86G	5 days
3.	INCOIS_ROMS (~2.3 km, L40)	50N [1800 C]	60.6 TF	06:07:48	128 GB	397G	10 days
4.	IITM_GFS_TcO (~12-14 km in tropics)	64 N [2304C]	77.4 TF	01:31:21	128 GB	1.7T	10 days
5.	Weather_Bench (1024x1024)	8 GPU Nodes (A100)	80 TF	10:00:00	320 GB		Per epoch (10 epochs required)
6.	NCMRWF_NEMO_v3.6 (9 km L75)	150N[5400C]	181.4 TF	00:45:45	128 GB	1000G	2 Days
7.	DNS (1mm, 4 m)	683N[24588C]	826 TF	15 Hours	128 GB	5.5T	1000 Iterations
8.	NCMRWF_coupled (10 km AGCM L75, 25 km OGCM, L75)	177N[6372C]	214 TF	08:55:36	128 GB	954G	9 Days
9.	HWRF-HYCOM (3 nesting domains, 18km L61, 6km, 2km) OGCM (9km, L41)	50N (1800C)	60.4 TF	01:41:18	128 GB	1.7TB	6 days
10.	WRF (1km)	60N(1080C)	72.5TF	07:03:49	128GB	182GB	2 days

**Table 1: List of benchmark Programs to be demonstrated.**

Optional Benchmarks (Output data is not available to ascertain the quality of outputs due to limitation of the system size available at MoES). MoES may facilitate running this benchmark on OEM's machines. This benchmark may be a part of RFP.

<b>Model</b>	<b>Memory requirement</b>	<b>Duration</b>
IITM_GFS_TcO (~ 6-8 km in tropics) Steps to change the resolution are provided with benchmarks	More than 128 GB	10 days

### **5.1 Benchmark Requirements**

Bidders must submit benchmark results. The runtime configurations and software environment used for the above benchmarks along with detailed system configuration must be provided along with the results. The bidders are not allowed to do code level optimization of the benchmark programs. If there are any modifications to enable porting and execution of the benchmark programs on the vendor's machine, the modification details should be submitted. Any system level configuration changes to support porting and execution of the benchmark programs should also be clearly detailed and submitted along with the results.

MoES reserves the right to re-run the modified codes on OEM's system, if required. The bidders are also required to provide all the original output and log files on a readable media for verification and also required to provide the final details as listed in README file of each application.

Bidders are encouraged to submit the benchmark details on different system solutions/configuration so as to identify the pros and cons of various solutions. Projections of details on future architecture/processors are also encouraged.

### **6.0 EVALUATION PROCESS:**

Step1: Interested bidders may express their willingness in writing by responding to all the points mentioned in **Section 4 and Section 5 above** with documentary evidence before the last date of submission.

Step2: It is mandatory to meet all the pre-qualification criteria of Section 4 failing which bidder may be disqualified.

Step3: It is mandatory to run and submit results (output files, logs, modified source code) for all the benchmark programs mentioned in section 5 failing which bidder will be disqualified. The outputs of submitted results should be within 5% of RMSE (over Indian region) of the original output files provided with EOI.

Step4: MoES shall review the proposals, verify the benchmark results and call the bidders for a presentation or for clarification if required.

Step5:MoES will short list the bidders based on details provided in response to section 4 and 5 above and other relevant documents.

Step6:The short-listed bidders will only be allowed to participate in the next stage of tendering process.

## **7.0 Instructions to Bidder**

- a) The Director IITM reserves the right to cancel the EOI/tendering process at any time without assigning any reason thereof. Director, IITM, Pune will not be held liable for any loss which may incur to any bidder because of this cancellation.
- b) The Institute reserves the right to reject the proposal submitted by any of the bidders without assigning reasons therefore.
- c) Corrupt or Fraudulent Practices:

The Buyer (i.e., IITM) requires that the bidders, suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:

<b>Sr. No.</b>	<b>Term</b>	<b>Meaning</b>
A)	Corrupt practice	The offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution
B)	Fraudulent practice	a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract
C)	Collusive practice	Means a scheme or arrangement between two or more bidders, with or without the knowledge of the purchaser, designed to establish bid prices at artificial, noncompetitive levels
D)	Coercive practice	means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract

- d) An undertaking (self-certificate) is to be submitted that the Bidder has not been blacklisted by any Central/State Government Department/Organization.
- e) Please note that all the pages of the EOI documents should be signed with date and seal of the Bidder.
- f) The bidder shall complete the Bid Form (Annexure-2) as furnished in the bidding documents. These forms must be completed without any alterations to its format and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested. The Bid Form shall be submitted with the bidding documents.

- g) The covering letter and the Proforma given in this document should be submitted on bidder's company Letter Head, along with the technical proposal.
- h) Canvassing in any form would disqualify the bidder from further participation.
- i) All the submitted proposals will be scrutinized on the basis of documents and information furnished by company/ industry along with the prescribed proforma mentioned elsewhere in this document.
- j) Director, IITM, Pune may obtain clarifications wherever required from the company or from the referred client list in the profile. Proposals shall be shortlisted based upon the scrutiny, offers of those companies / industries that fulfill the prequalification criteria, presentation / interaction on proposed methodology, benchmark and other conditions as stated above.
- k) RFP document shall be issued only to those bidders who will qualify this EOI.
- l) The Bidders should fill the Proforma-I as attached and sign on all pages.
- m) The Bidders should sign on each page in their response to this EOI.
- n) To evaluate a bid, the Institute shall only use all the factors, methodologies and criteria defined in Clause No. 4 & 5. No other criteria or methodology will be used.
- o) This Institute is following and abides with the Public Procurement (Preference to Make in India), Order 2020, DIPP, MoCI Order No. P-45021/2/2017 -PP (-B.E.II) dated 16<sup>th</sup> September 2020 and subsequent amendments if any to the said order. Accordingly, preference will be given to the "Make in India products" while evaluating the bids, however, it is the sole responsibility of the bidder(s) to specify the product quoted by them is of "Make in India product" along with respective documentary evidence as stipulated in the previously mentioned order in the technical bid itself. OEMs are also required to provide information on their status (viz. class I/II local supplier or non-local supplier) details.
- p) **Settlement of Disputes:**  
The Purchaser / Buyer and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the EOI published.

If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser / Buyer or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has to be given in accordance with this Clause shall be finally settled

by arbitration.

The dispute settlement mechanism / arbitration proceedings shall be concluded as under:

A)	In case of Dispute or difference arising between the Purchaser / Buyer and a domestic supplier relating to any matter arising out of or connected with this EOI, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996 and its subsequent amendments, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to The Secretary, Ministry of Earth Sciences, Govt. of India and if he / she is unable or unwilling to act, to the sole arbitration of some other person appointed by him / her willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties.
B)	In the case of a dispute between the Purchaser / Buyer and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.

- q) Governing Language: All correspondence and other documents pertaining to this EOI, which are exchanged by the parties (viz Buyer and bidders), shall be written in the English language only.
- r) The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction as specified in this EOI.
- s) The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction as specified in this EOI.
- t) The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction as specified in this EOI.
- u) Jurisdiction: The disputes, legal matters, court matters, if any shall be subject to the place from where the tender / Purchase Order / Contract is issued ie Pune (India).

**7.1 EOI Documents: EOI shall contain the following documents:**

- a) In addition to the supporting documents for section 4 & 5 the following documents should be submitted.
- b) Dully filled, sealed and signed Proforma-I enclosed in the EOI document.
- c) Dully filled, sealed and signed Undertaking towards acceptance of all the T&C of

the EOI (Annexure-I).

- d) Dully filled, sealed and signed Certificate for Non-blacklisting (Annexure-II)
- e) Authority letter of the bidder authorizing personnel for bidding on behalf of the firm / company. (Annexure-III)
- f) Eligibility Certificate (Annexure-IV)
- g) Undertaking from the bidder towards Earnest Money Deposit (EMD) (Annexure-V)
- h) Certificate from the bidder towards compliance with the Office Memorandum: F/No/6/18/2019-PPD dated 23rd July, 2020, issued by Public Procurement Division, Department of Expenditure, Ministry of Finance, Government of India. (Annexure-VI)
- i) A copy of Certificate of Incorporation, Partnership Deed / Memorandum and Articles of Association / any other equivalent document showing date and place of incorporation, as applicable, in support of eligibility criteria.
- j) Copies of PAN and GST registration certificates, as applicable.
- k) Copies of documents in support of eligibility requirements. The copies of balance sheets OR the certificate from a Chartered Accountant certifying the annual sales turnover of the bidder for the last 3 financial years
- l) Other documents necessary in support of eligibility criteria, product catalogues, brochures etc.
- m) Company profiles including organizational structure with details of ownership and evidence of incorporation.
- n) Evidence of technical & financial capability, including annual audited accounts for the past five (05) years ending March 31, 2021. Certificate from Chartered Accountant for the Net worth Criteria.
- o) Detailed information on key technical Strengths in understanding Weather & Climate applications and codes and deployed HPC solutions for the same.
- p) Suggestions and views, if any for HPC Solution requirements of MoES.
- q) Submission of EOI: EOI should be submitted on <https://moes.euniwizarde.com> on or before 03 Aug 2021 up to 12:00 hrs and should also submit sealed envelope clearly marked “**EOI for High Performance Computing Solution Systems – 2021 to IITM, Pune.**”
- r) The benchmark details along with configuration of the of the system used. We encourage the bidders to submit profiling details (IO, memory bandwidth etc.) of each benchmark also.
- s) Modified codes, outputs, logs, profiling details etc. in a separate media (e.g., Tape/USB disk etc.). It is the responsibility of the vendor to ensure integrity of the data submitted to MoES.
- t) Technology (Compute nodes, network, Storage, Operating System etc.) development roadmap of the bidder for the next five years.
- u) Details of the manpower required to maintain the system on 24x7 basis at 99.5 % uptime on quarterly basis.



- v) The vendor must sign and stamped the duly filled Pre-Contract Integrity Pact (Annexure-A) as a part of qualification criteria.
- w) Vendor also should submit self-declaration form on status of their supply (Class I/II local supplier, non-local supplier) together with the details of equipment qualifying for make in India consideration.

## **8.0 Independent Monitors**

**8.1** The BUYER has appointed independent monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission. The details of Independent External Monitors are as below.

(1) Dr. S.K.Sarkar, IAS (Retd.),  
B-104, Nayantara Apartment,  
Plot 8 B, Sector- 07, Dwarka, New Delhi- 10075  
E Mail: sksarkar1979@gmail.com  
Mobile No. 9811149324

(2) Shri. Rakesh Goyal, IRSE (Retd.)  
2094, Joy Apartment,  
Sector 2, Dwarka, Delhi -110075  
E Mail: goyal1259@gmail.com  
Mobile No. 9717644264

**8.2** The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

**8.3** The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

**8.4** Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of the meetings.

**8.5** As soon as the Monitors notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.

**8.6** The BIDDER(s) accepts that the Monitors has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitors, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitors shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

**8.7** The BUYER will provide to the Monitors sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

**8.8** The Monitors will submit a written report to the designated Authority of the BUYER/Secretary in the Ministry / within 8 to 10 weeks from the date of reference or intimation to him by the BUYER / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

**9.0 Important dates:**

**9.1** Last date for collection of benchmark suite: 10 July 2021, 1700 hrs.

**9.2** Pre- EOI discussion meeting : 16 July 2021 at 11:00 hrs. ( through Online)

**9.3** Last date of EOI submission : 03 Aug 2021 up to 12:00 hrs.

**9.4** Opening of EOI documents : 03 Aug 2021 at 15:00 hrs.

Note: Date of pre-submission discussion meeting is scheduled on **16 July 2021** at 11:00 hrs. through VC, Pune. Registered participants should send request for VC link on email id [psu.iitm@tropmet.res.in](mailto:psu.iitm@tropmet.res.in) on or before 15 July 2021 up to 1600 Hrs. Queries if any, on this EOI may be submitted in writing on or before **14 July 2021** up to 1700 hrs.

**10.0 Addressed to**

The Director,  
Indian Institute of Tropical Meteorology,  
Dr. Homi Bhabha Road, Pashan,  
Pune 411 008, Maharashtra, India  
Phone : +91-20-2590-4200  
Fax : +91-20-2586-5142

**Note:** For any clarification, the bidders are recommended contacting following authorized officials: -

	<b>Name of Official</b>	<b>Contact No.</b>
1)	Shri. S.M.D. Jeelani, Sc-E (For technical clarification)	020-25904213
2)	Smt. Yogita Kad, Dy. Manager (For any other clarification)	020-25904483

**PROFOMA I**

**INDIAN INSTITUTE OF TROPICAL METEOROLOGY  
(AUTONOMOUS INSTITUTE, MINISTRY OF EARTH SCIENCES, GOVERNMENT OF INDIA)**

<b>1. Particulars of Applicant Company</b>					
Name of the Company					
Registration No.					
Address			STD Code		
			Tel. No.1		
			Tel. No.2		
			Fax No.		
	City		Pin		
State			E-mail *		
Website Address					
Type of company	Government		Public Sector Undertaking		Private Limited
	Partnership		Public Limited		Proprietorship

\* Email sent on this address will be treated as valid communication. Add a separate sheet, if necessary

<b>2. Particulars of Managing Director/CEO/Proprietor/Managing Partner</b>					
Name & Designation	Address			STD Code	
				Tel. No.1	
				Tel. No.2	
				Fax No.	
	City			Mobile	
	State		Pin		E-mail

<b>3. Particulars of Contact Persons</b>				
S No.	Name & Designation	Address		Numbers
1.				STD Code
				Tel. No.
				Fax No.
		City:		Mobile
		Pin Code:		E-mail

S No.	Name & Designation	Address	Numbers	
2.			STD Code	
			Tel. No.	
			Fax No.	
		City:	Mobile	
		Pin Code:	E-mail	
3.			STD Code	
			Tel. No.	
			Fax No.	
		City: Pin Code:	Mobile E-mail	

4. Location of Offices in India				
S No.	Name of Head	Address	Numbers	
1.			STD Code	
			Tel. No.	
			Fax No.	
		City:	Mobile	
		Pin Code:	E-mail	
2.			STD Code	
			Tel. No.	
			Fax No.	
		City:	Mobile	
		Pin Code:	E-mail	
3.			STD Code	
			Tel. No.	
			Fax No.	
		City:	Mobile	
		Pin Code:	E-mail	

5. Turnover for last three years (All amounts in Indian Rupees and in Crores only)			
Year	Period (Month/Year) From To	Total Turnover of the Company	Turnover from HPC Projects.
2020-2021			
2019-2020			
2018-2019			

6. Certifications	Yes/No (Indicate the level wherever it is applicable)	Valid up to

7. HPC Solutions Commissioned	Site	Details & Date of Installation
Add separate sheet, if necessary		

8. Details of sites/customers where similar solutions deployed						
Sr. no	Name & Address of Customer	Contact Person & Tel.No	HPC details	Value in Crores (optional)	Applications being used (optional)	Date of Installation
<b>8.1 Projects successfully completed during last 3 years</b>						
1.						
2.						
3.						
<b>8.2 Projects successfully supported for minimum 3 years</b>						
1.						
2.						
3.						
Add a separate sheet, if necessary						
Note: Attach explanatory note for each project in not more than two pages.						

**9.0 Any other information that Applicant Company wants to give**

Add a separate sheet, if necessary

10. List of Enclosures	
(i)	
(ii)	
(iii)	

### **Undertaking**

This is to certify that I have gone through all the pages of the document. The applicant company undertakes to abide by all the terms & conditions mentioned in the EOI tender document. It is further certified that the information furnished in the EOI documents is true and correct.

In the Event of any of above information found to be false, we understand that own EOI proposal can be rejected and not considered.

Date:  
Place:  
Seal

Signatures:  
Name:  
Designation:

**Undertaking**

It is hereby undertake that M/s. \_\_\_\_\_ has examined the EOI and unconditionally accepts the terms and conditions set in the EOI published.

We confirm that the information, documentation submitted in response to the EOI is true, accurate, verifiable and complete.

We understand and agree to comply that on verification, if any of the information, documentation submitted in response to the EOI is found to be misleading or false, we are liable to be rejected from the tendering process.

**Authorized Signatory**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

Seal:

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**Non-Black listing Self Certificate**

This is to certify that M/s. \_\_\_\_\_ has not been blacklisted by any Central / State Government Department / organization in last 3 years.

**Authorized Signatory**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

Seal :

**Certificate of Authorized Signatory**

This is to certify that M/s. \_\_\_\_\_ nominates Mr. \_\_\_\_\_, (Designation : \_\_\_\_\_) who has signed this response to the EOI is authorized to do so and bind the company by authority of its board / governing body. The signature of the authorized signatory is appended below in presence of me. (Name and Sign of Authorized Signatory)

**Authorized Signatory**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

Seal :

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**Eligibility Certificate**

This is to certify that we are not associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids / Tender No. \_\_\_\_\_ dated \_\_\_\_\_.

**Authorized Signatory**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

Seal :



**Undertaking for submission of EMD**

It is hereby M/s. \_\_\_\_\_ accept that if we withdraw or modify our Bid / response to the EOI during the period of its validity, or if we are awarded the contract and we fail to sign the contract, or to submit a performance security before the deadline defined in the EOI / request for bids document, We will be suspended for the period of one year for all the future tenders of MoES.

**Authorized Signatory**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

Seal :

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**Certificate of Compliance**

It is hereby confirmed that M/s. \_\_\_\_\_ comply with the Office Memorandum: F/No/6/18/2019-PPD dated 23rd July, 2020, issued by Public Procurement Division, Department of Expenditure, Ministry of Finance, Government of India. We understand and agree that if the compliance provided by us found to be false, this will be a ground for immediate termination and further legal action in accordance with law.

**Authorized Signatory**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

Seal :

**Format of the Integrity Pact  
PRE-CONTRACT INTEGRITY PACT**

**General**

This pre-bid-contract Agreement (hereinafter called the Integrity Pact) is made on \_\_\_\_\_ day of the month of \_\_\_\_\_ 2021, between, on one hand, the **Director IITM, Pune** acting through Shri \_\_\_\_\_, Designation of the officer, Ministry/ Department, Government of Indian (hereinafter called the 'BUYER", which expression shall mean and include, unless the context otherwise required, his successors in office and assigns) of the First Part and M/s \_\_\_\_\_ represented by Shri \_\_\_\_\_, Chief Executive Officer (hereinafter called the 'BIDDER/Seller" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the BUYER proposes to procure (Name of the Stores/Equipment/Item) and the BIDDER /Seller is willing to offer/has offered the stores and

WHEREAS the BIDDER is private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the BUYER is a Ministry/Department of the Government of India/PSU performing its functions on behalf of the President of India

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to :-

Enabling the BUYER to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and BUYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto agree into this Integrity Pact and agree as follows: -

**Commitments of the BUYER**

- 1.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
- 1.2 The BUYER will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide and such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.

- 1.3 All the officials of the Buyer will report the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BUYER with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceeding, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted the BUYER the proceedings under the contract would not be stalled.

### **Commitments of BIDDERS**

3. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following: -
  - 3.1 The BIDDER will not offer directly or through intermediaries, any bribe, gift, consideration, reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
  - 3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration Reward, favor, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do so having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favor or disfavor to any person in relation to the contract or any other contract with the Government.
  - 3.3\* BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.
  - 3.4\* BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.
  - 3.5\* The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/integrator/authorized government sponsored export entity of the defense stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be

paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

- 3.6\* The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details if services agree upon for such payments.
- 3.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness, and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means, and illegal activities.
- 3.9 The BIDDERS shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals, and business details, including information contains in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the action mentioned above.
- 3.12 If BIDDER or any employee of the BIDDER or person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an officer of the BUYER has financially interested/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender.

The term 'relative' for this purpose would be as define in Section 6 of the Companies Act 1956.

- 3.13 The BIDDER shall not lend to or borrow any money from or entire into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.
- 3.14 Bidders shall not pass any information provided by the buyer as a part of business relationships to others and not commit any offence under the Prevention of Corruption Act/Indian Penal Code.

#### **4. Previous Transgression**

- 4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in

any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.

- 4.2 The BIDDER agrees that if it makes incorrect statement on this subject BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

## **5. Earnest Money (Security Deposit)**

- 5.1 While submitting commercial bid, the Bidder shall deposit an amount \_\_\_\_\_ (to be specified in RFP) as Earnest Money/ Security Deposit, with the BUYER through any of the following instruments:
- i) Bank Draft or a Pay Order in favor of \_\_\_\_\_
  - ii) A confirmed guaranteed by an Indian Nationalized Bank. Promising payment of the guaranteed sum to the BUYER on demand within three working days without any demur whatsoever and without seeking any reason whatsoever. The demand for payment by the BUYER shall be treated as conclusion proof of payment.
  - iii) Any other mode or through any other instruments (to be specified in the RFP).
- 5.2 The Earnest Money/ Security Deposit shall be valid up to a period of six months or the complete conclusion of the contractual obligation to the complete satisfaction of the both the BIDDER and the BUYER, including warranty period, whichever is later.
- 5.3 In case of the successful BIDDER a clause would also be incorporated in the Article pertaining to performance Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
- 5.4 No interest shall be payable by the BUYER to the BIDDER on Earnest Money/Security Deposit for the period of its currency.

## **6. Sanction for Violations**

- 6.1 Any breach of the previously provisions by the BIDDER or any on employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:
- i) To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.
  - ii) The Earnest Money (in pre-contract stage) and/or Security Deposit/ Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason thereof.
  - iii) To immediately cancel the contract. If already signed, without giving any compensation to the BIDDER.
  - iv) To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereof at 2% higher than the prevailing Prime Lending

Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the bidder from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

- v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.
- vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
- vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the BUYER.
- viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.
- ix) In case where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.
- x) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The BUYER will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes of this Pact.

## **7. Full Clause**

7.1 The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Ministry/Department of the Government or India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in cost would be refunded by the BIDDER to the BUYER, if the contract has already been concluded.

## **8. Independent Monitors**

8.1 The BUYER has appointed independent monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission. The details of Independent External Monitors are as below.

**(1) Dr. S.K. Sarkar, IAS (Retd.),**

B-104, Nayantara Apartment,  
Plot 8 B, Sector- 07, Dwarka, New Delhi- 10075  
E Mail: sksarkar1979@gmail.com  
Mobile No. 98111-49324

**(2) Shri. Rakesh Goyal, IRSE (Retd.)**

2094, Joy Apartment,  
Sector 2, Dwarka, Delhi -110075  
E Mail: goyal1259@gmail.com  
Mobile No. 97176-44264

8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

8.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of the meetings.

8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.

8.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

8.7 The BUYER will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

8.8 The Monitor will submit a written report to the designated Authority of the BUYER/Secretary in the Department/ within 8 to 10 weeks from the date of reference or intimation to him by the BUYER / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

**9. Facilitation of Investigation**

In case of any allegation of violation of any provisions of this Pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

**10. Law and Place of Jurisdiction**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BUYER.

**11. Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

**12. Validity**

12.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

12.2 Should one or several provisions of this Pact turn out to be invalid, the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties hereby sign this Integrity Pact at \_\_\_\_\_on \_\_\_\_\_

**BUYER**  
Name of the Officer  
Designation  
Dept./Ministry/PSU  
Seal  
Witness

**BIDDER**  
Name of the Officer: Chief Executive Officer  
Designation:  
Seal  
Witness

1. \_\_\_\_\_  
\_\_\_\_\_

1.

2. \_\_\_\_\_  
\_\_\_\_\_

2.

\*Provisions of these clauses would need to be amended/deleted in line with the policy of the BUYER in regard to involvement of Indian agents of foreign suppliers.



## **Instruction to Bidders**

E-Procurement is the complete process of e-Tendering from publishing of tenders online, inviting online bids, evaluation and award of contract using the system. You may keep a watch of the tenders floated under <https://moes.euniwizarde.com>

These will invite for online Bids. Bidder Enrolment can be done using "Online Bidder Enrolment".

The instructions given below are meant to assist the bidders in registering on the e-tender Portal, and submitting their bid online on <https://moes.euniwizarde.com> the e-tendering portal as per uploaded bid.

More information useful for submitting online bids on may be obtained at:  
<https://moes.euniwizarde.com>

### **GUIDELINES FOR REGISTRATION:**

1. Bidders are required to enrol on the e-Procurement Portal with clicking on the link "Online Bidder Enrolment" on the e-tender Portal by paying the Registration fee of Rs.2000/-+Applicable GST.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidders.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile. Or bidders can contact our help desk for getting the DSC.
5. Only valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID /password and the password of the DSC / e-Token.
7. The scanned copies of all original documents should be uploaded in pdf format on portal <https://moes.euniwizarde.com>

8. After completion of registration payment, bidders need to send their acknowledgement copy on our help desk mail id [ewizardhelpdesk@gmail.com](mailto:ewizardhelpdesk@gmail.com) for activation of your account.

#### SEARCHING FOR TENDER DOCUMENTS:

1. There are various search options built in the e-tender Portal, to facilitate bidders to search active tenders by several parameters.
2. Once the bidders have selected the tenders they are interested in, you can pay the form fee and processing fee (NOT REFUNDABLE) by net-banking / Debit / Credit card then you may download the required documents / tender schedules, Bid documents etc. Once you pay both fee tenders will be moved to the respective 'requested' Tab. This would enable the e- tender Portal to intimate the bidders through e-mail in case there is any corrigendum issued to the tender document.

#### PREPARATION OF BIDS:

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF formats. Bid Original documents may be scanned with 100 dpi with Colour option which helps in reducing size of the scanned document.
4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GST, Annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Documents" available to them to upload such documents.
5. These documents may be directly submitted from the "My Documents" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

#### SUBMISSION OF BIDS

1. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document as a token of acceptance of the terms and conditions laid down by Railtel.

3. Bidder has to select the payment option as “e-payment” to pay the tender fee / EMD as applicable and enter details of the instrument.
4. In case of BG bidder should prepare the BG as per the instructions specified in the tender document. The BG in original should be posted/couriered/given in person to the concerned official before the Online Opening of Financial Bid. In case of non-receipt of BG amount in original by the said time, the uploaded bid will be summarily rejected.
5. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white Colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
6. The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
7. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. Upon the successful and timely submission of bid click “Complete” (i.e. after Clicking “Submit” in the portal), the portal will give a successful Tender submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.
9. The tender summary has to be printed and kept as an acknowledgement of the submission of the tender. This acknowledgement may be used as an entry pass for any bid opening meetings.

For any clarification in using <https://moes.euniwizarde.com>

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to e-tender Portal in general may be directed to the Helpdesk Support.

Please feel free to contact (as given below) for any query related to e-tendering)  
PhoneNo.011-49606060,Anand:-9355030602,Amrendra:-8448288980,  
Abhishek:-9355030617 Mail id: - ewizardhelpdesk@gmail.com