GRID CONTROLLER OF INDIA LTD. (GRID-INDIA)

(A Govt. of India enterprise)

Invites

Expression of Interest (EOI)

For

Replacement/Upgradation of SCADA-EMS-DTS System at Western Region Load Despatch Centre (WRLDC) and State Load Despatch Centres (SLDCs) of Western Region

(INVITATION FOR EXPRESSION OF INTEREST)

LIST OF ABBREVIATIONS WITH FULL FORMS USED IN THE DOCUMENT

S. No.	Abbreviation	Full Form
1	ACDB	AC Distribution Board
2	ADMS	Advanced Distribution Management System
3	AGC	Automatic Generation Control
4	AMC	Annual Maintenance Contract
5	API	Application Programming Interface
6	APS	Auxiliary Power Supply
7	APT	Advanced Persistent Threat
8	BOQ	Bill of Quantity
9	CC	Control Centre
10	CEA	Central Electricity Authority
11	CERT-In	Indian Computer Emergency Response Team
12	CIM	Common Information Model
13	DCPC	Data Concentrator cum Protocol Converter
14	DDS	Database Development System
15	DG	Diesel Generator
16	DNH-DD	Dadra Nagar Haveli - Daman & Diu
17	DR	Disaster Recovery
18	DSA	Dynamic Security Assessment
19	DTS	Dispatcher Training Simulator
20	EMS	Energy Management System
21	EOI	Expression of Interest
22	FAT	Factory Acceptance Test
23	GI	Galvanized Iron
24	GRID-INDIA	Grid Controller of India Limited
25	GSTN	Goods and Services Tax Number
26	HIPS	Host-based Intrusion Prevention System
27	HVDC	High Voltage DC
28	ICCP	Inter-Control Centre Communication Protocol
29	IT	Information Technology
30	LAN	Local Area Network
31	LDC	Load Despatch Centre
32	LOA	Letter of Award
33	LSS	Load Shedding Scheme
34	NAC	Network Access Control
35	NAS	Network Attached Storage
36	NCIIPC	National Critical Information Infrastructure Protection Centre
37	NDA	Non-Disclosure Agreement
38	NLDC	National Load Despatch Centre
39	ODBC	Open Database Connectivity
40	OEM	Original Equipment Manufacturer

41	OPC	Open Platform Communication
42	PAN	Permanent Account Number
43	POSOCO	Power System Operation Corporation Limited
44	PSU	Public Sector Undertaking
45	RCC	Remote Control Centre
46	REMC	Renewable Energy Management Centre
47	REST	Representational State Transfer
48	RFP	Request for Proposal
49	RGB	Red, Green Blue
50	RLDC	Regional Load Despatch Centre
51	RTU	Remote Terminal Unit
52	SAN	Storage Area Network
53	SAS	Substation Automation System
54	SAT	Site Acceptance Test
55	SAVT	System Availability Test
56	SCADA	Supervisory Control and Data Acquisition
57	SI	System Integrator
58	SIEM	Security Information and Event Management
59	SLA	Service Level Agreement
60	SLDC	State Load Despatch Centre
61	SOAP	Simple Object Access Protocol
62	SOAR	Security Orchestration, Automation and Response
63	SOC	Security Operations Centre
64	SOE	Sequence of Events
65	SSD	Solid State Drive
66	SSL	Secure Sockets Layer
67	UI	User Interface
68	UPS	Uninterruptible Power Supply
69	URTDSM	Unified Real Time Dynamic State Measurement
70	VAPT	Vulnerability Assessment and Penetration Testing
71	VPS	Video Projection System
72	WAMS	Wide Area Measurement System
73	WBES	Web Based Energy Scheduling
74	WRLDC	Western Region Load Despatch Centre
75	XML	Extensible Markup Language

DOCUMENTS OF EOI

This EOI document comprises of the following sections:

(i)   Section-I: Invitation for Expression of Interest

(ii)   Section-II: Information to Applicants

(iii)   Section-III: Application Form and Appendices

Instructions to APPLICANTs

- Applicants should go through Section-I and Section-II thoroughly before filling and submitting the application.

- For expression of interest, application form and appendices given in Section-III shall be duly filled and sent to GRID-INDIA by the applicant in soft copy.

SECTION-I:

INVITATION FOR EXPRESSION OF INTEREST

(INVITATION FOR EXPRESSION OF INTEREST)

DETAILED NOTICE INVITING EXPRESSION OF INTEREST (EOI)

EOI No.: CC-WR/2025-26/001   **Date: 22.04.2025**

Replacement/Upgradation of SCADA-EMS-DTS System at Western Region Load Despatch Centre (WRLDC) and State Load Despatch Centres (SLDCs) of Western Region

1.   Introduction

The power sector in India is organized in five synchronously interconnected electrical regions for operation of power system, namely, North, West, South, East and North-East. Indian power grid comprises of 765/400/220KV transmission lines and HVDC interconnections. The real-time operation of the respective regional grid is managed by the concerned Regional Load Dispatch Centre (RLDC) in coordination with the respective State Load Dispatch Centre (SLDCs) of the region. The National Load Dispatch Centre (NLDC) monitors the inter-regional and trans-national power exchanges.

Grid Controller of India Limited (GRID-INDIA) is entrusted to discharge the statutory functions of grid operations in India through RLDCs and NLDC under applicable provisions of Indian Electricity Act. In similar lines, SLDCs are entrusted to discharge the statutory functions of grid operations in the respective states under applicable provisions of Indian Electricity Act.

Accordingly, NLDC, RLDCs and SLDCs are equipped with SCADA and EMS along with DTS system for real time grid management, generation and load forecasting as well as post analysis of grid events. Further, Renewable Energy Management System (REMC), Wide Area measurement Systems (WAMS) system and IT system are also available at Load Dispatch Centers (LDCs).

The existing SCADA-EMS-DTS systems installed at LDCs comprises of the following sub systems:

1. SCADA-EMS-DTS application software
2. Third party software (Operating System, Virtualization, etc.)
3. Cyber security solutions (HIPS, NIPS, Endpoint security, Firewalls, etc.)
4. Servers, Workstation, laptops & Remote Consoles
5. Storage Devices (SAN, NAS)
6. Video Projection System (VPS)
7. Networking Devices (Switches, Routers)

8. Auxiliary Power Supply (UPS, Battery, DG Set, ACDB, etc.)

The scope of this project includes implementation and maintenance of SCADA-EMS-DTS system at the main & backup control centers of the following organizations:

- Western Regional Load Despatch Centre (WRLDC) of GRID-INDIA
- Madhya Pradesh State Load Despatch Centre
- Maharashtra State Load Despatch Centre
- Gujarat State Load Despatch Centre
- Chhattisgarh State Load Despatch Centre
- Goa State Load Despatch Centre
- DNH-DD State Load Despatch Centre

The SCADA-EMS-DTS systems for all the above-mentioned control centers will be procured through a single tender by GRID-INDIA wherein the owner LDCs will be signing the LOA with the successful bidder for their respective scope of works and GRID-INDIA will be providing consultancy to owner LDCs till commissioning of the project. Owner LDCs will also sign a contract agreement with the successful bidder for comprehensive maintenance of the supplied system.

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2.0   Eligibility Criteria for submission of EOI

Applicants shall apply under either Criteria-A or Criteria-B as mentioned below.

Criteria-A:

Applicant should have its own SCADA & EMS product and should have previous experience in design, supply, installation, testing, commissioning and maintenance of at least two (02) real time SCADA & EMS projects for power transmission systems (132 /110/100 kV or above) in any government/PSU/public listed company handling more than 2000 MW in each individual project for at least two (2) years in the last ten (10) years.

Each of the above projects must consist of SCADA, EMS applications and integration of RTUs (Remote Terminal Units)/SAS (Sub Station Automation Systems).

The SCADA & EMS product must be supporting the following functions either in a single project or combination of above projects.
1. SCADA software supporting alarm, trending, SOE, real time data acquisition & calculations.
2. Data exchange on ICCP.
3. EMS software supporting at least two functions out of State Estimation (SE), Contingency/Security Analysis (CA), Optimal Power Flow (OPF), Automatic Generation Control (AGC) and Dynamic Security Assessment (DSA).

OR

Criteria-B:

(a)   Applicant should have supplied, installed, commissioned and maintained minimum three (03) projects involving real time systems consisting of at least three (03) categories out of four (4) categories listed below:

    SCADA Application Software / Cyber Security Solutions (NAC / SIEM / Firewall) / Data Historian Solution /Computing and Networking Devices

    These projects should have been executed in any government /PSU/ public listed company within last 10 years. At least two (2) of these projects should have been successfully running and operational for more than two (2) years in the last Ten (10) years.

And

(b) Applicant shall form an association/collaboration with the collaborator who fully meets the requirement of **Criteria-A**.

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The applicant applying through either **Criteria-A** or **Criteria-B** shall perform supply, configuration, installation and integration of SCADA-EMS-DTS software along with associated software and hardware items (servers, workstations, 3rd party software, storage devices, switches, routers, firewalls, other cyber security products, VPS, APS, DG sets etc.) through OEMs/ OEM Authorized Partners of these items and shall require to have back-to-back arrangements/ support with OEMs for providing comprehensive maintenance of the integrated system. However, the overall responsibility for supply, configuration, integration, testing, commissioning, meeting performance requirements and maintenance SLAs remains with the applicant.

DOWNLOAD AND SUBMISSION OF EOI

A. Interested applicants may download the documents of EOI free of cost from www.grid-india.in

B. The applicant is required to submit the EOI application complete in all respect in soft form. The copy of EOI application shall be e-mailed to cc-contracts@grid-india.in and scadaupgradation@grid-india.in

C. **Opening/Upload date of EOI** : **22.04.2025**

D. **Last date for queries/ seeking clarifications** : **29.04.2025**

E. **Response Validity** : **180 days from EOI date**

F. **For consideration of EOI, applicants are required to submit soft copy of EOI through e-mail till 06.05.2025.**

4.0 Applicant shall ensure that EOI application is complete in all respect.

5.0 GRID-INDIA reserves the right to reject or accept any or all applications, cancel/withdraw the EOI process without assigning any reason whatsoever and in such case, applicant shall not have any claim arising out of such action.

6.0 **Queries**

Applicants may send their queries related with EOI through e-mail to both mail IDs, viz., abhineet@grid-india.in and mohneesh@grid-india.in

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SECTION-II:
INFORMATION TO APPLICANTS

1.0 Introduction

Grid Controller of India Limited (GRID-INDIA), formerly known as Power System Operation Corporation Ltd. (POSOCO), through the RLDCs and NLDC, is entrusted to discharge the statutory functions under applicable provisions of Indian Electricity Act. Similarly, SLDCs are entrusted to discharge the statutory functions in respective states under applicable provisions of Indian Electricity Act

The intent of this project is to replace/upgrade the existing Supervisory Control and Data Acquisition System, Energy Management System and Despatcher Training Simulator (SCADA-EMS-DTS) deployed in RLDC and SLDCs of western region along with integration, commissioning of associated 3rd party software, hardware, networking equipment, cyber security equipment, VPS and APS systems and provide comprehensive maintenance of the complete supplied system.

The project implementation including tendering and execution is planned to be carried out in fast-track mode.

2.0 Objective of EOI

Expression of Interest (EOI) is invited from applicants with the minimal eligibility criteria as defined in Section-I para 2.0.

The objective of EOI is to garner interest from potential System Integrators (SI) willing to deliver a fully functional system meeting the technical specifications and performing comprehensive maintenance of the system through technically qualified resident engineers with support from OEMs of 3rd party software and hardware equipment.

3.0 Existing setup of SCADA-EMS-DTS systems in western region RLDC and SLDCs

The existing SCADA-EMS-DTS system deployed at RLDC and SLDCs of western region had been procured through an open tender and covers the following:

(i)   Supply, integration, commissioning and comprehensive maintenance of the SCADA-EMS-DTS system along with the 3rd party software, Servers, workstations, networking equipment and cyber security equipment.

(ii)   Supply, integration, commissioning and comprehensive maintenance of Video Projection System (VPS) and Auxiliary Power Supply (ACDB, UPS with battery sets and DG set) as per requirement.

(iii)   The System Integrator (SI) for the supplied system being SCADA-EMS-DTS OEM has back-to-back maintenance arrangements with OEMs of 3rd party software, hardware equipment (servers, workstations, switches, routers, firewalls, VPS, APS,

etc.) with defined SLAs.

(iv)   The entire supplied system is in round the clock (24 X 7 X 365) operation with minimal downtime specified as per SLAs.

(v)   Deployment of qualified engineers at site during installation, commissioning and as resident engineer during the maintenance phase of the project.

(vi)   Imparting user level and admin level training to the owner (RLDC and SLDCs) for all sub systems of the supplied system.

4.0   Scope of Work:

The scope of work under this package shall include overall project management including survey, planning, design, engineering, documentation, integration, supply, delivery to site, unloading, insurance, storing, handling, transportation to site, installation, termination of control and power connections, testing, demonstration for acceptance, commissioning & comprehensive maintenance of the supplied system as per below details:

a. Supply, installation and commissioning of main & backup SCADA-EMS-DTS system software and hardware which includes equipment like Servers, Routers, Switches, Workstations, Firewall, Cyber Security Appliances, Printers along with associated items like VPS, furniture, auxiliary power supply systems (UPS, DG set, ACDB Panels, etc.) at eighteen (18) control centers, considering Western Region Load Despatch Centre (WRLDC) of GRID-INDIA and the State Load Despatch Centres (SLDCs) of Maharashtra, Madhya Pradesh, Chhattisgarh, Gujarat, Goa and Dadra & Nagar Haveli and Daman & Diu.

Sl. No.	Control Centres	Main CC	Backup CC	Sub LDC/ Remote CC	Total Control Centers
1	Western Regional Load Dispatch center	WRLDC, Mumbai	Bhopal		2
2	Madhya Pradesh SLDC	Jabalpur	Bhopal	Indore	3
3	Maharashtra SLDC	Navi Mumbai, Airoli	Ambazari, Nagpur		2
4	Gujarat SLDC	Vadodara	Gandhinagar	(1) Jambuva (2) Jetpur (3) Gandhinagar	5
5	Chhattisgarh SLDC	Raipur	Bhilai		2
6	Goa SLDC	Margao	Cuncolim		2
7	* DNH-DD SLDC	Silvassa	Daman		2
Total Control Centers for Project					**18**

* Backup CC of DNH-DD SLDC shall be called / known as Sub LDC Daman.

b. The new system should be deployed in such a way that the operation of the existing systems at WRLDC and SLDCs should not be disturbed. Both the main and backup control center shall work in active-active mode and in case of failure of main control center backup shall take over the role of main control Centre without any manual intervention. However, the control command authority shall require explicit transfer.

c. Integration of existing and new RTUs, SAS, DCPCs (Data Concentrator cum Protocol Converter)/Terminal Servers with the main and back-up control centers. The scope of works under integration of RTU with control center is inclusive of work of integration (including database and display) with DCPCs/Terminal Servers also, if any. Each RTU shall report to main and back-up control centers and suitable splitting (compatible with IEC 101/104) shall be used for redundancy at communication front ends of respective control centers. The devices required for the integration of RTUs at the control center shall be in the scope of the applicant.

d. Integration of main and back-up control centers with other control centers on mixed mode ICCP protocol (i.e. new control centers shall exchange data over secure ICCP and existing control centers shall continue to exchange data on plain ICCP and/or Secure ICCP protocol, as the case may be). Supplied system shall support simultaneous multiple bit encryption for SSL certificates for secure ICCP connection.

e. Integration of main and back up control centers of RLDC with existing control centers such as main and backup control centers of NLDC (National Load Dispatch Center), main and back up control centers of SLDCs of the region.

f. Integration of main and back up control centers of SLDCs with existing/new main and backup control centers of RLDCs (Regional Load Dispatch Center).

g. Integration of Main and Back up control centers on ICCP protocol with distribution companies

h. Data exchange with URTDSM (Unified Real Time Dynamic State Measurement) projects & Renewable Energy Control centers either on ICCP or IEC 60870-5-101/104 Protocol as per site/system requirement.

i. Collection & merging of SOE data at SLDCs & collection of SOE data from SLDCs, RTUs and merging at RLDC and transferring to Historian Systems at all Control Centers.

j. All necessary protocol emulations are required to integrate the existing RTUs, SAS and existing control centers without affecting the data at the existing control centers.

k. Development of complete databases, displays and reports either from scratch or by extracting existing database, displays and reports. The text available in displays and reports shall have support fonts of at least three (3) languages, i.e., English, Hindi and the local language. Applicant shall develop and provide tools to convert CIM files for different versions based on customized CIM-profiles in the files used by vendor's system. The displays shall comply with the display building guidelines IS 18058: 2023 and as per contract document.

l. Data exchange with test bench DDS (Database Development System) on ICCP by new control center and on IEC 60870-5-101/104 protocol by new RTUs for testing before integrating with real time system.

m. Import and adaptation of database & displays made by owner for existing SCADA-EMS-DTS system including import of historical data stored in existing historical servers to the new Historian System. Scope also includes the development of the required software tool to acquire the database/displays from the existing system, if required, by applicant to perform this activity. All the features envisaged for the historian shall also be applicable for data imported from other systems.

n. A database development tool shall be provided at each control center which shall import the data model from other control centers, validate the same at its own end and shall create the ICCP database, historian database and SCADA-EMS-DTS database at each control center including updating of ICCP bilateral table for fulfilling these requirements. The tool shall be independently operable and upgradable at each of the control centers.

o. Supply, installation and commissioning of DCPC/Terminal Server, wherever applicable.

p. Supply of spares identified for AMC along with main items to meet the contingency during installation period and during AMC period.

q. All cabling, wiring, dressing, tagging, ferruling and interconnections to the equipment being supplied and to be integrated including communication equipment and power supply. Any cabling required for integration/interconnection of the supplied system with the existing equipment shall also be in the scope of the applicant. All the supplied cables under the project shall be shielded type.

r. Integration of all the supplied equipment and existing system.

s. The applicant's scope shall include customization of its ICCP protocol, such as configuration of ICCP database for ICCP name, scan period and all other - database parameters required to integrate existing control centers successfully.

t. The applicant's scope shall include customization of its IEC-60870-5-101 & 60870-5-104 protocols, such as configuration of database, scan period and all other database parameters required to integrate existing RTUs and SAS successfully.

u. Dismantling, shifting of existing system workstation/SCADA system and installation of new system workstation at temporary location in parallel for intervening period.

v. Shifting and Installation of new system including server racks and panels after renovation of control center. This shall include all the services including cabling, interface modification and shifting or re-shifting of system required for intervening period and for final shifting to main control center. Re-cabling for some or all equipment as required for final shifting shall also be in the scope of applicant. All LAN cabling /power cabling etc. required for this activity shall be under the scope of applicant.

w. Dismantling of existing system (RLDC/ SLDC) after successful shifting of operation

to new control center. The existing system after dismantling shall be taken away by the applicant, through a buyback arrangement. The new system and existing system shall run in parallel for a duration of three (03) months before the dismantling of the existing system. This shall include all the services including cabling and interface modification required for the intervening period before final shifting to main control center. The provision for clean data wiping shall be in the scope of contractor during dismantling as per owner's policy under owner's supervision and disposal shall be through e-waste process.

x. Additional hardware, software and services necessary to ensure compatibility with existing equipment.

y. Auditing of cyber security implementation by CERT-In listed auditors during FAT, SAT and AMC.

z. Training to owner's personnel.

aa. Comprehensive maintenance of the supplied system as per specification including future ICCP & RTU/SAS/Terminal Server/DCPC integrations, database configurations, maintaining spare inventory, etc.

bb. Integration with market, offline and other applications: SCADA-EMS-DTS system being supplied shall have the provision to exchange data with other applications (existing or to be procured) such as open access application, WBES (Web Based Energy Scheduling) application, metering applications, etc. SCADA-EMS-DTS system shall exchange data with these applications in standard API (Application Program Interface)/formats like ODBC, OPC, XML, SOAP and REST, etc.

cc. GI/Aluminum cable trays/traceways with covers shall be supplied for laying cables so that cables can be protected from rodents. These cable trays/traceways shall be screwed/ fixed on the floor by the applicant.

dd. Supply of necessary interface (hardware and software) for sniffing/tapping the existing RTUs/SASs for parallel operation of new system with existing system.

ee. The AMC scope shall include supply of necessary interfaces (hardware and software) for integration of number of RTUs and control centers as specified in BOQ.

ff. Supply and laying the power cable from the owner provided points including distribution board for server room /control room/communication room and its distribution to the associated rack panels.

gg. During the entire contract period (including extension of contract, if any), if OEM discontinues/ ends support to any item supplied (software/hardware/security solution) under the contract, such hardware, software (or both, depending on software or hardware dependency) to be replaced.

hh. Preparation of complete site overview display showing operating status of all

hardware, LAN wise display in SCADA UI browser along with alarms. The site overview display will also have provision for monitoring of historian functioning.

ii. Supply, installation and commissioning of auxiliary power system comprising of UPS with battery set and DG set along with all necessary distribution board wherever applicable.

jj. The C10 capacity test shall be done periodically (yearly), to determine whether the battery rating is holding up using capacity test. If the battery capacity is less than 80% of its design value in any of the cases, the battery shall have to be replaced by a applicant during the entire period of contract (including extension of contract, if any) without any cost implications to the owner. If the number of cells replaced(cumulative) in battery bank exceeds more than 25% of total battery bank in any of the cases during the entire period of contract (including extension of contract, if any), then applicant shall replace that entire battery bank without any additional cost to the owner.

kk. All the cables including laying required during the entire process of shifting/re-shifting and installation of the new system.

ll. CIM compliance and CIM database exchange.

mm. Integration and operation of existing equipment/devices, if any, to be utilized during contract period.

nn. All types of data exchange to/from the different applications of the complete system shall be in secure manner, ensuring the latest cyber security guidelines from various statutory authorities (CEA, NCIIPC, CERT-In etc.) throughout the period of contract, considering all the amendments issued from time to time.

oo. Signature updating throughout the contract period, including AMC of various software licenses supplied under this project shall be in scope of the applicant.

pp. All the software licenses shall be purchased in the name of the owner (the name of each location shall also be mentioned where these licenses will be deployed). Additional information e.g. address, contact person, e-mail id, mob/land line number etc. for each control center location should also be provided by the owner.

qq. Necessary support for providing security logs from firewalls/other cyber security devices through SIEM to NCIIPC and integration of supplied SCADA-EMS-DTS system with already available or future Security Operations Center (SOC) and Security Orchestration, Automation and Response (SOAR) systems (if any) to be procured by owner.

rr. Integration of any station on OPC protocol shall be considered as the integration of RTU which includes configuration, integration, database and display preparation, etc. at control center end. Charges shall be considered accordingly.

ss. Integration of new feeders in LSS/ADMS application and new generating units in

AGC application during entire period of contract including extension, if any.

tt. The comprehensive AMC of sub-SLDCs/RCC/DR shall also be covered under main control center AMC BOQ of respective constituents for same duration and no separate line item for AMC of sub-SLDCs/RCC/DR. All scopes of work during AMC defined for SLDC under the proposed contract shall also be applicable for the sub-SLDCs/RCC/DR for the items envisaged for sub-SLDCs/RCC/DR in BOQ.

uu. Buyback of existing SCADA-EMS-DTS system in WRLDC and SLDCs of Maharashtra, Madhya Pradesh, Chhattisgarh, Gujarat, Goa and Dadra & Nagar Haveli and Daman & Diu.

vv. Maintenance during one (01) year defect liability period and six (06) years thereafter.

NOTE: All the scope of work defined for SLDC/RLDC under the proposed contract shall also be applicable for the sub-SLDCs/ RCC (if scope of sub-SLDCs/RCC is envisaged).

A. Scope of Maintenance and Support Services

The applicant shall be responsible for the maintenance & support services of entire systems (hardware and software) supplied under the project during the entire contract period of contract including extension of contract (i.e. 8th and 9th years), if any. Maintenance and support services shall include various scopes specified under various sections of technical specifications which inter-alia includes following without any additional cost to owner:

1. **OEM Back-to-back Support**:

   I. OEM back-to-back support shall mean OEM back-to-back warranty and support from OEMs for all the supplied system items (hardware and software) under the project. OEM back-to-back shall also include all patch supports (including security patches), replacement of hardware/software from OEM in case of, if OEM discontinues or declared end of support/end-of-life, whichever is later for any item supplied items (software/hardware) under the contract.

   The OEM back-to-back warranty shall be provided for a period of seven years from the successful completion of either parallel operation or system availability test (SAVT), whichever is earlier for all the supplied items (hardware and software).

   II. **OEM Back-to-Back Support for Cyber Security Solutions**: OEM support for cyber security solutions (being a critical system) supplied under the project shall be available for entire period of contract including extension of contract (8th and 9th years), if any, without any additional cost to owner. OEM back-to-back shall also include all patch supports (including security patches), replacement of hardware/software from OEM in case of, if OEM discontinues or declared end of support/end-of-life, whichever is later for any supplied cyber security solutions (software/hardware) under the contract without any additional cost to owner.

The following solutions are considered under cyber security solutions:

    a) Firewall /Log Analyzer and its centralized management

    b) HIPS and its centralized management

    c) End point security solution and its centralized management

    d) Anti APT

    e) NAC

    f) Remote diagnostic tool

    g) VAPT tool

    h) Identity management software

    i) Patch management software

    j) Application whitelisting tool, if applicable

    k) SIEM

III.   SCADA-EMS-DTS applications shall be under OEM warranty & support for the entire duration of the contract, including extension, if any.

2. During extension of contract (i.e. 8th and 9th year), if any and balance period of contract (duration between end of OEM back-to-back support and completion of AMC period), if any, where back-to-back OEM warranty is not applicable, applicant shall ensure maintenance of all third-party supplied items (hardware & software, except cyber security solutions) by themselves or through back-to-back OEM/3rd party support without any additional cost to owner.

3. In case of item(s) (hardware and software), supplied under the contract becomes non-functional/degraded in performance during entire contract period including extension of contract, if any, the same shall be replaced by the applicant/respective OEM without any additional cost to owner. Replacement shall be of either the same or higher configuration, keeping the required performance specified under the contract and either from same OEMs or from approved OEMs under the contract.

4. If there is any inter-dependency in replacement of either hardware or software, necessary and suitable solutions (hardware/software or both) meeting design and performance requirement shall be provided by the contractor without any additional cost to owner as per the above provisions.

5. Items supplied under the project such as printers, external SSD, keyboard, mouse, server panels, splitters, displays/monitors, digital displays for time & frequency system, input ACDB, output ACDB, DG system could be on OEM standard back-to-back warranty. If OEM declares an end of support/end-of-life to these items and are functional and are meeting the performance criteria, then the same shall be maintained by either applicant or through back-to-back OEM/3rd party support without any additional cost to owner. However, in case it becomes either non-functional or degraded in performance during the entire contract period including extension of contract, if any, the same shall

be replaced by the applicant without any additional cost to the owner.

6. In case of requirement(s) of any new hardware/software solution which is not envisaged/supplied under this contract, need to be deployed to meet the compliance requirements of various advisories issued by government bodies time-to-time during entire period of contract including extension of contract, if any, the same shall be provided by the owner. However, integration of such additional hardware/software (procured by owner) for complying with the above statutory guidelines, shall be under applicant's scope without any additional cost to owner.

7. The applicant shall be responsible for all the scopes defined under the contract for the entire period of contract including extension of contract, if any.

Note: AMC charges quoted shall be minimum 30% of the total contract price to be distributed uniformly over seven (07) years span of AMC period [i.e. one (01) year defect liability period + six (06) years maintenance period].

5.0   Sample Non-Disclosure Agreement (NDA) Format

(To be stamped in accordance with Stamp Act)

Ref. …………………

Bank Guarantee No. ……………………
Date ……………………………………

To
Grid Controller of India Limited.
61, IFCI Tower, 8th & 9th Floor,
Nehru Place, New Delhi – 110 019

This Agreement executed on this _____ day of _____ 20xx at New Delhi by and between Grid Controller of India Limited, a company incorporated under the provisions of the Companies Act, 1956 and having its registered office at B-9, 1st Floor, Qutab Institutional Area, Katwaria Sarai-110016 (hereinafter referred to as "Employer" which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its successors and permitted assigns) of the FIRST PART,

AND

……………………, a company incorporated under the provisions of the Companies Act, 1956 and having its registered office at ………………………. hereinafter referred to as "Contractor" (which expression shall, unless repugnant to the context or meaning thereof, be deemed to mean and include its successors and permitted assigns) of the SECOND PART.

WHEREAS, GRID-INDIA stores and maintains records and data of highly sensitive and confidential nature, including records and data, the disclosure of which to unauthorized persons or entities is prohibited by law (the "Confidential Information") and

WHEREAS, the ……………………………….., is executing ……………………………., could have the ability and opportunity to view and obtain access to confidential information.

WHEREAS, in order to pursue the mutual business purpose of this particular project, GRID-INDIA and ………………….., recognize that there is a need to disclose to one another certain information, as defined in below paras, of each party to be used only for the business purpose and to protect such confidential information from unauthorized use and disclosure.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:
▪ **DEFINITIONS**
    In this Agreement, unless repugnant to or inconsistent with the context thereof, the following terms shall have the meaning assigned to them herein below:
i) "Agreement" means this non-disclosure agreement.

ii) "Confidential Information" means any information which is not excluded by virtue of Clause 2 of this agreement and which is contained in any software code/ module/application, documentation, specifications, data, database, codes, software module, software applications, computer outputs or other materials or records or other information of technical or any other nature of Employer.

iii) "Disclosing Party" means GRID-INDIA whose Confidential Information is disclosed to the Contractor.

iv) "Receiving Party/ Recipient" means Contractor/ its employees / officers / representatives who receive and/or comes in possession of the Confidential Information of Employer.

v) "Party" means authorized representatives of either Contractor or Employer and when used in plural this will mean Employer and GRID-INDIA collectively.

vi) "Third Party" means personnel/ organization, other than authorized representatives of Employer and Contractor.

- **Obligations to maintain confidentiality**

This Agreement will apply to all confidential and proprietary information disclosed by disclosing party to the receiving party and other information which the disclosing party identifies in writing or otherwise as confidential. Information consists of certain specifications, designs, plans, drawings, software, prototypes and/or technical information, and all copies and derivatives containing such information that may be disclosed to one another for and during the purpose, which a party considers proprietary or confidential. Both parties agreed that during the Confidentiality Period:

i) The receiving party shall use information only for the purpose, shall hold Information in confidence using the same degree of care as it normally exercises to protect its own proprietary information, but not less than reasonable care, taking into account the nature of the Information, and shall grant access to Information only to its employees who have a need to know, but only to the extent necessary to carry out the business purpose of this project, shall cause its employees to comply with the provisions of this Agreement applicable to the receiving party, shall reproduce Information only to the extent essential to fulfilling the Purpose, and

shall prevent disclosure of information to third parties. The receiving party may, however, disclose the information to its consultants and contractors with a need to know; provided that by doing so, the receiving party agrees to bind those consultants and contractors to terms at least as restrictive as those stated herein, advise them of their obligations, and indemnify the disclosing party for any breach of those obligations.

ii) Upon the disclosing party's request, the receiving party shall either return to the disclosing party all information or shall certify to the disclosing party that all media containing information have been destroyed. Provided, however, that an archival copy of the information may be retained in the files of the receiving party's counsel, solely for the purpose of proving the contents of the information.

iii) Receiving party agrees not to remove any of the confidential information from the premises of the disclosing party without the disclosing party's prior written approval.

Receiving party agrees to exercise extreme care in protecting the confidentiality of any confidential information which is removed, only with the disclosing party's prior written approval, from the disclosing party's premises. Receiving party agrees to comply with any and all terms and conditions the disclosing party may impose upon any such approved removal, such as conditions that the removed confidential information and all copies must be returned by a certain date, and that no copies are to be made off the premises.

iv) Receiving party shall have direct access to the scheduling application/data where all utilities will dispatch their energy on a daily basis. The receiving party would not provide any data/information/access to any entity/department engaged in trading activities for facilitating trading of electricity for utilities based on their surplus – deficit scenarios, either directly or via its associates/subsidiaries/partner

v) All of the disclosing party confidential information is owned solely by the disclosing party (or its licensors) and that the unauthorized disclosure or use of such confidential information would cause irreparable harm and significant injury, the degree of which may be difficult to ascertain.

vi) The contractor shall not directly or indirectly copy, reproduce, remove, alter, delete, modify, edit, transfer, transmit, divulge, or disclose confidential information in whole or in part.

▪ **Exceptions**

The obligations contained in Clause 2 above shall not apply to each party's use or disclosure of information shall not apply to information that the receiving party can demonstrate:

i) which is in the public domain at the time of disclosure; or
ii) which later becomes part of the public domain through no breach of this Agreement and only after such later date; or
iii) was independently developed by or for the receiving party without reference to the Information, or was received without restrictions; or
iv) was in the receiving party's possession without restriction or was known by the receiving party without restriction at the time of disclosure; or

v) is the subject of a subpoena or other legal or administrative demand for disclosure; provided, however, that the receiving party has given the disclosing party prompt notice of such demand for disclosure and the receiving party reasonably cooperates with the disclosing party's efforts to secure an appropriate protective order; or
vi) is disclosed with the prior consent of the disclosing party; or
vii) was in its possession or known to it by being in its use or being recorded in its files or computers or other recording media prior to receipt from the disclosing party and was not previously acquired by the receiving party from the disclosing party under an obligation of confidence; or
viii) the receiving party obtains or has available from a source other than the disclosing party without breach by the receiving party or such source of any obligation of confidentiality or non-use towards the disclosing party; or

ix) which receiving party is obligated to disclose under law or by the order of a competent court, government or any other regulatory authority, copy of the information shall be shared by one party to the other.

▪ **Property of Disclosing Party**

Confidential information is proprietary to the disclosing party and shall remain, the property of disclosing party.

▪ **No Copies**

i) Confidential information shall not be copied, in whole or in part, without the prior written consent of the disclosing party.

ii) Upon the disclosing party's request, the receiving party shall either return to the disclosing party all information containing or consisting of the disclosing party's confidential information all copies thereof or shall certify to the disclosing party that all media containing information have been destroyed. Provided, however, that an archival copy of the information may be retained in the files of the receiving party's counsel, solely for the purpose of proving the contents of the information.

▪ **No Disclosure**

Contractor and its employees, officers, agents and affiliates shall hold confidential information in confidence and take all reasonable steps to preserve the confidential and proprietary nature of confidential information, including, without limitation:

i) refraining from disclosing confidential information to persons within its and its affiliates' and agents' organizations not having a reason to know, and all persons outside such organizations, and

ii) advising all its employees, officers, agents and affiliates that have access to confidential information of its confidential and proprietary nature.

▪ **Duration**

This Agreement shall be valid for a period of six (06) months beyond the validity of the Letter of Award (LOA) for ………………….dated …… for a scope of work……………... The obligations of contractor hereunder with regard to confidential information disclosed prior to expiry / termination shall continue to survive for a period of six (06) months after such expiry / termination.

▪ **Waivers**

Contractor understands that the disclosing party may waive some of the requirements expressed in this agreement but such a waiver to be effective must be made in writing by the disclosing party and should not in any way be deemed a waiver of contractor right to enforce any other requirements or provisions of this Agreement.

▪ **Assignment**

This Agreement is not assignable by either party without an express written approval

of the other party.

- **Miscellaneous Provisions**

i) Amendments

No modification, amendment of this agreement and no waiver of any of the terms or conditions hereof shall be valid or binding unless made in writing and duly executed by both the parties.

ii) This Agreement constitutes an entire agreement between the parties with respect to the subject matter herein and supersedes and cancels any prior oral or written agreement, representation, understanding, arrangement, communication or expression of intent relating to the subject matter of this agreement.

iii) If any provision of this agreement is held to be void, invalid or inoperative, such event shall not affect any other provisions herein, which shall continue and remain in full force and effect as though such void, invalid or in operative provision had not been a part hereof.

iv) This agreement and Letter of Award hereto constitutes the entire agreement of the parties with respect to the parties' respective obligations in connection with Information disclosed hereunder and supersedes all prior oral and written agreements and discussions with respect thereto. The parties can amend or modify this agreement only in writing and duly executed by their respective authorized representatives. Neither party shall assign this agreement without first securing the other party's written consent.

v) Dispute Resolution and Governing Law

If at any time any dispute, differences or question arises between the parties concerning the meaning, construction, interpretation, effect and scope of this agreement regarding the respective rights and liabilities of the parties under this agreement, then such disputes, differences or question shall be amicably resolved through mutual discussions and negotiations.

Should no such solution be arrived at within one (01) month from the first attempt by the parties hereto to resolve the problems to dispute, the aggrieved party shall send to the other party a registered letter intimation requesting reference of the matter to arbitration. Notwithstanding anything to the contrary, if any dispute/disagreement/differences ("Dispute") arise between the parties during the subsistence of the said agreement and/or thereafter, in connection with, inter alia, the validity, interpretation, implementation and/or alleged breach of any provision of the said agreement, jurisdiction or existence/ appointment of the arbitrator or of any nature whatsoever , then, the dispute shall be referred to a sole arbitrator who shall be appointed as per the Arbitration and Conciliation Act,1996. The place of arbitration shall be New Delhi and the arbitration proceedings shall be governed by the Arbitration and Conciliation Act 1996 as amended from time to time and shall be in the english language. The award shall be binding on the parties subject to the applicable laws in force and the award shall be enforceable in any competent court of law.

IN WITNESS WHEREOF the parties hereto have set and subscribed their respective

(INVITATION FOR EXPRESSION OF INTEREST)

hands on the day and the year first hereinbefore written.

Signed, sealed and delivered by:
Mr. / Ms. …………………………   …………………………………
Designation …………………………
In the presence of witness:
Signature: ………………………………………..
Name   : ………………………………………..

For Grid Controller of India Limited:
Address: …………………………………………..
In the presence of witness:
Signature: …………………………………………..
Name   : …………………………………………..

6.0   Application of EoI

The application of EOI is given in Section-III of this document which comprises of the following:

A) **Form of Application**:

The application form elicits the interest and extent of participation of the applicant(s) in the intended future tender/ bidding / RFP as the case may be and shall be submitted by an authorized representative of the agency / individual on its official stationery.

Appendices:

The following are the appendices required to be filled and submitted by applicant along with the application form.

a.   **Appendix -1**: Application Form

b.   **Appendix- 2**: Applicant's Profile

c.   **Appendix- 3**: Acceptance of NDA of GRID-INDIA

d.   **Appendix- 4**: Any other information

Note-

- Applicants should go through Section-I and Section-II thoroughly before filling and submitting the application.

- For Expression of Interest, Application Form and Appendices given in Section-III shall be duly filled and sent to GRID-INDIA by the applicant in soft copy through e-mail.

(INVITATION FOR EXPRESSION OF INTEREST)

SECTION-III:
APPLICATION FORM AND APPENDICES

**Replacement/Upgradation of SCADA-EMS-DTS System at Western Region Load Despatch Centre (WRLDC)
and State Load Despatch Centres (SLDCs) of Western Region**

(INVITATION FOR EXPRESSION OF INTEREST)

Instructions to Applicant

- This is Expression of Interest (EOI) to enlist interested parties and prepare them for tendering / bidding process for "**Replacement/Upgradation of SCADA-EMS-DTS System at Western Region Load Despatch Centre (WRLDC) and State Load Despatch Centres (SLDCs) of Western Region" and future tendering for similar nature of projects**. Applicants may note that this EOI is not solicitation for tender/bid.

- For expression of interest, Application Form and Appendices given in Section-III shall be duly filled and sent to GRID-INDIA by the applicant in soft copy.

- Applicants should go through Section-I and Section-II thoroughly before filling and submitting the application.

- Along with submission of application & form, applicants must ensure that they have provided the following information without which EOI shall be rejected:

  - o GSTN and PAN (in case of Indian entity) of firm (or individual if applying as individual).

  - o Undertaking in regard of obtaining necessary clearances / licenses from government departments / agencies (if required).

  - o Address/ contact number/ e-mail address/ Name of contact person.

(EXPRESSION OF INTEREST: APPLICATION FORM)

(To be submitted on company's Letter Head)

Ref No.

                                                  Date:

To,
Chief Manager (CS),
Grid Controller of India Limited
(formerly known as Power System Operation Corporation Limited),
61, IFCI Tower, 9th Floor, Nehru Place,
New Delhi – 110019
Email Address: abhineet@grid-india.in

Dear Sir,

Sub: Replacement/Upgradation of SCADA-EMS-DTS System at Western Region Load Despatch Centre (WRLDC) and State Load Despatch Centres (SLDCs) of Western Region and future tendering for similar nature of projects.

We, the undersigned, express our interest in the subject EOI and declare the following:

(a) We are duly authorized to represent and act on behalf of _____ (name of the firm/company/individual).

(b) We have examined and have no reservations to the EOI document including Amendment No(s) & Clarification No(s) _____ (if any).

(c) With reference to your invitation for EOI dated _____, we are furnishing herewith all the required details as per the prescribed appendices.

(d) We hereby express our willingness to (i) participate in RFP/ forth coming tender / bidding as and when GRID-INDIA invites the same, and (ii) provide budgetary quotation for the RFP upon enquiry by GRID-INDIA

(e) GRID-INDIA and /or its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents and information submitted in connection with this application and to seek clarifications from our bankers/suppliers and clients.

(f) This application will also serve as authorization to seek/ request information as deemed necessary from any individual or authorized representative of any institution referred to in the supporting document provided by applicant.

(g) GRID-INDIA and /or its authorized representatives may contact the following nodal persons for further information on any aspects of the application:

Name and designation of contact Person	Address for Communication	Telephone/ Mobile No.	Email ID

(h) This application is made in full understanding that:

Through this EOI, GRID-INDIA intends to identify interested and potential system integrators in India for Replacement/Upgradation of SCADA-EMS-DTS System at Western Region Load Despatch Centre (WRLDC) and State Load Despatch Centres (SLDCs) of Western Region and future tendering for similar nature of projects.

This EOI is not intended for empanelment of applicants or pre-qualification of applicant.

1. EOI process will be subject to verification of all information submitted at the discretion of GRID-INDIA.

2. GRID-INDIA reserves the right to reject or accept any or all applications, cancel/withdraw the EOI process without assigning any reason whatsoever and in such case, applicant shall not have any claim arising out of such action.

(i) We declare that we have read and abide by the provisions of NDA of GRID-INDIA and submit the form of Acceptance of /NDA duly filled as per GRID-INDIA's format.

(j) The undersigned declares that the statements made, and the information provided in the application are complete, true and correct in every detail.

SIGNATURE (AUTHORISED SIGNATORY)

(OFFICE STAMP)

DATE_____NAME_____DESIGNATION_____

PLACE_____

Applicant's Profile

1. **Name of the interested party**: …………………………………………………………

2. **Address**   : …………………………………………………………

3. **Eligibility Criteria (as per Section-I; 2.0 of EOI)**:   (Tick the correct box)

   Criteria-A   ☐
   Criteria-B   ☐
   Others   ☐   Please Specify: ……………………………………

4. **Classification of Company**

   Public Limited   ☐
   Partnership Limited   ☐
   Private Limited   ☐
   Others   ☐   Please Specify: ……………………………………

5. **GSTIN**   ……………

6. **PAN**   ……………

7. **Contact Details**   NAME: ………………………………………………......................
                              DESIGNATION: …………………………………………………………
                              MOBILE NO.: …………………………………………………
                              EMAIL-ID: ………………………………………………………...

8. Years of experience in the specified criteria: ……………………………………………………

9. No. of SCADA systems (with real time data acquisition) installed in last 10 years …………………………

10. No. of projects executed in last 10 years involving supply, configuration, installation and maintenance of systems in areas related to the following items (SCADA application, Cyber Security Solutions, Data Historians, Video Projection Systems, Computing and Networking Devices, Auxiliary Power Supply systems) ………………………

11. Annual Turnover in last FY……………………………………………………………………………….

12. Total available liquidity as on last quarter ……………………………………………………

13. Experience of commissioning and maintenance of data historian with more than 20000 data points/records …………………………………

(FORM FOR ACCEPTANCE OF NON-DISCLOSURE AGREEMENT)

We have read the contents of sample NDA of GRID-INDIA provided in the EOI (under Section-II, para 5.0) and undertake that we shall strictly abide by the provisions of the same.

SIGNATURE

(AUTHORISED SIGNATORY)

(OFFICE STAMP)

DATE_____NAME_____DESIGNATION_____

PLACE_____

(ANY OTHER INFORMATION)

If Applicant desires to share any other additional information relevant to the work / assignment like brochure, future plan or any suggestion, it may be given in addition to the above appendices.