ODISHA POWER GENERATION CORPORATION LIMITED
IB THERMAL POWER STATION
AT/ PO- BANAHARPALI, JHARSUGUDA
ODISHA
PIN-768234

OPGC Invities

"Expression of interest (EOI)"

for

"**Upgradation of Main Turbine Governing System and LPBP Governing System (Control & Protection) in OPGC 2 X 210 MW Units**"

Odisha Power Generation Corporation Ltd

(A Government company of the States of Odisha)

Expression of Interest: NIT No. ITPS/CC-22/2025-26/16, Date: 14.03.2026						
S/N	**Name of the work/Description**	**Tender cost**	**EMD (Rs.)**	**Contract Period**	**BID SALE DATE**	**Date of receipt & submission /Opening of EOI**
1	**Expression of Interest (EOI):** For Upgradation of Main Turbine Governing System and LPBP Governing System (Control & Protection) in OPGC 2 X 210 MW Units	--	--	As per Bid Document	14.03.26 to 04.04.26	Up to 15:00 Hrs on 06.04.26/ 15:30 Hrs onwards on 06.04.26

Expression of interest (EOI)

Expression of interest (EOI) for "Upgradation of Main Turbine Governing System and LPBP Governing System (Control & Protection) in OPGC 2 X 210 MW Units"

1. Brief Introduction:

Odisha Power Generation Corporation Ltd. (OPGC) is a Government Company of the State of Odisha. It operates state of the art thermal power plants at Banharpalli, Jharsuguda. It has a total generation capacity of 1740 MW (2x210 MW in first phase and 2x660MW in second phase).

2. Expression of Interest:

OPGC invites "Expression of Interest (EOI)" from interested parties for "Upgradation of Main Turbine Governing System and LPBP Governing System (Control & Protection) in OPGC 2 X 210 MW Units. Interested parties may clearly indicate the inputs required from OPGC.

OPGC is looking for interested parties having experience as follows,

The bidders must meet the following Qualifying Requirements.

1. Party or It's Principal must be the manufacturer of turbines having capacity 210MW or above.

And

2. Party or It's Principal must have carried out similar job in 210MW or above either in India or abroad for KWU turbine. Relevant work order copies to be submitted .

And

3. The party shall carry out the modification strictly as per the Scope of Work (SOW) given by OPGC. Bidders to give acceptance to the same in their company letter head .

And

4. No additional oil circuit for governing oil shall be introduced. The upgradation has to be carried out by using the existing control oil system (Low pressure-8 bar oil system). Bidders to give acceptance to the same in their company letter head .

And

5.The offered Control system for main turbine governing control and LPBP governing/protection control must be compatible with or interface seamlessly with the existing Max -DNA system provided by BHEL. Bidders to give acceptance to the same in their company letter head .

And

6.The bidder shall be financially sound and shall have average annual financial turnover of minimum Rs. **500** crores in the preceding three financial years. The agency shall submit audited financial results of the company as documentary evidence in support of these qualifying criteria. For the purpose of calculating financial turnover, revenue from Trading Business and Other Income is not admissible.

And

7. The bidder should be an Indian Company registered in India under the Companies Act.

And

8.Bidder must not be blacklisted related to any upgradation/modification project in any of the PSU & Govt Sector organization in last five years (Bidders Self Certification)

Similar Job: Engineering, supply and commissioning low pressure (8 bar) control oil Governing/ LPBP system for KWU design Turbine of 210 MW or above with minimum one year of successful operation.

Note:

- Sufficient documentary proof in support of the above must be submitted along with the Techno-Commercial Bid. Photocopies of supporting documents must be submitted along with Techno-Commercial Bid
- For all qualification criteria all supporting documents to be provided.
- Owner reserves the right to obtain necessary documents and also to assess the qualification of the Bidder, subsequent to submission of bid, as deemed necessary by Owner to establish bidder's qualification.
- The bidders who are found qualified in above will be invited to participate in tender .

Documents to be submitted in support of QR:

1) Relevant PO copy and Client's completion certificate

2) Audited balance sheet including Profit & Loss statement for the previous three completed financial years reckoned from the date of application. In case the documents are not ready/ available, then certified copy by a registered practicing Chartered accountant may be submitted.

3) Any other documents in addition to the above which the applicant wants to submit.

3. **<u>Brief Scope of Work:</u>** The SOW is segregated into three parts and party must complete the project as total

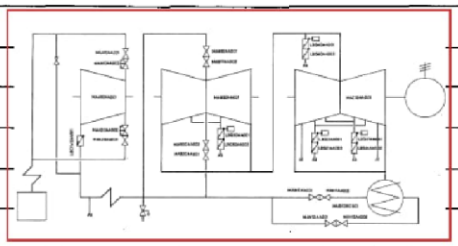
   A. **Design, Engineering, Manufacturing, and Supply of Main Turbine Hydraulics Governing Controls and LP- Bypass Hydraulic Control & Protection System.**
   B. **Design, Engineering, Manufacturing & Supply of DCS for Turbine Controls & LP-Bypass Control & Protection System with communication gate way to existing DCS of MAX DNA.**
   C. **On-Site Services – Installation and commissioning of the above scope of supply.**

1 Existing Data Steam Turbine

Manufacturer : BHEL (KWU) Rating : 210 MW

Construction

Three-cylinder reheat condensing turbine		
Single-flow HP turbine with 25 reaction stages	Type	H30-25-2
Double-flow IP turbine with 20 reaction stages per flow	Type	M30-20
Double-flow LP turbine with 8 reaction stages per flow	Type	N30-2x5
2 main stop and control valves	Type	FV160-1
2 reheat stop and control valves	Type	AV320
2 swing check valves in cold reheat line		DN450
2 bypass stop and control valves		DN200
Extraction valves:		
Extraction 1: no valve		
Extraction 2: 1 swing check valve with auxiliary actuator, 1 swing check valve, manufacturer Babcock		
Extraction 3: 1 swing check valve with auxiliary actuator, 1 swing check valve, manufacturer Babcock		
Extraction 4: 1 swing check valve with auxiliary actuator, 1 swing check valve, manufacturer Babcock		
Extraction 5: 1 swing check valve with auxiliary actuator, 1 swing check valve, manufacturer Babcock		
Extraction 6: no valve		



Oil Pumps

	Main Oil pump	Auxiliary oil pump	DC Bearing oil pump	Shaft Lift oil pump	
Quantity	1	2	1	3	
Capacity (rated)	139	78,31	30	1,26	dm^3/s
Discharge pressure (gauge)	8,2	6,8	2,3	120	at

<u>2: Existing System Configuration:</u>

1. The existing turbine control system are based on hydraulic components like the hydraulic/mechanical startup device, the hydraulic speed controller, the electrohydraulic

converter, the solenoid valve in the secondary auxiliary fluid and the solenoid valve in the IP secondary fluid controlled by load swing relay, the hydraulic speed converter and the auxiliary slide valve.

Turbine Hydraulic Governing Control System (Low Pressure@8Bar)

Grade of Oil: Servo Prime 46, **NAS Maintained**: 7/8

- Mechanical Hydraulic Governing System, Starting Device, Load Limiter etc.
- Mechanical Hydraulic Turbine Protections – Overspeed Bolt, Axial Trip, Condenser Vacuum.
- Electro-Hydraulic Converter, Turbine Trip SOV, ATT SOV/CV Motors etc.

2. The existing LP-bypass control and protection system is based on hydraulic components, which consist of the electro-hydraulic converter, electro-hydraulic LP-bypass limit pressure controller, the condenser protection unit, the interlocking solenoid valves and the hydraulic pressure switch.

   LP-Bypass Hydraulic Governing Control System (Low Pressure@8Bar)

- Electro-Hydraulic Converter, By-pass Limit Pressure Controller
- Mechanical Hydraulic Protections – Spray Water Pressure Switch, Condenser Vacuum, Temperature Protection SOVs

3: Proposed Modification (SOW)

A) Main turbine hydraulic governing system upgradation (Control):

- Main turbine hydraulic governing system shall be upgraded from Group control of HP/IP valves to single valve control of main steam HP/IP control and stop valves.
- The electrohydraulic converter (MAX45BY001), hydraulic converter (MAX45BY011) will be eliminated and will be replaced with a single valve control system using a E/H converter for each turbine control valve (2xHP; 2xIP). The I/H converters are mounted directly on the actuator housings of the HP-CV and IP-CV. One new duplex oil filter will be installed in the turbine control rack for supplying fluid. The piping's near the control actuator shall be modified as per requirement.
- The solenoid start/test valves and supply units are retained & used for the startup and testing of the HP/IP stop actuator.
- The speed changer will be eliminated and will be replaced by two new start-up solenoid valves and pressure transmitters.
- The test motors on the CVs will be eliminated. Their function will be performed by the new E/H converters.
- The auxiliary slide valve for the extraction valves A2-A5 will be eliminated. The extraction valves will be controlled directly via the existing solenoid valves.
- The solenoid valves controlled by the load step change relay will be eliminated. This function will be reproduced in the electronic turbine controller.

B) LP-Bypass hydraulic governing system upgradation (Control & Protection):

- LP-Bypass hydraulic governing system shall be upgraded from Group control of LP-Bypass valves to Single Valve control of LP-Bypass control valves.
- The electrohydraulic LP by-pass converter, LP-bypass limiting regulator and the hydraulic pressure switch will be eliminated. Replacement will be a single valve control system using a proportional valve for each valve direct mounted on the bypass control actuator with an additional duplex filter. The pre-control devices will be eliminated.
- The bypass trip system will be implemented with two solenoid valves in 1-out-of-2 logic (de-energize-to-trip). The installation place will be the LBPP rack.
- For the interlocking function of the bypass stop valve actuator, two solenoid valves shall be installed in the bypass rack.
- For the first stage of water injection valve operation, a new solenoid valve in the bypass rack shall be installed.
- A separate electronic injection water pressure protection system will be implemented for each injection water valve with pressure transducers in 2-out-of-3 logic.
- The common measuring point for downstream pressure of the bypass valves will be eliminated. This will be replaced with a three-channel measurement for each bypass valve.
- The condenser protection unit will also be eliminated. A separate electronic bypass condenser pressure protection system will be implemented for each condenser using 2-out-of-3 logic. The same pressure transducers will be used as in the turbine condenser pressure protection system. The condenser pressure protection system for the turbine side will be described separately in conjunction with the turbine protection system.

4 .The Parts That will be retained from Existing System:

- Existing HP/IP / LP-Bypass control valves and stop valves along with oils servomotors & actuators.
- Existing solenoid valves & supply units for start/testing of HP/IP stop valves
- Existing main oil pump, CRH flaps, extraction valves, LP-Bypass spray water valves etc.
- Existing control oil system along with piping

5. Indicative Bill of Material

Main Turbine Governing Valve Control			
S.No.	**Item Description (Main Turbine)**	**Unit**	**Qty Per Turbine**
1	Electro-hydraulic converters for each HP control valves along with pre-control block and accessories	Set	2
2	Electro-hydraulic converters for each IP control valves along with pre-control block and accessories	Set	2
3	24VDC solenoid valves for startup with mounting accessories	Set	1
5	Duplex oil filter along with mounting accessories	Set	1
6	Existing governing rack modification with associated solenoid valves, piping connections & accessories	Set	1
7	Dismantling of existing hydraulic components as applicable	Lot	1
8	Integration of upgraded hydraulic system with I&C system	Lot	1
LP-Bypass Control & Protection			

S.No.	Item Description	Unit	Qty Per Turbine
1	Electro-hydraulic converters for each Bypass control valves with pre-control block & and accessories	Set	2
2	24VDC solenoid valves for a by-pass trip system with mounting accessories	Nos.	4
3	24VDC solenoid valves for 1st stage injection water valves with mounting accessories	Nos.	1
4	Process measurement transmitters for spray water injection protection with mounting accessories	Nos.	6
5	Process measurement transmitters for steam behind bypass control vales with mounting accessories	Nos.	6
6	Process measurement transmitters for condenser vacuum protection with mounting accessories	Nos.	3
7	Process measurement transmitters for trip oil with mounting accessories	Nos.	2
8	Existing LP-Bypass rack modification with associated solenoid valves, piping connections & accessories	Lot	1
9	Duplex oil filter along with mounting accessories	Set	1
10	Dismantling of existing hydraulic components	Lot	1
11	Integration of upgraded hydraulic system with I&C system	Lot	1

The above material list is indicative; party has to supply whatsoever required to complete the project without any additional financial implication to OPGC.

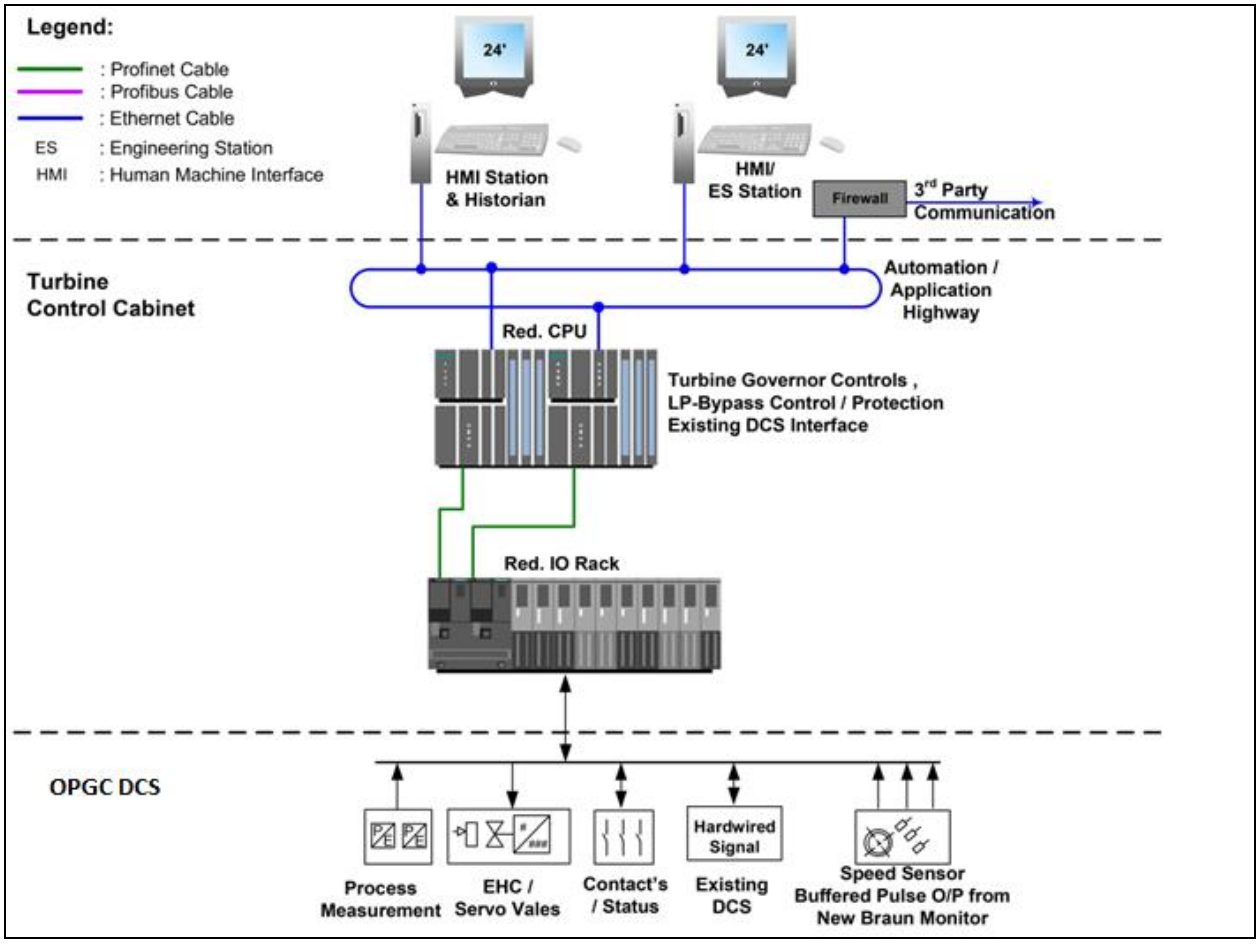
6.Turbine C&I Controls System

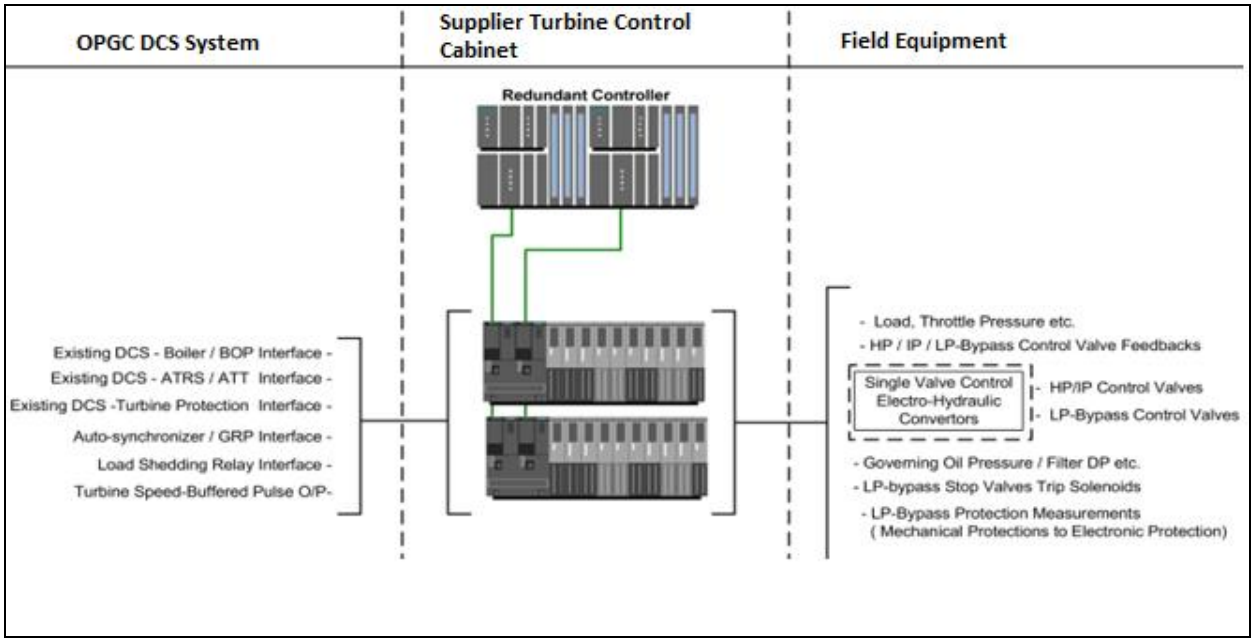
The existing C&I for Turbine Integral of OPGCL is supplied by BHEL MAX -DNA DCS system. However, Party has to give the Turbine control system DCS) for the following functions as the minimum scope of supply along with a turbine hydraulic upgrade solution:

Digital Turbine Controller	Single Valve Governing Control for HP & IP Control Valves
Other Interfaces	ATT Functionality as per new single valve Control
	Hardwire interface with existing Turbine protection system
	Hardwired interface with existing DCS of Boiler Controls/BOP/ATRS/ATT/ Auto synchronizer/GRP/Load shedding relay etc. required to meet single valve control functionality
LP-Bypass Control & Protection	Single valve control for LP-Bypass Control Valves
	Latest Electronic ~~V~~acuum Protection (Replacement of mechanical vacuum protection)
	Latest Electronic injection water pressure protection (Replacement of mechanical injection water protection)
	Latest Electronic pressure downstream of the bypass valve (Elimination of bypass limit pressure controller)

The control functions mentioned in the above table shall be implemented in the Supplier DCS system control cabinet. The balance turbine CLCS/OLCS logic and protection logic shall be retained as such in the existing DCS/control system(MAX DNA Supplied by BHEL). The required interface of the new DCS system with boiler and turbine auxiliaries shall be hardwired as per process requirements. Typical system configuration of Proposed DCS System is given below. The redundant 24VDC power supply shall be provided by the OPGC. The existing earthing system shall be used for grounding of new Turbine Control System.

Proposed System Configuration:





Indicate Bill of Material for C&I:

TURBINE & LPBP GOVERNING(2X210MW)				
	Indicate Bill of Material for C&I			
S. No	**Item Description**	**Approved Make**	**Unit**	**Qty/ Unit**
1	Redundant controller for Governing System	1)Siemens 2) BHEL 3) GE 4) Mistubishi	Set	1
2	HMI station with historian, keyboard / mouse & 22" HD LED monitor	1) Dell 2) HP	Set	1
3	Engineering station with keyboard/mouse & 22" HD LED monitor	1) Dell 2) HP	Set	1
4	Network Components	1) Cisco	Lot	1
5	software & licenses	OEM as per Sl.01	Lot	1
6	Control cabinet	OEM as per Sl.01	No.	1
7	IO Racks and IO Modules as per the proposed concept	OEM as per Sl.01	Set	1
8	Position Control Module for Turbine Control	1) Rexroth 2) Moog	Lot	1
9	Position Control Module for LP-Bypass Control	1) Rexroth 2) Moog 3) CCI	Lot	1
10	Load transducer	1) Rishabh Instruments Pvt. Ltd 2) Automatic Electric 3) Secure	Nos.	2
11	IP65 Field Junction Boxes-36Way	1)Rittal 2) BCH (BHARTIA CUTLER HAMMER)	Lot	1
12	C&I Cables Cu-0.5sqmmm un-armored	1) Finolex 2) Polycab 3) KEI 4) LAPP 5) Havell	Lot	1
13	Control cables Cu-1.5/2.5 sqm un-armored		Lot	1
14	Earthing & power cables Al-16/35 sqm un-armored		Lot	1

The above material list is indicative, party has to supply whatsoever required to complete the project without any additional price implication to OPGC.

Delivery :

Supply :10 Months from the date of PO.

Installation and Commissioning: 20 days after the Unit de-synchronization and stoppage of barring gear.

The above SOW and tentative BOQ is for Upgradation of one Unit of 210MW .

4. Required Information

2.1. The prospective agencies are required to submit particulars of the firm with the background of operation & business.

2.2. The party submitting the EOI shall be bearing all costs associated with the preparation and submission of the EOI and OPGC will, in no case be responsible or liable for these costs, regardless of the conductor outcome of the assessment/evaluation process.

5. Bid Document & Instruction to Bidders:

The bid complete in all respect must be submitted in sealed envelope super scribed with EOI number, Name of the work. The bid documents are not transferable.
The bidder must submit the following documents:

i. Signed & Stamped Bid Documents (all pages) as a token of acceptance.
ii. Photo copies of GST Registration Certificate, IT PAN, Provident Fund and ESI Registration Certificate.
iii. Filled in and signed formats as specified in Annexure – I & II.
iv. Credentials and other supporting documents as per requirement

6. Submission of EOI:

Interested parties are required to submit all the documents as per the attached format complete in all respect through courier, registered post or hand delivered to the following address.

DGM- Contract Cell
ITPS, Banharpali, OPGC,
District- Jharsuguda,
Odisha,
Pin- 768234

NOTE:

I. Each page of the documents submitted shall be duly authenticated by the applicant.
II. The language of submission of applications shall be in English.

For any further clarification/queries the following personnel may be contacted:

- For Commercial queries:
  Sri Manoj Pradhan;
  D.G.M. (Contract Cell)
  E-Mail Id. manoj.pradhan@opgc.co.in
  Mob no : +91- 7852904002

  Sri. Satya Tarai
  Sr. Manager (Contract Cell)
  E-Mail Id. satya.tarai@opgc.co.in
  Mob no : +91- 7682854483

- For Technical queries:
  Sri Santosh Sahoo
  AGM (Mechanical)
  E-Mail Id. santosh.sahoo@opgc.co.in
  Mob no :+91- 7682854500

ANNEXURE-I

Standard Format for Expression of Interest

Date: _____

To,
DGM- Contract Cell
ITPS, Banharpali,
OPGC,
District- Jharsuguda,
Odisha
Pin- 768234

Subject: Expression of interest (EOI) for "Upgradation of Main Turbine Governing System and LPBP Governing System (Control & Protection) in Unit-1, OPGC 2X210 MW"

Dear Sir,

In response to your public advertisement in [Insert the names of the newspaper and/or website] on [Insert date of the advertisement] inviting EOI for "**Upgradation of Main Turbine Governing System and LPBP Governing System (Control & Protection)in Unit-1, OPGC 2X210 MW**"; we hereby submit our EOI.

We have also attached information according to the standard form as per attached Annexures. The information furnished by us in this EOI is true, correct and accurate to the best of our knowledge.

Sincerely yours,
On behalf of the firm/company/organization:

Signature: _____
(Person signing the EOI and supporting documents should be an Authorized Signatory supported by necessary Board resolutions)

Name of signatory; Designation; Company Seal/stamp

ANNEXURE-II

CREDENTIALS

1. Name and address
   i. Name of the Firm/Company/Organization:
   ii. Corporate Address:
   iii. Registered Address:
   iv. Telephone No:
   v. Fax:
   vi. Email:

2. Contact Person:
   i. Name:
   ii. Designation:
   iii. Telephone No:
   iv. Email:

3. Company Profile:
   i. Core area of expertise:
   ii. Date of Incorporation:
   iii. CIN No.:
   iv. GST No.:
   v. PAN No.:
   vi. Share holding Pattern:
   vii. Financial Capability (Including Turnover, Reserve and Surplus etc.)

4. Key Operating parameters for Last three Financial Years:
5. Supporting Documents: [Provide copy of the registration, copy of PAN of the firm; with their latest renewals where applicable, Audited Financials for last three Financial years]
6. Experience/ Details of similar work executed (Along with supporting documents /credential issued by the client company) in Last three FY:
7. Any other details: