

For Authorised Use Only



GADRE MARINE EXPORT PVT LTD

GADNADI HYDRO ELECTRIC PROJECT

1 x 1800 KW+10%COL

TENDER DOCUMENT

NO. GMEPL-01/2025-26

VOLUME - I

**Press NOTICE, PROJECT DESCRIPTION, SALIENT
FEATURES, TERMS & CONDITIONS FORMS & ANNEXURES**

NAME OF WORK: GADNADI Hydro Electric Project

: Design, Manufacture, Test at Shop, Supply at site including Transport, handling, loading/unloading, Installation, Putting to Operation and Supervision during Erection, Testing, Commissioning and Setting to Operation of Turbine/Generator sets along with all E&M equipment required for Hydel power station and switchyard for **GADNADI Hydro Electric Project:**

OFFICE ADDRESS:

GADRE MARINE EXPORTPVT LTD
PLOT NO. FP-1, MIRJOLE BLOCK,
MIDC, RATNAGIRI-415639, MAHARASHTRA
Email - sandesh.salvi@gadremarine.com

PRICE: Rs. 20000 /- Per



GADRE MARINE EXPORTPVT LTD

GADNADIHYDRO ELECTRIC PROJECT

1 x 1800 KW+10%COL

NO. GMEPL-01/2025-26

VOLUME - I

Issued To M/s. _____

Date: / /

I N D E X

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GADRE MARINE EXPORT PVT LTD

GADNADI HYDRO ELECTRIC PROJECT

1 x 1800 KW+ 10%COL

SECTION - I

- PRESS NOTICE
- DETAILED TENDER NOTICE
- QUALIFYING CRITERIA
- PROJECT DESCRIPTION
- SALIENT FEATURES

**SECTION -I****A. DETAILED TENDER NOTICE****GADRE MARINE EXPORT PVT LTD****GADNADI HYDRO ELECTRIC PROJECT (1 X 1800 KW+10%COL)****(INTERNATIONAL COMPETITIVE BIDDING)**

1.1 Issued to tenderers (Applicants) on request pursuant to press notice.

SEALED TENDERS FOR THE WORK OF Design, Manufacture, Test at Shop, Supply at site including Transport, handling, loading, unloading at site, Installation, Putting to Operation and Supervision during Erection, Testing, Commissioning (72 hrs continuous run) and Setting to Operation of Turbine/Generator sets along with all E&M equipment required for Hydel power station and switchyard for ***GADNADI HYDRO ELECTRIC PROJECT*** are invited by "***GADRE MARINE EXPORT PVT LTD, RATNAGIRI, MAHARASHTRA INDIA***" from the Supplier/Manufacturer/Tenderers who intend to participate in this competition.

1.1.1 The prospective bidders are advised to note following

The complete set of tender documents is displayed on our website and consultant's website www.gadremarine.com and www.dkahydro.com under category section "Tender" from ***05/03/2026 to 15/04/2026***.

The tender is available free for viewing & downloading. The bidders are advised to go through the various conditions, eligibility criteria, visit the site and get clarified on doubts if any from the inviter's representative. If the bidder intends to bid for the work, he will be required to submit the tender in 2 copies along with a separate ***DD of Rs 20,000/-*** (Rs Twenty Thousand only) as cost of the tender payable as detailed under 1.2. The DD will be submitted in a separate envelope. Before tender opening, the inviter will open the bids of only those bidders who have submitted the ***DD of Rs 20,000/-***. The D.D. purchased from ***05/03/2026 to 15/04/2026*** will only be accepted. No Cash or D.D. drawn at the time of submission will be accepted. The bids not accompanied by the D.D. will be recorded.



1.2	Cost of Blank Bid document GMEPL- 01/2025-26	: INR. 20,000/- Indian Rupees Twenty Thousand only (Nonrefundable) By Demand Draft in favour of GADRE MARINE EXPORT PVT LTD payable at RATNAGIRI Maharashtra .
1.3	Inviter Address:-	: GADRE MARINE EXPORT PVT. LTD. Plot No. FP-1, Mirjole Block, M.I.D.C., Ratnagiri-415639, Maharashtra Ph. 02352-231600 Email - sandesh.salvi@gadremarine.com
1.4	Date & Time of Pre-Bid Conference	: GADRE MARINE EXPORT PVT LTD Plot No. FP-1, Mirjole Block, M.I.D.C., Ratnagiri-415639, Maharashtra on 23/03/2026 at 12:00 pm
1.5	Date & time for receipt of Bid	: 15.00 Hrs at the above address mentioned in 1.4 at On or before 15/04/2026
1.6	Date & time for opening of Sealed Tender document	: Date 15/04/2026 at 16.00 Hrs at the above address mentioned in 1.4
1.7	Earnest money to be paid with Tender	: INR 6.30 lakhs in the form of DD or Bank Guarantee of Nationalised Bank payable at Ratnagiri, Maharashtra, India in the name of GADRE MARINE EXPORT PVT. LTD.
1.8	Performance Security	: 10% of the contract price in the form of Bank Guarantee similar to 1.7 above
1.9	Validity of Tender	: 120 calendar days from the date of submission of the bid.
1.10	Time limit for completion of work from date of Award	: 12 Months Commissioning & O&M for 6 month after Successful commissioning, total time of completion 18 months.
1.10.1	Location of work site.	: The work site is situated near village Kuchambe (Gadnadi Dam), Tal-Sangameshwar, Dist-Ratnagiri State-Maharashtra, India. At about 75 Kms from Ratnagiri City.



		Ratnagiri Airport to Site-72 Km Latitude 17° 17'6.87" (N) Longitude 73°38'2.41" (E)
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Pre-Bid conference opens to the Bidders who have purchased the bid documents will be held at office Address- **GADRE MARINE EXPORT PVT. LTD.**, Plot No FP-1, Mirjole Block, M.I.D.C., Ratnagiri-415639, Maharashtra

- 1.11** On **23/03/2026 at 12 hrs** wherein the prospective bidder will have an opportunity to obtain clarification, if any on the contents in bid document. The clarification & amendment if any will be issued to all the prospective Bidders.
- 1.12** The bidders are advised to send their queries (Regarding Prebid) before or on **20/03/2026** by Mail/Letter/Fax. Any queries received after this date will not be entertained.
- 1.13** The contact person at Ratnagiri, Maharashtra is **Mr. Sandesh Salvi-9823120188 & at Kolhapur Mr. Sagar Yalugade-8149848370.**
- 1.14** **IMP NOTE FOR BIDDER** - * The Bidders are advised to fill up "**Enquiry Now** " under section Contact us of www.dkahydro.com website before downloading the **GADNADI HEP E&M tender Volumes.**
- 1.15** **Bid document will be opened of those bidders who fill up the information in the above mentioned option from the website. It is mandatory.**
- 1.16** **IMP NOTE FOR BIDDER** - *As per of Hybrid policy by Govt. of Maharashtra, The Solar project (using Dam area) will be connected after existing 11 KV VCB of outgoing line.
- 1.17** Manufacturer is free to suggest any other alternative of main turbine M/C & generator with its auxiliaries without changing the Installed Capacity, Generated units, Head range & Discharge range provided in the Tender Document

B. CRITERIA FOR QUALIFICATION

The prospective Tenderer shall furnish information & documentary evidence to Purchaser's satisfaction to show that the qualifying requirements as given hereunder are fulfilled by him

2.1 CRITERIA FOR FINANCIAL SOUNDNESS

The Tenderer shall be financially sound. His bid capacity shall be decided by the following formula

$$\text{Bid Capacity} = (2 \times A \times N) - B$$

Where,

A = maximum value of works executed by the Tenderer in any one year during the period of last five years (updated to the price level of the year in which the Tenders are opened) which will take into account the completed and ongoing works.

To update the cost of works done in last five years to the current price level, the following multiplying factors shall be adopted for corresponding year

Cost of works for the year	Multiplying Factor
2021-22	1.46
2022-23	1.33
2023-24	1.21
2024-25	1.10
2025-26	1.00

B = Value of existing commitments and ongoing works of Tenderer to be completed in the period stipulated for completion of work for which tenders are invited.

N = Number of years prescribed for completion of the work for which the tenders are invited i.e. **1.5 years**

The Tenderer shall be considered as financially sound only if Bid capacity so calculated is not less than the cost of work put to tender.

In case of Joint Venture the yearly turnover relating to any particular year, bid capacity and quantities of main items executed shall be added together in the proportion of their share in the Joint Venture for determining the minimum criteria of qualification.

The above details shall be ascertained from the information given by tenderer in prescribed Performa.

2.2 ELIGIBILITY & MINIMUM CRITERIA FOR QUALIFICATION

a) The Tenderer must be well established firm having experience & capability in manufacturing, execution of works similar to the work given in this document

b) Tenderer shall be

- i) Either manufacturer of hydro turbine and/or Generator having business experience of at least 5 years in the field of execution of Hydro Power Projects and He should have successfully executed and commissioned at least one Hydro Power Project comprising of unit capacity not less than 1800 KW during last five (5) years & the plant should be in satisfactory commercial operation for continuous period not less than one (1) year within the stipulated span.

The Tenderer should furnish performance certificate from actual users/utilities to whom the manufacturer has supplied the equipment(s) in the past. The performance certificate issued by the user/utilities should indicate the location, description of equipment with rating etc. date of supply, date of commissioning & remarks about satisfactory operation of equipment along with duration of actual operation.

Note: - In case the Tenderer is a Contractor/Supplier, he shall submit the letter of assurance, assuring that the manufacturer along with Tenderer shall be jointly and severally responsible for guarantees & Warrantees.

c) QUALIFYING CRITERIA FOR TURBINE & GENERATOR MANUFACTURER: -

The qualifying criteria for turbine/generator manufacturer(s) whose equipment is proposed to be offered by the Tenderer should possess own technical experience for at least 5 years in the design, manufacture and supply of equipment & providing services during onsite erection, testing, commissioning & start-up of the Turbine/generator plant & so installed plant must be in satisfactory operation of at least one (1) year in respect of turbine/generator stated as under.

1) TURBINE: -

One Horizontal Francis Type having rated output of not less than 1x1800 KW+10%COL, which should be in continuously satisfactory commercial operation for at least one (1) year during the operational period.

2) GENERATOR:-

One synchronous generator having rated output of not less than 1x1800 KW+10% overloading & should be in continuously satisfactory commercial operation for at least one (1) year during the operational period.

Other equipment is not to be considered for any specific qualifying requirements.

In support of manufacturer's performance in respect of above requirement, the tenderer should furnish performance certificate from actual users/utilities to whom the manufacturer has supplied the equipment(s) in the past. The performance certificate issued by the user/utilities should indicate the location, description of equipment with rating etc.,

date of supply, date of commissioning & remarks about satisfactory operation of equipment alongwith duration of actual operation.

d) Details of Technical Personnel & Supervisors etc on the roll of the Tenderer/contractor shall be furnished.

Even though the Tenderer satisfies the above requirements, they are subjected to be disqualified if they have:-

i) Made untrue statement or submitted false information as called for in various Proforma, Schedules and certificates submitted along with the prequalification document. In this respect Tenderer shall give declaration.

ii) Records of poor performance such as abandoning work, not properly completing contract, inordinate delay in completion or financial failure etc.

2.3 Notwithstanding the above, the purchaser reserves the right to assess the financial and technical capabilities of the Tenderer through other sources as may be deemed necessary.

2.4 Two copies of the document shall be returned duly filled in and signed on all pages.

2.5 The right is reserved by the Purchaser to reject or ignore any or all documents for tender or annul the tendering process altogether or enhance or dilute the qualifying requirements & assessment of the capacity & capability of the tenderers without assigning any reason whatsoever.

C. SALIENT FEATURES

3.1 LOCATION

1.	State	:	Maharashtra
2.	Region	:	Konkan
3.	District	:	Ratnagiri
4.	Taluka	:	Sangameshwar
5.	Village	:	Kuchambe
6.	Topo Sheet No.	:	47-G/11
7.	Latitude	:	17° 17' 6.87" (N)
8.	Longitude	:	73° 38' 2.41" (E)
9.	River	:	Gad River Gad tributary of Shastri River

TYPE OF SCHEME	:	Dam Foot Power House
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3.2 HYDROLOGY AND WATER PLANNING

1)	Catchment area	:	37.539 Sq.km
2)	Average annual rainfall	:	3846 mm
3)	Average annual Yield	:	133.01 Mcum
4)	75% dependable yield	:	117.546 Mcum as per working table
5)	50% dependable yield	:	125.63 Mcum
6)	Utilization Proposed	:	80.191 Mcum as per working table
7)	Submergence Area	:	354.11 Hectors

3.3 RESERVOIR STORAGE & IT'S UTILISATION DETAILS

1)	Gross Storage	:	83.212 Mcum
2)	Dead Storage	:	0.312 Mcum
3)	Live Storage	:	82.900 Mcum
4)	Annual Evaporation losses	:	2.712Mcum
5)	Type of dam	:	Earthen dam with gated spillway on right bank

6)	Length of dam	:	565 m
7)	Max. Height of dam	:	71.38 m

3.4 CONTROLLING LEVELS

1)	Top of dam	:	129.800 m
2)	M.W.L. (H.F.L.)	:	126.760 m
3)	F.R.L	:	126.150 m
4)	M.D.D.L (Irrigation)	:	69.500 m
5)	M.D.D.L (Power)	:	99.100 m
6)	River bed level	:	58.425 m
7)	Irrigation outlet sill level	:	67.500 m
8)	T.W.L. (min.)	:	66.785 m

3.5 EXISTING INTAKE STRUCTURE & RCC conduct (In Body of the dam)

1)	Location (Chainage)	:	Irrigation cum power outlet through tunnel @ Ch. 560 m
2)	Outlet sill level	:	67.00 m
3)	D shape size tunnel	:	729.00 m
4)	Bed Width	:	2.50 m
5)	Details of EG	:	3.45 x 2.65 m
6)	Designed discharge	:	5.30 cumecs
7)	Penstock length with Y piece at end of tunnel	:	31.40 m

3.6 POWER HOUSE

1)	Location and size	:	Ch 560 m At 49.590 m. D/s from Bulkhead (29.10 m x 16.69 m)
2)	Ground Level at Power House	:	71.000 m (Avg)
3)	Center Line of machine	:	67.635 m
4)	Machine hall level	:	66.485 m
5)	Service bay Level	:	71.000 m
6)	Control Room Level	:	71.000 m

7)	Span of EOT	:	10.00 m
8)	Capacity of EOT	:	24 Tonne

3.7 DETAILS OF PENSTOCK (Extended Piece)

1)	Design Discharge of penstock	:	5.30 cumecs
2)	Maximum head (Net)	:	58.514 m
3)	Head Loss	:	0.850 m
4)	Maximum head (Gross)	:	59.364 m
5)	Max head including upsurge	:	59.364 m + 29.63m = 88.994 m
6)	Design Pressure	:	10 kg/cm ²
7)	Diameter of Penstock	:	1400 mm Dia
8)	Thickness of Penstock	:	10 mm
9)	Length of Penstock proposed	:	49.590 m

3.8 TAIL RACE CHANNEL

1)	Size of tail channel		
	i) Bed width	:	2.60 m
	ii) F.S.D,	:	1.00 m
2)	Total Length of TRC	:	35.00 m (Excluding Rising apron)
3)	Design Discharge	:	6.349 cumecs
4)	Shape	:	Rectangular
5)	Side Slope	:	1 : 1
6)	Bed Gradient	:	1:400
7)	Rugosity Coefficient	:	0.014 for smooth rock cutting
8)	Bed level	:	
	a) At the end of apron	:	66.30m
	b) Level where TRC joins the waster weir	:	66.15 m
9)	Type of Lining	:	Rock cutting smooth surface

3.9 TURBINE

1)	Head Range	:	125 % to 65 %
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2)	Load Variation	:	110 % to 40 %
3)	Rated Discharge for m/c from working Table	:	4.487 Cumecs
4)	Rated Head	:	46.810 m
5)	Type of Turbine	:	Horizontal Francis
6)	No of Unit & its Rating	:	One ; 1 X 1800 KW+10%COL
7)	Efficiency of Turbine proposed	:	95%

3.10 GENERATOR

1)	Type of Generator	:	Synchronous 3 phase 50 c/s
2)	No of Unit	:	One x 1800 KW +10% COL
3)	Synchronous Speed	:	500 rpm
4)	Generation voltage	:	3.3 K V
5)	Power Factor	:	0.866
6)	Estimated efficiency	:	96 %

3.11 TURBINE AND GENERATOR PARAMETERS;

1)	Specific Speed of turbine	:	210 rpm
2)	Rotational speed / Synchronous speed of generator	:	500 rpm
3)	Runner Diameter	:	1000 mm
4)	Runner setting	:	+0.85 m
5)	Level of distributor /C.L. of M/c	:	67.635 m
6)	Centre Line of Penstock	:	66.435 m
7)	Gantry rail Level	:	75.800 m
8)	Gantry Hook Level	:	75.300 m
9)	Top of Crane Level	:	77.800 m
10)	Roof Truss rest Level	:	81.050 m
11)	Speed of increaser	:	No need of gear box / speed increaser

**3.12 GENERATION**

1)	Total No of Generation Days	:	223 days
2)	Annual Generation	:	8.697 Mus
3)	CUF	:	55.15 %

3.13 EVACUATION ARRANGEMENT

1)	Switch yard	:	Outdoor type
2)	Switch yard Room Level	:	71.00 m
3)	Voltage of power will be evacuated	:	3.3 KV stepped up to 11 KV



D. PROJECT DESCRIPTION

PROJECT DESCRIPTION

The Project is situated on Gad River at Kuchambe Taluka Sangameshwar, District Ratnagiri.

The river – The river Gad is right bank tributary of the Shastri river originates in Sahyadri Hill ranges at an altitude of 923 m. and flows towards south west in the first 5 km up to village Rajivali. The River then flows southwards up to the village Kutgiri. Afterwards it runs in North West direction up to village Yegaon. Then after following towards west it crosses the National Highway No. 17 (Mumbai-Goa) near village Aravali. Afterwards it flows in Zigzag directions before it meets Kapshi River near village Kapshiwadi. After the confluence the river meets the Shashtri River within a distance of 2 Km.

The Catchment Area

The catchment area of “Gad” river upto the proposed Dam site is 14.50 sq.miles (37.539 Sq.Km) Average annual rainfall in the catchment area range from 5000 to 6250 mm. The Gad valley is very rugged. Narrow in width. Considering the availability of suitable basin for storage, the shape of the valley and available command area, the site which is now proposed is the only choice for construction of a storage dam. This site is situated down stream of village Rajivali after the confluence with a major nalla on the left bank. The catchment lies in heavy rainfall zone hence classified as “Good”.

PRESENT PROPOSAL

The area proposed to be irrigated by this project has heavy precipitation. However, this precipitation is restricted during three months i.e. 15th June to 15th the September. The river flow after rainy season dwindles down considerably and in hot weather the river becomes practically dry. There is acute shortage of drinking water in this tract & hence provision for the same is made. The farmers have to restrict to farming during monsoon only. The agricultural produce is not sufficient for maintaining their families. They are therefore compelled to migrate to Mumbai for their live hood.

The main crop in this area is paddy which is grown in the low lying areas in valley. Other crops such as nagli and wan are grown on hill slopes. The percentage of fallow land in the command is nearly 76% in spite of heavy rain fall. By constructing storage it would be possible to provide water for second crop rabi and also during H.W. season. Due to assured supply of water it will be possible to bring some fallow lands under cultivation. This would ultimately result in increased food production which will help in making this area self-sufficient in food production. Moreover it will stimulate and allied industries which in turn will help in curbing down the migration to Mumbai.



INTAKE WORKS, POWER HOUSE AND ALLIED WORKS

DETAILS OF INTAKE

Irrigation cum power outlet is proposed through tunnel @Ch.560 meter on Dam axis. The outlet sill level is 67.50 meter. And full supply discharge is 5.30 cumes with 1.80 MW electricity generations. At present the work of I.C.P.O. is completed, 'D' shape size tunnel having 729 m length and 2.50 Bed width is provided for I.C.P.O. and at the centre of dam axis well of size 3.45 x 5.20 m is provided for emergency gate.

Penstock of length 31.40 m and dia 1.40 m provided with Y piece at end of tunnel. Water will be released through service gate in the first km of Right Bank Canal.

Power House and Switchyard

The Promoter/Developer shall access the location of the power house and shall submit the detailed proposal for the approval of GOMWRD.

The map showing area for penstock, power house in possession of GOMWRD etc. is enclosed herewith as Drawing No. II. The Developer shall have to acquire land for development of entire project including intake structure, power house, Switch yard etc at his own cost.

**SECTION -I****TENDER NOTICE**

PRESS NOTICE NO. GMEPL-01/2025-26

GADRE MARINE EXPORT PVT LTD

Plot no. FP-1, Mirjole Block, MIDC, Ratnagiri-415639, Maharashtra-415639 Email - sandesh.salvi@gadremarine.com

PH.: 91-2352-231600

**GADNADI HYDRO ELECTRIC PROJECT (1 x 1.8 MW+10%COL)
(INTERNATIONAL COMPETITIVE BIDDING)**

Scaled tenders for the following works are invited for EPC contract from Domestic/International bidders/suppliers/manufacturers who intend to participate in this Bid.

Gadre Marine Export Pvt Ltd has received a loan from parents Bank, Ratnagiri to meet the expenses for commissioning of the project.

1. Design, Manufacture, Test at Shop, Supply at site including Transport, handling, Insurance, loading, unloading at site, Installation, Storage at site, watch & ward, Putting to Operation & Supervision, Erection, Testing, Commissioning (72 hrs conti. Run) of Turbine/Generator set along with all associated switch gear, protectors & auxiliary equipments and Six month commercial operation and maintenance of **Gadnadi Hydro Electric Project (1 x 1.8 MW+10%COL)** on Turnkey basis.

Bid reference	Press Notice No. GMEPL -01 / 2025-26
Cost of Bid Documents	Rs 20,000/- (Non Refundable)
Display of Bidding document on www.gadremarine.com OR www.dkahydro.com website	05/03/2026 to 15/04/2026
Pre-Bid meeting at Consultant Office at Pune	23/03/2026 at 12.00 Hrs
Last date for submission of bids	15/04/2026 by 15.00 Hrs
Date Of Opening	Same Day by 16.00 Hrs
Contact Person for Technical/Bid Document related Information	Gadre Marine Export Pvt Ltd Plot no. FP-1, Mirjole Block, MIDC, Ratnagiri-415639, maharashtra-415639. PH.: 91-2352-231600 Mr. Sandesh Salvi- 9823120188 Mr. Sagar Yalugade-8149848370
EMD	Rs.6,30,000/-in the form of DD or BG
Site Address	Gadnadi Hydro Electric Project (1 x 1.8 MW+10%COL), Village: Kuchambe, Tal: Sangameshwar Dist: Ratnagiri , Maharashtra, India Latitude 17° -17' -6.87" (N) Longitude 73° - 38' - 2.41" (E)

GADRE MARINE EXPORT PVT LTD



GADRE MARINE EXPORT PVT LTD

GADNADI HYDRO ELECTRIC PROJECT
1 x 1800 KW+ 10%COL

SECTION - II

➤ INSTRUCTIONS TO TENDERERS

SECTION - II

INSTRUCTIONS TO TENDERER

2.0 PART - A- INSTRUCTIONS

2.1 GENERAL INSTRUCTIONS:

After having received this document, the tenderer shall carefully examine the project description & scope of work, Tender Notice, Instructions to tenderers, Conditions of contract, Forms, Annexures, Technical specifications, Drawings etc, as contained therein. Further, the Bidders/Tenderers/Suppliers/Manufacturers as the case may be are informed to get themselves fully acquainted with all details of the site such as locations, access, climatic conditions, Living facilities for their Supervisors/Experts in the Township, etc. i.e. in general with all necessary information and data required for carrying out the work successfully and in a professional manner.

2.2 COST OF TENDERING :

The Tenderer shall bear all costs associated with the preparation and submission of his tender and Purchaser will in no case be responsible or liable for those costs regardless of conduct outcome of the tendering process.

2.3 ELIGIBLE TENDERERS :

The invitation to tender is open only to Tenderers, who are declared qualified in Envelope No. 1. Post qualification is applicable. Tenderer should note purchaser's qualifying requirement stated in SECTION-I-B to be produced in Envelope No. 1 It is not binding on purchaser to inform rejection of tender to non-qualified tenderer.

2.4 PART - B - TENDERING DOCUMENT

2.4.1 CONTENTS OF TENDERING DOCUMENTS :

The scope of works, tendering procedures & contract terms are prescribed in the tendering documents. The tendering documents include the following.

VOLUME I:-

- Tender Notice
- Instructions to Tenderers
- List of Drawing Along with Tender & After Award of Tender
- Conditions of Contract
- Forms
- Annexure

VOLUME II:-

- Detailed Scope of Work/Supply
- Price Schedule/ break up

- Technical Specifications for each Equipment/ Makes
- Guaranteed Technical Particulars
- Tender Drawings

2.4.2 The Tenderer shall examine all instructions, forms, conditions of contract and the specifications and drawings in the tendering document. Failure to furnish all information required as per tendering document or submission of a tender which is not substantially responsive to the tendering document will be at the Tenderers risk and may result in the rejection of his tender.

2.4.3 It will be imperative on each Tenderer to fully inform himself of all local conditions and factors which may have any effect on the execution of the works covered under these documents and specifications. The Purchaser shall not entertain any request for clarifications from the tenderer regarding such local conditions.

2.4.4 It must be understood & agreed that such factors have been properly confirmed by tenderer been investigated & considered while submitting the tender. No claim for financial adjustments in the contract awarded under these specifications & documents will be entertained by the Purchaser. Neither any change in the time schedule of the contract nor any financial adjustment arising thereof which are based on lack of such clear information, its effect on the cost of works to Tenderer shall be permitted by purchaser.

2.4.5 The work also includes clearing and forwarding and inland transportation, unloading and stacking at site, Supervision of erection testing & commissioning of the equipment and setting to operations of the power plant as a whole. The tenderer shall therefore also carry out necessary route surveys and investigations with a view of restricting the permissible dimensions (length, width and height) of the moving consignment. It shall strictly be avoided to allow any important shipment to reach site unprotected from rains during monsoon period. –Monsoon is heavy.

Tenderer shall familiarize himself with the facilities available on the Roads and Railways system along with the rules and regulations governing transportation of such consignments. The Purchaser shall not entertain any claims due to improper, inaccurate or incomplete assessments made by the Tenderer.

2.5 CLARIFICATION OF TENDERING DOCUMENT :

2.5.1 Prospective tenderer requiring any clarification on the tendering document may notify the purchaser before pre-bid meeting in writing/by mail or by fax at the Purchaser's mailing address at least 7 days in advance. Purchaser will clarify all such queries in the pre-bid meeting OR will send clarifications to all bidders 5 days before the date of submission of bid document.

2.6 AMENDMENTS OF TENDERING DOCUMENT :

- 2.6.1** At any time prior to the date fixed for receipt or submission of Tenders the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by prospective Tenderers may modify the tendering document by an amendment.
- 2.6.2** The amendment will be notified in writing to all prospective Tenderers who have purchased the tendering document and will be binding on them.
- 2.6.3** In order to afford prospective Tenderers reasonable time to enable them to take the amendment into account in preparing their tender the Purchaser may at his discretion extend the deadline for the submission of the tender. Such communication will be given to all concerned in the form of an Addenda.

PART - C PREPARATION OF TENDERS**2.7 Language of tender :**

The tender prepared by the Tenderer and all correspondence and documents relating to tender exchanged between the Tenderer and the Purchaser shall be written in English language. Also any printed literature furnished by the tenderer shall be in English language.

2.8 DOCUMENTS COMPRISING THE TENDER

- 2.8.1** The Tenderer must submit his tender in two separate sealed envelopes. One denominated as "ORIGINAL and other "DUPLICATE". Each containing separately sealed Envelope No. I and Envelope No. II.

ENVELOPE NO.1

The first Envelope clearly marked, as "ENVELOPE NO.1" shall contain the following documents. "ORIGINAL" Envelope shall contain,

1. Tender forwarding letter this shall be furnished in format given in Bidding Documents. --- Original.
 2. Earnest money deposit in accordance with Bidding Documents. ---Original.
 3. Power of Attorney: Original authorising a person(s) to sign the tender.
 4. Solvency Certificate/net worth certificate to the extent of an amount equivalent to tender cost from Scheduled Bank.
 5. Authority letter of manufacturer of which turbine/generator is to be supplied by the tenderer, if applicable
 6. Departure from Technical and Commercial terms & conditions if any.
 7. Annexure No. I to XIII (As per format given) of this document duly filled in.
- 1) Supporting documents for qualification and users/utilities certificates from three users for satisfactory operation of Turbine & Generator set more than 1800 KW for last 1 year.

- 2) Manufacturer data for last 5 years for manufacturing/supply & Erection of Turbine – Generator plant.
8. Declaration of the Contractor. This shall be furnished in format of Bid Documents.
9. Financial capability of EPC contractors / Tenderers / Manufacturers
10. Site Visit Certificate. This shall be furnished in format of Bid Documents.

A) ENVELOPE NO.2 :-

The second envelope clearly marked an "**Envelope No.2** (Tender) shall contain the following documents.

1. Covering letter of offer.
2. Original Tender document Purchased from **GADRE MARINE EXPORT PVT LTD, RATNAGIRI** complete with addenda, amendment if any, issued by the Purchaser, duly filled in all respect and each page signed by the Tenderer.
3. Price Schedule (As per format given in Vol-2 Section-II) duly filled in and signed.
4. Special features; if any, the Tenderer feels worth mentioning about his offer.
5. Under taking for providing services of experts after warranty period.
6. Programme Chart PERT for supply erection and commissioning of the generating sets.
7. Copy of Turbine type test certificate (Previous model test report).

Copies of all the documents, information's, literatures, drawings etc stated above and in Bidding Documents shall be submitted in a similar way as above and named **Envelope II "DUPLICATE"**.

- 2.8.2** The Tenderer shall note this procedure carefully and he should quote his tender as per this procedure only. He should not quote his cost anywhere directly or indirectly in **Envelope No.1**. The Tender documents & forms are to be completed in ink or typewritten without interlineations, alterations or modifications and Tenderer shall furnish all the information required. No changes to the forms will be accepted. The Tenderer shall sign and print or type his name on schedule, continuation sheet and other pages on which he makes entries. Erasures or other changes must be initialised by the person signing the tender.
- 2.8.3** The Tenderer must sign all the pages at bottom of page.
- 2.8.4** No page should be removed from the tendering document.
- 2.8.5** The Tenderer should carefully note that no tender will be considered for only part of the scope of works.
- 2.8.6** The tender and the document attached there to shall be considered as forming part of contract document.



2.8.7 The Tenderer must enter the amount in Price Schedule in both words & figures. In case of ambiguity in words and figures words will be treated as correct. Similarly for ambiguity in ORIGINAL and DUPLICATE offers ORIGINAL will be treated as correct.

2.9 PRICE VARIATION:

Prices offered shall be firm and not subjected to any price variations during the Contract Period.

2.10 EARNEST MONEY DEPOSIT:

2.10.1 The Earnest Money Deposit is required to protect the Purchaser against the risk of Tenderers conduct which would warrant the security's forfeiture.

2.10.2 The Earnest money deposit shall be furnished either by Demand Draft or Bank Guarantee of any Nationalised Bank payable at RATNAGIRI, Maharashtra duly issued in the name of **GADRE MARINE EXPORT PVT LTD, RATNAGIRI**. The Bank Guarantee shall be in the format of Bidding Documents. Validity of Earnest deposit shall be 120 days from the deadline for submission of tender. The purchaser reserves the right of physical verification of B.G. issued by the bankers.

2.10.3 Any tender not accompanied by EMD shall be rejected.

2.10.4 Unsuccessful Tenderer's Earnest Money Deposit will be discharged/returned as promptly as possible as but not later than 30 days after the expiration of the period of tender validity prescribed by the purchaser pursuant to clause 2.15.

2.10.5 The successful Tenderers Earnest Money Deposit will be discharged upon the tenderers executing the contract pursuant to clause 2.30 and furnishing the performance security pursuant to clause 2.29

2.10.6 The Earnest Money Deposit may be forfeited if :

- a) A Tenderer withdraws his tender during the period of tender validity specified by the Tenderer in the tender form, or
- b) The Tenderer fails
 - 1) To sign the contract in accordance with Clause No. 2.30 and
 - 2) To furnish performance security in accordance with Clause No.2.29

2.10.7 No interest shall be payable by the purchaser on Earnest Money Deposit.

2.11 INSTRUCTIONS FOR SUBMISSIONS OF ENVELOPE NO.2

Documents to be submitted in Envelope No.2 shall conform to the instruction given below.

i) CONDITIONAL TENDER:-

Conditional tenders will be summarily rejected. The tenders which do not fulfill any of the conditions of the notified requirements laid down in this detailed tender notice, the general rules and directions for the guidance of the tenderer as mentioned in the Tender form, General & special condition of contract or are incomplete in any respect are likely to be rejected without assigning any reasons thereof.

2.12 TENDER UNITS :-

The tender has been invited under the Metric System of measurements.

2.13 CORRECTIONS:-

No corrections should ordinarily be made in the tender documents. Any corrections in the entries made by the Tenderer should be by crossing the incorrect portion and writing the corrected portion above and each such correction shall bear the attestation of the Tenderer.

2.14 SIGNING OF TENDER DOCUMENTS :-

If the Tenderer is a Turbine and/or Generator Manufacturer/Supplier/Contractor as single Tenderer, the tender shall be signed by the Tenderer above his full name & current address or by the person holding the power of attorney.

2.15 PERIOD OF VALIDITY OF TENDER :

2.15.1 Tender shall remain valid for 120 days (One Hundred Twenty Days) from the deadline for submission of tender pursuant to clause 2.18. A tender valid for a shorter period will be rejected by the purchaser as non-responsive.

2.15.2 In exceptional circumstances, the purchaser may solicit the tenderers consent to an extension of the period of validity. The request and the response thereto shall be made in writing (or by cable or fax). The tender security provided under clause 2.10 shall also be suitably extended. A Tenderer may refuse the request without forfeiting his tender security. A tenderer granting the request will not be required nor permitted to modify his tender thereafter.

2.16 FORMAT OF TENDER :

2.16.1 The Tenderer shall fill in blank tendering document obtained from the purchaser and return the same in **Envelope 2**.

2.16.2 The tender duly filled in shall be signed by the Tenderer or a person or persons duly authorised to bind the Tenderer to the contract. Authorisation shall be established by written power of attorney accompanying the tender. All pages of the tender except for unamended printed literature shall be initialed by person or persons signing the tender.



2.16.3 The tender shall contain no interlineations, erasers or over writing except as necessary to correct the tender, in which case such correction shall be initialed by the person signing the tender.

PART - D SUBMISSION OF TENDER :

2.17 SEALING AND MARKING OF TENDER.

2.17.1 The Tenderer shall submit his tender in two separate sealed envelopes.

2.17.2 Both the sealed envelopes of the tender shall be addressed to **GADRE MARINE EXPORT PVT LTD, RATNAGIRI & SHALL BE SUBMITTED AT OWNERS OFFICE AT RATNAGIRI** as per the address given below.

GADRE MARINE EXPORT PVT LTD
Plot no. FP-1, Mirjole Block, MIDC,
Ratnagiri-415639, Maharashtra-415639

2.17.3 On each envelope the following shall be superscribed :

- 1. Name of Project. : GADNADI HYDRO ELECTRIC PROJECT (1 X 1800 KW+10%COL)**
- 2. Name of work for which tender is submitted :** Design, Manufacture, Test at Shop, Supply at site including Transport, handling, loading, unloading at site, Installation, Putting to Operation, Supervision during Erection, Testing, Commissioning (72 Hrs Cont. run), Erection, Testing, Commissioning and Setting to Operation of Turbine/Generator sets along with all E&M Equipment required for Gadnadi Hydro Electric Project
- 3. Last date Of Submission : 15/04/2026 at 15.00 Hrs.**
- 4. Date of opening. : 15/04/2026 at 16.00 Hrs.**
- 5. Envelope No. : (1 or 2 as per the case may be).**
- 6. Identification : 'ORIGINAL" and "DUPLICATE" on inside Envelopes**
And nothing on common envelope.

2.17.4 Each sealed envelope shall indicate the name and address of the Tenderer and full name of the authorised agent delivering the tender at the left hand corner of the envelope.

2.17.5 The two sealed Envelope Nos. 1 and 2 shall be again put together in one common cover and sealed. The copy shall be addressed to **GADRE MARINE EXPORT PVT LTD, RATNAGIRI** super scribed as **Gadnadi Hydro Electric Project**, Tender No. GMEPL-01/2025-26. With clear inscription of **"DO NOT OPEN BEFORE 15/04/ 2026"** Tenderer's name and address indicated in left hand corner. If submitted by post, the sealed cover containing the tender as above and also marked as specified above shall be enclosed in another cover properly addressed and shall be sent by Hand Delivery or Registered Post with acknowledgement due. Purchaser is not



responsible for delays or loss of document in postal or courier service. Documents received late will be summarily rejected.

2.17.6 If the tenders are not sealed and marked as required above the Purchaser will assume no responsibility, if the tender is misplaced or opened before the due date.

2.18 DEADLINE FOR SUBMISSION OF TENDER :

2.18.1 Tenders must be received by the Purchaser at the address specified under Cl.2.17.2 and Date specified under Cl.2.17.3 not later than 15.00 hrs on the date notified as the dead line for submission of the tender.

2.18.2 The Purchaser may, if required, extend this date of receipt/submission of tenders pursuant to Clause 2.6 in which case all rights and obligations of the Purchaser and the Tenderers, previously subject to the deadline will thereafter be subject to the deadline extended.

2.19 LATE TENDERS :

Any Tender received by the Purchaser after the deadline for submission of tenders will not be accepted or if inadvertently accepted will be rejected and/or returned unopened to the tenderer.

2.20 MODIFICATION AND WITHDRAWAL OF TENDER :

2.20.1 No Tender shall be modified after its submission.

2.20.2 The Tenderers may however withdraw his tender prior to the deadline prescribed for receipt of Tenders by informing in writing to purchaser suitably.

2.20.3 No tender shall be withdrawn after submission of tender & before the expiry period of tender validity specified as in clause No.2.15.1. withdrawal of tender during this interval shall result in forfeiture of Tenderers Earnest Money Deposit pursuant to clause 2.10.6

PART - E TENDER OPENING AND EVALUATION:

2.21 OPENING OF TENDER:

2.21.1 Purchaser, if possible will open the Tenders in presence of Tenderer or their authorised representative who choose to attend tender opening at 16.00 hours on the date specified in Cl. 2.17.3.

2.21.2 The Tenderers representative who will remain present shall sign a register evidencing their attendance. In the event of the specified date for opening of tenders being declared a holiday for the purchaser, the tender will be opened on the appointed time on the next working day. The Tenderers name, tender price, modifications and the presence or absence of the requisite earnest money and such other details as the Purchaser at his discretion, may consider appropriate will be announced at the opening.

2.21.3 The following procedure will be adopted for opening of tenders:

First of all, Envelope no.1 of the tender will be opened to verify contents as per requirements of the Purchaser. If various documents contained in his envelope do not meet the requirements of the Purchaser, a note will be recorded accordingly by the tender opening authority and the said Tenderer's Envelope No.2 will not be considered for further action & the same will be recorded. Such tender(s) shall stand rejected. Minor short falls in submission of requisite information may be waived at the discretion of purchaser.

The Envelope No.2 shall be opened after opening Envelope No.1 only if the contents of Envelope No.1 are found to be acceptable to the Purchaser.

2.22 PRELIMINARY EXAMINATION :

2.22.1 The Purchaser will examine the tenders to determine whether they are complete, whether any errors have been made, whether the documents have been properly signed and whether the tenders are generally in order. If there is a discrepancy between words and figures, the amount in words will prevail and if the Tenderer does not accept the same his tender will be rejected.

2.22.2 Prior to evaluation pursuant to Clause 2.24 the Purchaser will determine the substantial responsiveness of each tender to the tendering document with respect to commercial aspects. For the purpose of this, a substantially responsive tender is the one which conforms to all the terms, conditions and of the tendering document without material deviation, objections, conditionality or reservation

- 1) Which affects in any substantial way the scope, quality or performance of the contract.
- 2) Which limits in any substantial way, inconsistent with the tendering document, the Purchaser's rights or the successful tender's obligations under the contract or
- 3) Whose rectification would unfairly affect the competitive position of other tenders who are presenting substantially responsive tenders. In particular, deviations from or objections to or reservations about critical provisions, such as those concerning about Earnest Money (Clause 2.11), Applicable laws, Taxes and Duties, Required tender validity, Firm Price, Warranty, Performance Security, Patent Rights, Limitation of Liability and related prescriptions in the data sheets/guaranteed particulars will be treated as non- responsive.

2.22.3 The Purchaser will also carry out a detailed evaluation of the tender in order to determine substantial responsiveness of the tender with respect to technical aspects of the tendering document. In order to reach such a determination, the Purchaser will examine and compare the technical aspect of the tenders based on the information supplied by the tenders taking into account the following factors.

- a) Overall completeness and compliance with the technical specification and drawings, deviations from the technical specifications and those deviations not so identified, suitability of the facilities offered in relation to the environmental and climatic conditions prevailing at the site and quality, function and operation of any process control concept included in the tender. The tender that does not meet minimum acceptable standards of completeness, consistency and detail will be rejected for non-responsiveness.
- b) Achievement by the facilities of specified performance criteria.
- c) Type, quantity and long term availability of mandatory and recommended spare parts and maintenance services, and
- d) Any other relevant factors listed in the tender document.

2.22.4 A tender determined as substantially non-responsive will be rejected by the Purchaser and may not subsequently be made responsive by the Tenderer by correction of the non-conformity. The Purchaser's determination of a tender's non-responsiveness is to be based on the contents of the tender itself without recourse to extrinsic evidence.

2.22.5 The Purchaser may waive any minor infirmity or non-conformity or irregularity in a tender which does not constitute a material deviation provided such waiver does not prejudice or affect the relative ranking of the tender.

2.23 CLARIFICATION OF THE TENDERS :-

The Purchaser may ask the Tenderer, whose tender is previously determined as "Substantially responsive" for clarification of his tender with a view to obtaining minor missing details. The request for such clarification and the response shall be in writing and no change in the price of substance of the tender shall be sought, offered or permitted.

The clarification so furnished shall be accounted for the purpose of contract.

2.24 EVALUATION OF TENDERS :-

2.24.1 The Purchaser will evaluate the tenders for its substantial responsiveness.

2.24.2 The Purchasers evaluation of the tenders will take into account in addition to the tender offer quoted in price schedule, the following factors in the manner and to the extent stated in Clause 2.24.3

2.24.3 Pursuant to Clause 2.24.2 following evaluation method will be followed:

Evaluation & Comparison of the offers shall be carried out on offer for the work specified in the Envelope No.2.

The guaranteed performance value for Turbine and Generator will be taken into account for evaluating the tender.



No change in the prices after the opening of the Envelope No.2 will be allowed.

2.25 CONTACTING THE PURCHASER:

2.25.1 No Tenderer shall contact the Purchaser and his consultant in any matter relating to his tender from the time of tender opening up to the time the contract is awarded.

2.25.2 Any efforts by the Tenderer to influence the purchaser in the purchasers tender evaluation, tender comparison or contract award decisions may result in the rejection of his tender.

PART - F AWARD OF CONTRACT:

2.26 AWARD CRITERIA:

Subject to clause 2.28 the Purchaser will award the contract to substantially responsive Tenderer whose tender is found technically efficient and lowest. However it is not binding up the inviter to award this contract to the lowest bidder. Sufficient evaluation will be done by the Inviter. The process of evaluation is confidential.

2.27 PURCHASER'S RIGHT TO ACCEPT ANY TENDER AND TO REJECT ANY OR ALL TENDERS:

Purchaser reserves the right to accept or reject any tender and to annul the tendering process and reject all tenders at any time prior to award of contract without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the ground for Purchaser's action.

2.28 NOTIFICATION OF AWARD :

2.28.1 Prior to the expiration of the period of tender validity the Purchaser will notify the successful Tenderer in writing by registered letter or by cable or fax to be confirmed in writing by registered letter that his tender has been accepted.

2.28.2 The notification of award will constitute the formation of contract.

2.28.3 Upon furnishing of security deposit pursuant to clause 2.29 by the successful Tenderers the Purchaser will promptly notify every unsuccessful Tenderer and will discharge his Earnest Money Deposit pursuant to clause 2.10.4

2.29 PERFORMANCE SECURITY :

2.29.1 Within 15 days from the date of 'Notification of Award' the successful tenderer shall have to furnish a security deposit, equivalent to 10% of the contract price.

2.29.2 The security deposit shall be in the form of irrevocable Bank guarantee given by any Nationalised Bank, duly issued in favour of **GADRE MARINE EXPORT PVT LTD, RATNAGIRI**. The purchaser reserves the right of physical verification of B.G. issued by the bankers. The Bank guarantee shall be kept valid for a period of one and half (1.5) year (18 months) from the date of

commencement of commercial operation of project. The Bank guarantee is acceptable to the purchaser as per format given in the tendering document.

The proceeds of the security deposit shall be payable to the purchaser as compensation for any loss resulting from the Tenderers failure to complete his obligations under the contract.

2.29.3 The Security Deposit will be discharged by the purchaser and returned to the supplier not later than 30 days following the date of completion of the Tenderers performance obligation, including any warranty and maintenance obligations under the contract.

2.29.4 Failure of the successful Tenderer to comply with the requirement of clause 2.29 shall constitute sufficient grounds for annulment of the award and forfeiture of the Earnest Money, in which event the Purchaser may make the award to the next lowest evaluated Tenderer.

2.30 SIGNING OF CONTRACT:

After Notification of Award, the successful bidder shall submit the Performance Bank Guarantee within 15 days' time. Immediately after submission of PBG, the Contract Form pursuant to Section V Pg No. 97-98 shall be signed between the successful bidder and the Purchaser. For all purposes, however, the date of Notification of Award shall be considered as the date of Commencement.

NOTE:-Technical Specifications, GTP etc of all element except Main Plant and Auxiliaries of main plant are provided in the technical specification section i.e. Vol-2.



GADRE MARINE EXPORT PVT LTD

GADNADI HYDRO ELECTRIC PROJECT
1 x 1800 KW+ 10%COL

SECTION - III

- **LIST OF DRAWING TO BE SUBMITTED
ALONG WITH TENDER & AFTER
AWARD OF TENDER**

SECTION - III

3.1 TENTATIVE LIST OF DRAWING TO BE FURNISHED ALONGWITH TENDER.

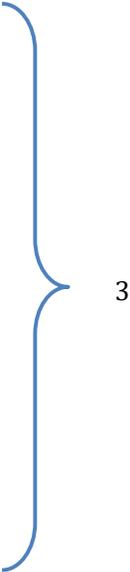
Sr. No.	PARTICULARS.	No of Drawing
1	General plan and elevation of the power station showing installation of various equipments & layout marking crane reaches and capacities of items.	One
2	Cross section of the power station showing various floors along with levels and space requirement.	One
4	Single line diagram showing all items and ratings.	One
5	Turbine Hill charts.	One
6	Model test report	One

3.2 TENTATIVE LIST OF DRAWINGS, DESIGN NOTES, STUDIES & MANUALS TO BE FURNISHED AFTER AWARD OF CONTRACT

Sr. No.	Brief Description	To be submitted within months from the signing of contract	Remarks
1	2	3	4
1.0	Earthmat layout: - Showing layout & plans on various floor, Extension to various floors, Earth pit sectional view locations.	1	For Approval
1.0	TURBINE:		
I.	DRAWINGS		
1.	General plans and sections showing all essential details of turbine assembly, setting and water passages.	1	Set
2.	Plans and cross sections of power house showing layout of equipment listed below, floor arrangement, principal dimensions and scope of works (including	1	Set

	<p>limits of supply on upstream and downstream with reference to turbine axis of :</p> <ul style="list-style-type: none"> ✚ Penstock pipes provided at both sides of the butterfly valves to connect draft tube liner with Y piece. ✚ Turbine components ✚ Governing system ✚ Pressure pumping systems for governing. ✚ Turbine casing ✚ Draft tube and draft tube liner ✚ Generator outline. ✚ Speed signal device. Excitation equipment with AVR. ✚ Unit control boards. ✚ All unit auxiliaries ✚ All station auxiliaries viz. cooling water system. Drainage system, compressed air systems etc. 	 1	Set
3.	Section through turbine and longitudinal Section.	1	For Approval
4.	<p>Installation Drawing of :</p> <ul style="list-style-type: none"> ✚ Discharge Ring ✚ Stay ring assembly. ✚ Pressure release valve assembly. ✚ Guide apparatus. Regulation and operating mechanism. ✚ Runner ✚ Shaft and shaft seal. ✚ Guide vanes and sealing. ✚ Turbine bearing lubrication and cooling. 	 3	For Approval
5.	Governor, governing scheme and connection diagram hydro mechanical and electrical cabinets.	6	For Approval
6.	Control diagram for turbine.	6	For reference
7.	Assembled Turbine Lifting Tool	4	For reference
8.	Schematic diagram for auto control of turbine.	6	For Approval
9.	Drawings of tools, tackles and erection	3	For reference

10.	Embedment in: Generator/rotor housing concreting.	3	For Approval
11.	Forces on foundation due to turbine under following conditions: <ul style="list-style-type: none">  Worst operating conditions.  Under earthquake conditions.  Under transient condition viz. starting, synchronizing, Tripping and runaway. 	} 1	For reference
12.	Layout plan and cross-sections showing details of floor openings (for piping cables etc.) <ul style="list-style-type: none">  Trenches.  Block-outs/cutouts  Openings in concrete. 	} 1	For approval
13.	Layout of piping of Cooling water. <ul style="list-style-type: none">  Dewatering and drainage.  Air pipelines if applicable  Oil piping. 	1 3 3	For approval For approval For approval
14.	Interconnection and wiring diagrams and cable schedules of turbine equipment. Unit and station auxiliaries.	8	For reference
15.	Panel drawings	4	For approval
II	MANUALS (One soft copy)		
1.	Manual for storage preservation and handling of the supplied goods.	3	For reference
2.	Manual for erection/dismantling, testing and commissioning of the supplied goods.	8	For reference
3.	Operating manual giving instructions for all the 'Dos' and 'Donts'.	12	For reference
4.	Manual with detailed maintenance Schedules	12	For reference

Sr. No.	Brief Description	Within months from the date of signing of contract	Remarks.
1	2	3	4
2.0	GENERATOR		
I.	DRAWINGS		
1.	Arrangement drawing describing and illustrating the information of: <ul style="list-style-type: none"> ✚ General layout drawing showing turbine, MIV, Generator assembly. ✚ Combined turbine and Generator cross section ✚ General arrangement and overall dimensions of generator showing position and marking of main and neutral leads, important elevations etc. ✚ Thrust and guide bearing assembly ✚ Excitation system. ✚ Description of thrust bearings and data regarding construction, adjustment, accessibility and method of removal for repair. 		For Acceptance
2.	Installation assembly drawings of:		
	✚ Generator and turbine shaft coupling	4	For reference
	✚ Top and bottom brackets	4	For reference
	✚ Thrust and upper guide bearings	4	For reference
	✚ Lower Guide bearing	4	For reference
	✚ Rotor	4	For reference
	✚ Stator Foundation.	4	For reference
	✚ Stator windings.	6	For reference
	✚ Rotor arrangement including poles.	6	For reference
	✚ Slip ring arrangement	6	For reference

	 Generator brakes	6	For reference
	 Assembly of stator and rotor with lifting arrangement	6	For reference
	 Speed sensing element arrangement	6	For reference
3.	Drawings illustrating dimensional details with schematics for:		
	 Lubrication and cooling system of thrust and guide bearings	6	For reference
	 Generator cooling with heat exchangers, air guides etc.	6	For reference
	 Turbine Generator gauge panel	6	For reference
	 Schematic diagram of air, oil and water piping	6	For reference
	 Schematic diagram of brake, jack system.	6	For reference
	 Thermometers R.T.Ds etc.	6	For reference
	 General scheme giving details of excitation system, D.V.R. Thyristors, field breaker, field discharge resistance. Etc.	6	For reference
	 Arrangement of generator heaters	6	For reference
	 Arrangement of rotor pit on service bay, Rim building stools and loading on service bay floor	4	For reference
	 Arrangement of staircase, hand-rails, doors, coverings etc.	8	For reference
	 Arrangement of oil cooler withdrawal	8	For reference
	 Schematic diagram of thrust bearing High Pressure injection of lubrication system.	8	For reference
4.	Layout, plan and cross sections of floor openings for piping, cables etc. for units for	4	For approval
	 Trenches	4	For approval
	 Block-out / cut-out etc.	4	For Approval
5	Data giving the magnitude and the direction of various forces along with point of applications under following different conditions:  Static  Generating mode  Generator trip – out Generator runaway	2	For reference

6	Sole plate, stator and bracket fixing	6	For approval
7	Layout of oil piping and air piping	6	For approval
8	Layout of piping	6	For approval
9	 Drawings arrangement for generator fire extinguishing scheme.	6	For reference
	Layout of fire protection system with schematics & equipment details	6	For reference
10	Cable schedules cable termination details for all equipments of entire power station as whole and covering all equipment under	6	For reference

II	DESIGN STUDIES (CALCULATION VALUES)		
1.	Stress analysis's of		
	 Generator stator frame	6	For reference
	 Head cover	6	For reference
	 Generator Lower Bracket	6	For reference
	 Generator Upper Bracket	6	For reference
2	Shaft system analysis (critical sipped and natural frequency of turbine-generator shaft)	6	For reference
3	Vibration response of main shaft system, bearings and brackets.	6	For reference
4.	Hydraulic axial efforts of thrust bearing during load rejection.	6	For reference
5	Considerations made in strength design of generator for fatigue phenomenon for centrifugal forces, and thermal expansion and also to prevent vibration distortion under stresses cause during operational rated and runaway speed and short-circuit conditions.	6	For reference
6	Oil film thickness, pressure distribution and temperature distribution of thrust bearing.	6	For reference
7	Insulation structure of stator and rotor winding.	6	For reference

8	Considerations made in mechanical design of the unit with the seismic conditions under worst combination of operating.	6	For reference
9	Considerations made in data about loading on foundations of generator stator, Upper and Lower brackets under following conditions.		
	 Static	6	For reference
	 Generating mode	6	For reference
	 Generator trip – out	6	For reference
	 Generator runaway.	6	For reference
10	Ventilation scheme for generator	6	For reference
11	Characteristics of excitation system.	6	For reference
12	Surge protection and neutral grounding scheme of generator	6	For reference
13	Reactance and time constants of generator	6	For reference
14	Moment of inertia of turbine generator.	6	For reference
III	MANUALS.		
1	Manual for storage preservation and handing of the supplied goods.	3	For reference
2	Manual for erection/dismantling, testing and commissioning of the supplied goods.	4	For reference
3	Manual giving operations instructions for all the DO's and "DONT'S"	8	For reference
4	Manual giving detailed maintenance schedule	8	For reference

Sr. No.	Brief Description	Within months from the date of signing of contract	Remarks.
1	2	3	4
3.0	DRAWINGS OF MAIN INLET VALVE (MIV)		
I.	DRAWINGS		
1	Arrangement of butterfly valve	6	For Approval
2	Arrangement of operating mechanism	6	For Approval
3	Control gear diagram for butterfly valve	6	For Approval
4	Sealing arrangement	6	For Approval
5	Installation of butterfly valve	6	For Approval
6	Oil piping system	6	For Approval
7	Pressure oil system with piping	6	For Approval
8	Layout drawing for tail race (downstream) filling, dewatering system.	6	For Approval
9	Tools, tackles & erection devices for butterfly valve	6	For Approval
10	Valve servomotor	6	For Approval
11	Foundation of valve and loading on foundation of the valve servomotor under worst operating conditions and earthquake conditions with calculations	6	For Approval
12	Layout of trenches, block outs etc. for pipe & cables.	6	For Approval
13	Interconnection and wiring diagrams and cable schedule.	6	For Approval
14	Drawings showing arrangement of velocity measurement of flow and closing of butterfly valve for excessive water velocity.	6	For Approval



II.	DATA		
1	Opening and closing characteristics	6	For Approval
2	Max efforts and Max torque on foundation & steel shaft	6	For Approval
3	Considerations made in data about loading on foundations of valve and servomotors	6	For Approval
4	Adequacy of oil supply system	6	For Approval
II.	MANUALS		
1	Manual for storage preservation and handling of the supplied equipments.	6	For reference
2	Manual for erection/dismantling testing & commissioning to the supplied goods	6	For reference
3	Maintenance manuals	8	For reference
4	Tolerance for assembly	6	For reference
5	List of consumables, oil and spares	6	For reference

Sr. No.	Brief Description	Within months from the date of signing of contract	Remarks.
4.0	DRAWING OF D.V.R., D.T.R., L.A.V.T & N.G. CUBICLE		
1.	Diagram of control & indication panel.	8	For Approval
2.	Diagram of Alarm Annunciation panel.	8	For Approval
3.	Diagram of sequence relay panel - I	8	For Approval
4.	Diagram of sequence Relay panel - II.	8	For Approval
5.	Diagram of Temperature measurement panel.	8	For Approval
6.	Wiring diagram of Temperature guage panel.	8	For Approval

7.	General arrangement of T.G. guage panel.	8	For Approval
8.	Schematic diagram of D.V.R.	8	For Approval
9.	Wiring diagram of D.V.R.	8	For Approval
10.	Schematic diagram of D.V.R..	8	For Approval
11.	Wiring diagram of joint Control Desk.	8	For Approval
12.	Schematic diagram of Joint Control Desk.	8	For Approval
13.	General arrangement of L.A.V.T. Cubicle.	6	For Approval
14.	General arrangement of N.G. Cubicle.	6	For Approval
15.	Schematic diagram for L.A.V.T. & N.G. Cubical.	8	For Approval
16.	Wiring diagram for N.G. Cubicle	8	For Approval
17.	Schematic & wiring drawing for SCADA.	8	For Approval
18.	Wiring diagram for D.V.R.	8	For Approval

Sr. No.	Brief Description	Within months from the date of signing of contract	Remarks.
1.	2.	3	4.
5.0	GENERATORS, TRANSFORMER, FEEDER PROTECTION AND SYNCHRONISING PANEL (INSTRUMENTATION, CONTROL, & PROTECTION EQUIPMENTS)		
1.	A.C. Schematic diagram showing 3.3 KV Generator, 3.3 KV Breaker panels, 3.3/11 KV Transformer up to 11 KV outdoor switchgear.	6	For Approval
2.	Schematic diagram for instrumentation, Control &	6	For Approval

	Protection Equipments.		
3.	Bill of material.	8	For Approval
4.	General arrangement of panels.	6	For Approval
5.	Control wiring diagram for 11 KV feeder control and Relay panel.	6	For Approval
6.	Control wiring diagram for Generator and Generator transformer control & relay panel.	8	For Approval
7.	Control wiring diagram for synchronizing panel.	8	For Approval
8.	Cable schedule and Termination Schedule for complete Power House and switchyard Equipments.	6	For Approval
9	Layout and dimensional drawings showing equipment for		
	 Water pumps	4	For Approval
	 Drainage and dewatering pump	4	For Approval
	 deleted		
	 Trenches, block outs etc. for pipe line and cables	2	For Approval
	 Support details of pipelines	4	
10	Arrangement of drainage and dewatering system	4	For Approval
11	Pipe layout of drainage and dewatering system.	4	For Approval
12	Schematic of drainage and dewatering system.	4	For Approval
13	Motor control center panel for drainage wing and dewatering system.	4	For Approval
14	Interconnection and wiring diagram and cable	6	For

	schedules of equipment.		Reference
15	Foundation/support Arrangement of the following, if any		
	 Drainage/dewatering pumps	4	For Approval
	 All water piping, valves pump columns.	4	For Approval
	 Switchgear panels of cooling water, drainage/dewatering and compressed air system.	4	For Approval
I.	DETAILS OF		
1.	Adequacy of cooling water system	2	For Approval
2.	Adequacy of dewatering and drainage pit size and volume	2	For Approval
3.	Adequacy of pump capacity for cooling water, drainage and dewatering system	2	For Approval
II.	MANUALS		
1.	Manual for storage preservation and handling of the supplied goods	8	For reference
2.	Manual for erection/dismantling testing & commissioning of the supplied goods.	8	For reference
3.	Maintenance manuals	12	For reference
4.	List of consumables, oil, grease spares etc.	8	For reference
5.	Erection & Maintenance Manual	6	For reference

IMP NOTE :- The above lists of design notes and drawings is the minimum requirement. The contractor has to prepare all necessary detailed design notes and drawings as per requirement of the scheme to commission the **GADNADI HEP (1X1.8 MW+10%COL)** to the full satisfaction of Consultants, Employer and that required for satisfactory commercial operations.

3.3 PERFORMANCE REQUIREMENT

1) Out Put Performance:-

The turbine shall be capable of continuous operation under any conditions of head & water level at any output between the ranges of 50% to 110% output (*Modern Francis turbines lower side range may 40%*) at any conditions of dynamic head within the 65% of design head to 125 % of design head range of Francis turbine.

2) Efficiency Performance:-

The max efficiency point of the turbine shall be put as close as possible to the rated operating range & decrease of efficiency shall be small at partial load. The supplier/manufacture shall guarantee the efficiency stated in GTP. During operation, the cavitation damage, vibration & noise due to cavitation shall be very small.

3) Output discharge & Efficiency:-

The contractor shall guarantee satisfactory starting, loading & continuous operation of the unit according to the technical schedules. The recommended minimum limit as percentage of rated output for which turbine can be operated continuously shall be specified.

Performance curves stage turbine operation Vs discharge & efficiency of the turbine for the full range of heads shall be furnished & the guaranteed prototype efficiencies shall be indicated in "GTP" as under

Head (M)	Output					Max. point
	125	100	75	50	25	
H max.						
H rated						
H min.	Note - Max efficiency at rated head and 100% output is desired.					

The rated operation of the turbine when operating at rated head & efficiencies of the turbine when operating at rated head & delivering outputs of i) 50% ii) 75% iii)100% and 110% of full load shall be guarantee by the Bidder/contractor under penalty with the rejection limit of minus four(-4)% in case of output as well as efficiency. No tolerance limit shall be permitted.

3.4 GENERATOR PERFORMANCE

1) Efficiency & Operation Guarantees:-

The efficiency shall be determined by summation of loss as specified in I.S. No 4889-1968 with latest amendment if any thereof.

The efficiency of the generator shall be guaranteed at 110 % of full load, 100% of full load, 3/4 of full load & 1/2 of full load at the rated voltage & power factor and for a mean temperature of the winding of 75⁰ C subject to the penalties, tolerances & rejection limits as under.

Within the limits of temperature rise, the rated contour output of the generator shall be guaranteed under penalty with rejection limit of minus two (-2) % for the generator terminal conditions as under –

- a) 3.3 KV voltage 0.866 PF under excited & rated frequency
- b) 3.3 KV voltage zero PF under excited & rated frequency and minimum excitation of 15% of the rated exciter

For any short fall in temperature values of operation & weighted average efficiency (as per calculation method given below) from the guaranteed figures a penalty shall to be applicable at the rate of 0.5% of the total contract value (Excluding spares) of the Generators for each 1% by which the test values of average efficiency are less than the guaranteed values. For fraction of 1%, the penalty shall be calculated pro-rata.

No tolerance will be permitted over the test figures of operational values. For the purpose of calculations, the weighted average efficiency shall be considered for the efficiency figures at the three specified as follows.

Weighted Average efficiency - $1/3 (0.23 \times \text{efficiency at } 110\% \text{ of full load} + 0.61 \times \text{efficiency at full load} + 0.16 \times \text{efficiency at } 4/5 \text{ of full load.})$

TRANSFORMER

Tenderer shall quote guaranteed losses combined for copper and iron losses in GTP. During test at works these losses will be compared for any excess losses penalty will be imposed at Rs. 14,50,0000/= per kW and pro-rata incase losses are found more than 3% the transformer will be rejected. Same procedure will be identically applicable to Auxiliary transformer too. Transformer will not be tested at site for losses.



GADRE MARINE EXPORT PVT LTD

GADNADI HYDRO ELECTRIC PROJECT
1 x 1800 KW+ 10%COL

SECTION - IV

➤ CONDITIONS OF CONTRACT

SECTION - IV
CONDITIONS OF CONTRACT

In case the provision of any of the clauses of Bid Document are at variance with those stipulated in under this section of contract, the provisions as contained in this section shall apply.

4.1 DEFINITIONS

In the Contract (as hereinafter defined) the following words and expressions will have the meanings hereby assigned to them.

A. Approved/Approval

This means approved in writing.

B. Construction Plant

This means all equipment, appliances or things of whatsoever nature required for the execution, completion or maintenance of the work or of temporary works, but does not include materials of the work or of temporary work, but do not include materials or others things intended to form part of the permanent work.

C. Contract

This means the agreement entered into between Purchaser and Contractor, as recorded in the contract form signed by the parties including general & special conditions of contract, specifications, drawings, tender, including the schedules of quantities and tender prices, the formal agreement and all addendum and attachments related to the above.

D. Contractor

This means the Bidder/Tenderer/Supplier whose tender shall be accepted by the Purchaser and shall include the Bidders/Tenderer/Contractor/Supplier's legal personal, representative, successors and permitted assignees.

E. Drawings

This means the drawings referred to in the specifications and any modification of such drawings approved in writing by the Purchaser and such other drawings as may from time to time be furnished or approved in writing by the Purchaser.

F. Purchaser/Owner/Promoter/ Developer.

All terms of Purchaser means **Gadre Marine Export Pvt Ltd**, Plot no FP-1, Mirjole Block, MIDC, Ratnagiri-415639, Maharashtra-415639 Email-sandesh.salvi@gadremarine.com Ph. +91-2352-231600 and shall include his successors/assigns and authorised representatives. Owner's Engineer shall mean Consultant appointed by the Purchaser and will be "**Diwan Khadilkar Consultants Pvt. Ltd** having address 221B/1A, E-Ward, Center One, Tarabai Park, Kolhapur.416003 Tel +91-231 2666422 Email: dkahydro@gmail.com, sby@dkahydro.com.

G. I.S.S.

This means latest revised edition of Indian Standard Specifications.

H. Month

This shall mean a calendar month.

I. Temporary Works

This means all temporary works of every kind required for the performance of the contract.

J. Works

This means the works to be executed in accordance with the contract.

K. Site

This means the lands and other place on, under, in or through which the works are to be executed or carried out and any other lands or places provided by the Purchaser for the purposes of the contract together with such other places as may be specifically designated in the contract or subsequently approved as forming part of site.

L. Week

This means seven consecutive days.

M. Day/Days

Unless herein otherwise expressly defined shall mean calendar day.

N. Contract Time

The number of consecutive calendar months as specified in this document for supply of goods or equipment and completion of works commencing from the date of notice to proceed.

O. Commercial use

Commercial use shall mean the use of the equipment plant/material which the contract contemplates or which it is commercially capable after successful commissioning and declaration of the date of commercial operation of the plant.

P. Commissioning

Commissioning means a process involving operation and testing of the supplied goods/equipment with a view to ascertaining the performance capability.

Q. Contract Price

The Contract Price means the price payable to the Contractor under this contract for the full and proper performance of its contractual obligations.

R. Date of Commercial Operation

Date of commercial operation shall mean the date fixed after successful commissioning of the complete plant with 72 hours of continuous operations (without break) of the plant including all auxiliaries.

S. Rupees/Rs.

Rupees/Rs mean Rupees of Indian Currency.

T. Services

Services means services ancillary to the supply of the goods such as transportation, insurance and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other such obligations of the contractor covered under the Contract.

U. Words imparting the singular only shall also include the plural and vice versa where the context so require.

V. Writing

Writing shall include any manuscript, typewritten or printed statement, under or over signature and/or seal as the case may be.

W. War

War means and include war, invasion, act of enemy hostilities (whether declared or not, civil war, rebellion, revolution, insurrection and military or usurped power).

4.2 INTERPRETATIONS

Words imparting the singular only also include the plural and vice versa unless, this is repugnant to the context. Wherever, the term Specification's is used apart from specified standard specifications, it shall mean the specifications or plan prepared for a particular item referred to, for the instructions to the Contractor in executing that item of work.

4.3 SUFFICIENCY OF TENDER

The tenderer shall be entirely responsible for the sufficiency of the offer quoted by him in his tender.

4.4 STATING OF OFFER

The offer shall be written both in words and in figures. In the case of conflict between the figures and words in the offer, the later shall prevail.

4.5 USE AND CARE OF SITE

Supervisor/Expert deputed at site by the Contractor shall have vigil to take care of plant installation Agency in respect of: -

- a. All land required for contractor's labour, office, Project work etc. shall be arranged by the Purchaser.
- b. Contractor shall clean all areas of operation, including his staff and labour colonies, in case land handed over to the Contractor by Purchaser.
- c. After completion of project work, the contractor shall handed over back the land or any other property handed over to him for the purpose of this project to Purchaser in good condition without any damage, alterations and satisfaction of the Purchaser.
- d. The lands shall as herein before mentioned, be handed over back to the Purchaser within three months after the completion of the work under this contract or the termination of the contract whichever is earlier. Also no land shall be held by the Contractor longer than the Purchaser

shall deem necessary and the Contractor shall, on due notice by the Purchaser vacate and return the land to the purchaser. In case the lands are not handed over back to the Purchaser within the time limit specified above, penalty rent as may be decided by the Purchaser will be recoverable.

- e. The vegetation and forest is scanty in project area. The contractor should take utmost care for the preservation of this vegetation and forest. Any damage in this vegetation and forest will have to be compensated by the Contractor and decision from Purchaser will be final and binding on Contractor.

4.5.1 Cleaning Up

- a. The Contractor shall at all-time keep the construction areas and storage free from accumulation of waste or rejected materials.
- b. Prior to the completion of the work, the contractor shall remove all rubbish from and around the premises and all tools, scaffolding equipment and materials which are not part of permanent structures except otherwise asked for or as provided under any other clauses of this contract, the premises will be left in a manner fully satisfactory to the Purchaser.

4.5.2 Period and Hours of work

The work shall be done usually during the daytime. In the interest of progress if it is felt necessary to work during night, the contractor shall obtain specific permission of the Purchaser. If the work is to be done at night, prior permission of Purchaser should be obtained and adequate lighting arrangement shall be made as directed by the Purchaser.

4.6 NOTICES.

- 4.6.1** Any notice given by one party to the other pursuant to the contract shall be sent in writing or by mail or fax & confirmed in writing to the address specified for that purpose.
- 4.6.2** A notice shall be effective when delivered or on the notices effective date whichever is Later.
- 4.6.3** The contractor shall furnish the postal address of his office. Any notice or instructions to be given to the Contractor under the terms of contract shall be deemed to have been served even if it is served to his authorised agent or representative by registered letter to the address provided by the contractor.
- 4.6.4** For the purpose of all notices, the following shall be address of the Purchaser.

GADRE MARINE EXPORT PVT LTD

Plot No FP-1, Mirjole Block, MIDC,

Ratnagiri-415639, Maharashtra, India

Email-sandesh.salvi@gadremarine.com, PH - +91-2352-231600

INSTRUCTION REGISTER

The contractor shall maintain bound instruction register at work site as the Purchaser may direct. This instruction register shall have machine numbered pages in triplicate. The Contractor shall make them available to the Purchaser or his representative, whenever called for by Purchaser or his representative may record order about works, in this register, leaving the original copy in the register and removing the second and third copy with him. The contractor or his authorised representative shall also sign this register, in token of its acceptance. All orders recorded in these register, shall be deemed to have been served on the Contractor. On completion of the work all the registers may be handed over to the Purchaser.

In the event of refusal of the Contractor's representative on the spot to sign the register, Purchaser shall take the necessary further steps in respect of further communication and control, modification or suspension of work as deemed fit at the entire responsibility of the Contractor.

4.7 USE OF CONTRACT DOCUMENTS AND INFORMATION :

4.7.1 The contractor shall not, without purchaser's prior written consent, disclose the contract or any provision thereof, or any specification, plan drawing pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Contractor in the performance of the contract. Disclosure to any such employed person shall be made in confidence & shall extend only as far as may be necessary for the purpose of such performance.

4.7.2 The Contractor shall not, without the Purchaser's prior written consent, make use of any documents or information enumerated in para above except for purpose of performing the contract.

4.8 PERFORMANCE SECURITY :

Please refer clause No. 2.29 in Section - II.

4.9 INSPECTION AND TESTS

4.9.1 The contractor shall without extra cost provide samples and co-operate in the testing of materials and inspection of work. The Purchaser shall have access at all times to the places where components are being manufactured for use under the contract, to determine that manufacturer is proceeding in accordance with drawings and specifications and the Purchaser shall also have access at all times to the places of storage.

4.9.2 The test report of manufacturer's factory inspector certifying that the equipment is manufactured as per specifications of the tender shall be furnished by the contractor.

4.9.3 Contractor cannot be relieved from the responsibility even if the drawing and test reports are approved by the Purchaser for the purpose of guarantee and quality of equipment/work.



- 4.9.4** The purchaser or his representative shall have the right to inspect and/or to test the material goods equipments to confirm their conformity to the contract. The technical specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Contractor in writing of the identity of any representatives deputed for these purpose.
- 4.9.5** The inspections and tests shall be conducted in the factory of the Contractor or his sub-contractor(s). All inspection related drawings and technical data, design data shall be furnished to the representative of the Purchaser 15 days before the inspection date.
- The tests and inspections of the items specified in Technical specification at Contractor's Manufacturer's works or sub-works shall be witnessed by two representatives of the Purchaser. The contractor will provide the cost of travel, lodging and boarding of the inspectors. The travel shall be arranged generally by Air, 1st class Railway or Car. The Purchaser reserves the right to appoint and deploy the services of the outside agency or any other reputed agency in association with the Purchaser for said purposes; however charges for the services of the outside agency will be borne by the Purchaser. The acceptance of the test shall be entirely with the Purchaser or his authorised representative.
- 4.9.6** Should any inspected or tested goods fail to conform to the specifications, the Purchaser may reject them and the Contractor shall either replace the rejected goods or make all alterations necessary to meet specification requirements free of cost to the Purchaser.
- 4.9.7** The Purchaser shall give notice in writing within fifteen days from the date of inspection to the Contractor of any objection. The Contractor shall give due consideration to such objections and shall make the modifications that may be necessary to meet the said objections. The Contractor shall declare readiness of material and equipment for testing in advance. The Contractor shall internally inspect/test the equipment specified as inspection item to ensue that the equipments may meet the requirement of specification before such equipment are notified for inspection to the Purchaser. On result of inspection/testing by such equipment, if it is found that it does not meet the requirement of specifications during inspection/testing by the Purchaser, the Contractor shall retest the equipment and bear all extra cost, such as to & fro first class charges, lodging & boarding charges, incidental charges etc. incurred by the Purchaser for such retesting. Notice of inspection and/or testing shall be given minimum 30 days prior to the inspection or testing date. Such tests shall be to the Contractor's account and all the charges are deemed to have included in contract price. Purchaser or his representative shall attend such inspection/tests at the time so notified unless otherwise inspection/test is waived. When the factory tests have been completed at the Contractor's or Sub-Contractor's factory in the presence of Purchaser or its representative, the Purchaser shall issue a certificate of inspection to this effect within 7 days after completion of tests, but if tests are not witnessed by the Purchaser or its

representative, the contractor shall re-arrange the test of equipment. The issue of the certificate of inspection shall not bind the Purchaser to accept the equipment. The inspection and tests to be conducted on various assembles and equipment is described in technical specification.

4.9.8 The Purchaser's right to inspect test and reject the goods after arrival at site if the goods/equipments without having Previously been inspected, tested and passed by the Purchaser or his representative prior to shipment from the place of manufacture/delivery.

4.9.9 Nothing in clause 4.17 shall in any way release the Contractor from any warranty or other obligations under this contract.

4.10 PACKING, LOADING, TRANSPORTATION & UNLOADING

4.10.1 The Contractor shall get himself fully acquainted with transport restrictions in connection with transport of goods to the project site.

4.10.2 The Contractor shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to the final destination as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, humid and salt laden climate and precipitation during transit and open storage. Packing case size and weight shall take into consideration, where appropriate, the remoteness of the goods final destination and the absence of heavy handling facilities at all points in transit. The packing shall meet the requirements of Insurance Authority and the carrier.

4.10.3 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided in the contract.

4.10.4 Transportation cost of all consignments from contractor/his sub contractor's factory to project site shall be borne by the contractor

4.10.5 Cost of Loading at contractor/his sub contractor's factory & Unloading cost at project site shall be borne by the contractor.

4.11 DELIVERY AND DOCUMENTS :

4.11.1 Delivery of the goods shall be made by the Contractor to suit completion period for the works.

4.11.2 Contractor may dispatch the goods for which tests are to be carried out in the factory. However, for other goods, Contractor shall not dispatch until necessary tests have been performed and certificate of inspection is issued and dispatch instructions are given.

4.11.3 Within the constraints imposed by contracted completion period the Contractor shall attempt to arrange dispatches to site so that consignments do not reach site during monsoon i.e. June to October of every year.

4.11.4 Upon shipment the Contractor shall notify Purchaser and the Insurance Company by mail. The full details of the shipment including contract No, description of the goods & quantity, registration No of road transporter, bill of lading No and date, railway or lorry receipt No & date.

The Contractor shall mail the following documents to the Purchaser with a copy to Insurance Company.

- 1) Six copies of the Contractor's invoice showing goods description, quantity, and amount.
- 2) Railway receipt/Lorry receipt.
- 3) Copies of packing list identifying contents of each package.
- 4) Insurance certificate.
- 5) Manufacturer's/Contractor's Guarantee Certificate.
- 6) Approved Inspection/Tests certificate issued by Purchaser or his nominated inspection agency and the Contractor's factory Inspection report.
- 7) Intimation to Insurance Company regarding shipment on each occasion.
- 8) A copy of the letter issued by the Purchaser giving instruction to dispatch the goods under the particular consignment, Shipment shall be received at site by the contractor and shall be properly stored by him.

4.12 INSURANCE

A) INSURANCE OF GOODS :

- 4.12.1** The works carried under the contract shall be properly and fully insured by the Contractor against loss or damage during transport from port of loading/unloading ex-factory up to unloading at project warehouse and completion of Civil Engineering works & erection, testing & commissioning of the E&M goods including all handling, storage and upto taking over. The Insurance shall be on "All Risks Basis".
- 4.12.2** The Insurance Policy shall be taken from Underwriter acceptable to Purchaser or the Director of Insurance, Government Insurance Fund, Maharashtra and shall be in the joint names of purchaser and Contractor, naming the Purchaser as the beneficiary. This Insurance Policy will be handed back to the Contractor for servicing. The Contractor shall therefore be responsible for preferring and handling of all claims till settlement. The cost of all such services shall be deemed to be included in the contract price. The Contractor shall not be relieved of his responsibilities upto the date of operation of the goods/equipments even though the title of property in goods stands transferred to the Purchaser.
- 4.12.3** The Insurance shall be provided for an amount equal to 110% of Contract Price. The Insurance Cover shall be obtained for all normal risks and special risks of war, strike, earth quake. Further the Insurance Cover shall be available without any break continuously from the date of shipment till the date of commercial operation of the goods/equipments and up to taking over.
- 4.12.4** The Contractor shall be responsible for making good of loss or damage at his cost and without requiring the Purchaser to place a separate order for replacement/repairs of the goods/works.

B) Third Party Insurance:

4.12.5 In addition, the Contractor shall indemnify the Purchaser against the loss or damage to the property of the third party and/or injuries to the third person which may arise out of or in consequences of transport, storage and erection, testing and commissioning of the goods/ equipment and construction of works.

4.12.6 The amount of third party insurance to be provided by the Contractor/his Sub-Contractor shall be as under :

PARTICULARS	FOR CONTRACT VALUE IN RS. LAKHS		
	Upto Rs.50 lakhs	Above Rs. 50 lakhs & up to Rs.100 lakhs	Above Rs.100 lakhs
Per person in case of fatality	5	10	10
Property damage per occurrence	5	10	10
Total cumulative during policy period	10	50	100

4.12.7 The terms of special policy for this purpose shall include a provision whereby, in the event of any claim being brought or made against the Purchaser in respect of which the Contractor would be entitled to receive indemnity under the policy, the insurer will indemnify the Purchaser against such claims and any costs, charges and expenses in respect thereof.

4.13 LIMITATION OF LIABILITY :

Except in case of criminal neglect or willful misconduct:

- a. The purchaser shall be not liable to the contractor whether in contract, tort or otherwise, for any indirect or consequential loss or damage, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the Purchaser and
- b. The aggregate liability of the Contractor to the Purchaser under the Contract shall not exceed the Total Contract Price, provided that this limitation shall not apply to any obligation of the Contractor to repair or replace defective equipment or to indemnify the Purchaser with respect to patent infringement.

4.14 ACCIDENT OR INJURY TO WORKMEN :

Purchaser shall not be liable for or in respect of any damages or compensation payable at law in respect, or in consequence of any accident or injury to any workman or other person in the employment of the Contractor or any Sub-contractor, save and except an accident or injury resulting from any act or default of the Purchaser.

Contractor shall indemnify and keep indemnified Purchaser against all such damages and compensations save and except as aforesaid and against all claims, proceedings, costs, charges and expenses, whatsoever in respect thereof or in relation thereto. Contractor shall insure against accident etc. to workmen provided always that, in respect of any persons employed by any Sub-Contractor, the Contractor's obligations to insure as aforesaid under this clause shall be

satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that the Purchaser is indemnified under the policy, but the Contractor shall require such Sub-Contractor to produce to the Purchaser through Supplier when required, such policy or policies of insurance and the receipt for the payment of the current premium.

If the Contractor, in any or all cases covered under the clause 4.12 "INSURANCE" as also his sub-contractor shall fail to effect and keep in force the insurance thereof, or any other insurance which he may be required to effect under the terms of the contract, then and in any such case Purchaser may effect and keep in force any such insurance and pay such premium or premia as may be necessary for that purpose and from time to time deduct the amount so paid as aforesaid from any money due or which may become due to the Contractor, or recover the same as a debt from the Contractor.

4.15 TRANSPORTATION AND HANDLING

4.15.1 The Contractor is required under the contract to undertake transport of goods from Ex-factory to project site. In addition shifting and handling of the goods at project site shall be arranged by him. The cost of all such services shall be arranged and paid for by the Contractor and the cost thereof shall be deemed to be included in the contract price.

4.15.2 Where the Contractor is required to effect delivery under any other terms, e.g., by post or to another address, the Contractor shall be required to meet all transport and storage expenses until delivery at site.

4.16 INCIDENTAL SERVICES

4.16.1 The Contractor shall be required to provide the following services with other necessary services. The cost of providing these services shall be included in the contract price.

- a) Performance of onsite erection, testing, commissioning and start-up is including supervision therefor of the supplied goods. The Contractor is required to undertake total onsite erection, testing commissioning & putting into commercial use of the supplied goods/equipment including the technical services from expert/specialist of the original manufacture.
- b) Performance of supervision or maintenance and/or repair of the supplied goods for a period of time agreed by the parties, provided that this service shall not relieve the Contractor of any warranty obligations under this contract, and
- c) **Training of the Purchaser's Engineers & Operators :**

Successful tenderer will be required to grant facilities of training to two Engineers to be nominated by the Purchaser for obtaining training for manufacturing, repairs and maintenance of equipments. The period of training shall be seven (7) days for each work viz Turbine, Generator, C&P panels, Remote control system, E.O.T crane, Transformers, 33kV switchyard and power station related systems etc. and charges towards lodging and boarding plus to and

from AC/first class train /air fare from work site to place of training shall be arranged by the tenderer. The training cost is deemed to have been included in the offer/quoted prices. This is similarly applicable for training abroad, if any. The training is to be arranged generally during manufacturing of the said equipments in one instance.

4.17 SPARE PARTS

4.17.1 a) A list of spare parts and tools for proper maintenance and operation of machine for a period of five years following commissioning of the whole system is given in specifications. The contractor shall undertake to supply the same before Commissioning of units.

b) The contractor shall either have adequate servicing and spare parts facilities in India in respect of the equipment to be supplied or shall arrange to provide such facilities simultaneously with supply of the equipment.

c) The contractor shall undertake to supply the necessary maintenance equipment and spare parts at any time during the life of the machine.

d) The Contractor shall warrant that before going out of production of the spare parts he will give adequate notice to the Purchaser so that the latter may order their requirements of spares in one lot if the Purchaser so desires.

e) The contractor shall further guarantee that if he goes out of production of spare parts, then he will make available the blue prints, drawings of the parts and specifications of materials at no cost to the Purchaser, if and when required in connection with equipment to enable the Purchaser fabricate or procure spare parts from other sources.

4.17.2 Contractor shall carry sufficient inventories to assure Ex-stock supply of consumable spares such as gaskets, plugs, washers, bolts etc. other spare parts and components shall be supplied as promptly as possible but in any case within 4 months of placement of order even after completion of contract.

4.18 PURPOSE OF DRAWINGS AND SPECIFICATIONS AND CONFORMATION THERETO AND ERRORS, OMISSIONS, DISCREPANCIES ETC.

The contract drawings read together with the contract specifications are intended to show and explain the manner of executing the work and to indicate the type of class of material to be used. The work shall be carried out in accordance with the directions of Purchaser and in accordance with the drawings and specifications which form part of the contract and in accordance with such further drawings, details and instructions as may from time to time be given by the Purchaser.

In case of errors, omissions and/or disagreement between written and scaled dimensions on the drawings or between the drawings and specifications, the following orders of preference shall apply.

Between actual scaled and written dimensions or description on drawings and corresponding one in the specification, the latter shall be adopted.

Between the quantities in the scope of works and those arrived at from the drawings, the former shall apply.

Between the written description of the item in the schedule of quantities and the detailed specifications of the same item, the latter shall be adopted.

In all cases of omissions and/or doubts or discrepancies, in the dimensions or description of any item, a reference shall be made to the Purchaser whose elucidation, elaboration or decision shall be considered as authentic and final. The Contractor shall be held responsible for any errors that may occur in the work through lack of such reference.

4.19 ERRORS IN SUBMISSION

The contractor shall be responsible for any errors or omissions in the drawings and other particulars supplied by him, whether such drawings/particulars have been approved by the Purchaser or not.

4.20 MODIFICATIONS

The Purchaser may order modifications at any time before the completion of the work. For all modifications, the Purchaser will issue revised plans or written instructions or both and no modifications shall be made unless so authorised.

4.21 SIGNED DRAWINGS, NO AUTHORITY TO THE CONTRACTOR

Signed drawings alone shall not be deemed to be an order for work unless it is entered in the agreement or schedule or drawings under proper attestation of the contractor and the Purchaser or unless it has been sent to the contractor by the Purchaser with a covering letter confirming that the drawings is an authority for work in the contract.

4.22.1 CIVIL WORK

All the Foundation loadings, forces, studies drawings, component wise design & drawing in three (3) copies respect of preparation of Civil Engineering designs shall be provided by the contractor.

4.22.2 ELECTRICAL & MECHANICAL WORKS

All the studies, layout drawings, component wise design & drawings in respect of E&M works shall be prepared by the Contractor and furnish in three (3) copies and got approved where ever required from Purchaser.

4.22.3 REPRODUCIBLE DRAWINGS :

Two sets of reproducible drawings in soft as required by the Purchaser shall be furnished by the contractor.

4.22 DRAWING APPROVALS.

4.23.1 Each drawing submitted by the contractor shall be clearly marked with the name of the Purchaser and the name of the project. If standard catalogue pages are submitted, the applicable items shall be indicated therein. All titles, noting, markings and writings on the drawing shall be in English. All dimensions should be in Metric units.

All manufacturing and fabrication work in connection with the equipment prior to the approval of the drawings shall be at the contractor’s risk. The contractor may make any changes in the design which are necessary to make the equipment conform to the provisions and intent of the contract and such changes will again be subjected to the approval by the Purchaser. Approval of contractor’s drawings or work by the Purchasers shall not relieve the contractor of any of the responsibilities and liabilities under the contract.

4.23.2 Subsequently, the contractor shall provide technical support for necessary approval from the concerned Electrical Inspector and Factory Inspector. Tenderer should submit Electrical Inspector's permission for commissioning of the electrical installations.

4.23 REFERENCE TO STANDARD SPECIFICATIONS

The specifications of the work as enclosed with this tender document are drawn with a specific reference to site conditions and do not every where include the details of the standard tests and procedures which are already laid down and available in the current Indian Standard Specifications. **Equipment must confirm to the following standards.**

EQUIPMENT	STANDARD
Turbines and generator (rotating electrical machines)	<ul style="list-style-type: none">  IEC 60034-1:1983  IEC 61366-1:1998  IEC 61116-1992  IS 4722-2001  IS 12800 (part 3) 1991
Field Acceptance Test for Hydraulic performance of turbine	 IEC 60041 : 1991
Governing system for hydraulic turbines	 IEC 60308
Transformer	<ul style="list-style-type: none">  IS 3156-1992  IS 2705-1992  IS 2026-1983
Inlet valve for hydro power stations & systems	 IS 7326-1902

4.24 FIELD OFFICE RECORDS

The Contractor shall maintain at his site office up to date copies of all drawings, specifications and other contract documents and any other supplementary data complete with all the latest revision thereof. The Contractor shall also maintain in addition, the continuous record of all changes to the above contract documents, drawings, specifications, supplementary data, etc. erected at the field and on completion of his total assignment under the contract shall incorporate all such changes on the drawings and other engineering data to indicate as installed,

conditions of the equipment furnished and erected under the contract. Such drawings and engineering data shall be submitted to the Purchaser in required number of copies.

4.25 TIME SCHEDULE FOR COMPLETION OF WORK.

Time schedule for completion of the work under this contract upto commissioning shall be 12 months for the complete set. The delay in work from this schedule will attract the provisions of "action for delay" in work progress.

TIME SCHEDULE

Sr. No.	Particulars of Work	Completion period.
1.	Execution of Gadnadi Hydro Electric Project (1X1800 KW+10% COL) on Turnkey Basis for Electrical & Mechanical works and trial operation period. Civil works will be carried out by Purchaser.	Erection and commissioning within 12 Months, O&M-up to SIX(6) months after successful commissioning of the unit. Total period 18 months.

4.26 WORK PROGRAMME

The Tenderer shall submit his own programme without changing total period of completion of work in Envelope No-2 with sufficient time span for the activities to be carried out and with the best sequence. In case, it is found necessary to alter this programme agreed in contract document, including the changes in the sequence of the items, the contractor shall submit in good time a revised programme incorporating necessary modifications proposed.

The Contractor shall give a detailed work programme within 14 days of the notice to proceed with the work. This programme will include stage wise construction of powerhouse & other civil works, manufacture of equipment, testing of the equipment at factory, transporting of the equipment to site, installation of the equipment, pre-commissioning of the equipment, test for guaranteed performance, etc. Such programme shall be finalised in consultation with Purchaser with due consideration of other works in progress.

Additional detailed programme if required for each quarter of the year shall be submitted to the Purchaser and got approved. The Purchaser is further empowered to ask for more detailed programme, say week by week for any items of special importance and contractor shall supply the same as and when asked for without delay.

The submission of the works programme and approval to it by the Purchaser shall not relieve the Contractor of any of his duties or responsibilities under the contract, like timely completion, the damages due to flood or other natural calamities, etc.

The Contractor shall not be entitled for any claims for any damages caused, due to particular work programme. It is the entire responsibility of the contractor to frame the programme after anticipating the rains, floods etc. Actual work turned out shall be mainly taken into account and

not just the sum total of the various payments made to the contractor. The advance on the material brought to the site of work will be accounted for while arriving at the progress achieved by the contractor in terms of proportion of the total work tendered for.

4.27 REFERENCE WORKS AND BENCH MARKS

The basic center lines, reference points and bench marks will be fixed by the Purchaser. The contractor shall establish at his cost, suitable points, additional reference lines and bench marks as may be necessary. The Contractor shall remain responsible for the sufficiency and accuracy of all his bench marks and reference marks. He shall take precautions to see that the reference lines or points and bench marks fixed by the Purchaser are not disturbed by his work and shall make good the damage if any at his cost.

It is the responsibility of Contractor to preserve the benchmark & the reference points established for setting out.

4.28 PASSING OF FOUNDATIONS ETC.

After the completion of the work of erection of equipment and before final grouting the foundation all levels and alignments will be checked and passed by the Purchaser & contractor jointly.

4.29 ACCURACY OF LINES, LEVELS AND GRADES AND SETTING OUT WORKS.

If at any time during the progress of works, the error shall appear or arise in the position, level, dimension or alignment of any part of the work, the Contractor shall rectify such error to the satisfaction of purchaser without any extra cost. The Contractor shall be responsible for the correct setting out of all works at his cost. The Contractor shall execute the work true to alignment, grade and levels as shown in the drawing and as directed by the Purchaser and shall check these at frequent intervals. The contractor shall provide free of cost, all facilities like labour, instruments, etc. and all equipments to the Purchaser, to check all dimensions, alignments, grades and levels. This shall not absolve the contractor of his own responsibility of maintaining the accuracy of the work.

4.30 ESSENTIALITY CERTIFICATE :

For procurement of materials, where requested by the contractor, Purchaser will provide an essentiality certificate for the same. This will, however, not be considered as a condition for not adhering to the work Schedule as agreed to in the tender. No financial burden will be accepted by Purchaser on account of foreign exchange.

4.31 TOOLS AND PLANT FOR ERECTION, TESTING ETC.:

The Contractor shall provide all types of scaffolding, tools, lifting tackles, erection appliances, testing equipment or any machine that may be required for installation of the complete equipment under this contract. Equipments of any type will not be made available by the Purchaser, Contractor have to make necessary arrangement for the same. The equipment

required for handling and erection work such as mobile crane, compressors, etc. will have to be arranged by the contractor.

4.32 HANDING OVER OF WORK.

The whole plant, before finally taken over by Purchaser will be the entire liability of the contractor for guarding, maintaining and making good any damages of any magnitude. The Purchaser will not take over piece meal equipment such as E.O.T. crane, A.C.L.T., D.C. equipments, D.G. Set etc. interim payments made for such work will not affect this position. The handing over by the contractor and taking over by the Purchaser or his authorised representative will be in writing.

4.33 FIRE EXTINGUISHERS AND HOSES.

The contractor shall inspect the entire site including storage areas for fire hazards, if any, and furnish and maintain fully charged fire extinguishers of the appropriate type, supplemented with temporary fire hoses wherever an adequate water supply exists at the places where burning, welding or other operations that may cause a fire, are being performed.

4.34 PROTECTION OF ADJOINING PREMISES.

The contractor shall protect the adjoining site against structural, decorative and other damages that could be caused by the execution of these works and make good at his cost any such damage.

4.35 UNFAVOURABLE WORKING CONDITIONS.

The Contractor shall confine all his field operations to those works which can be performed without subjecting the equipment and materials to adverse effects, during inclement weather conditions like Monsoon, storms etc and during other unfavorable construction conditions. No field activities shall be performed by the contractor under such conditions, which might adversely affect quality and efficiency thereof, unless special precautions or measures are taken by the Contractor in a proper and satisfactory manner in the performance of such works and with the concurrence of the Purchaser. Such unfavorable construction condition will in no way relieve the contractor of his responsibility to perform the works as per the schedule.

4.36 ACCESS TO SITE AND WORK AND CO-OPERATION WITH OTHER CONTRACTORS

The Purchaser may, if he considers fit, from time to time, enter on any lands which may be in the possession of the contractor under the contract for the purpose of executing any works not included in the contract and may execute such works not included in this contract by agents or by other contractors at his option and the contractor shall in accordance with the requirements of Purchaser afford all reasonable facilities for execution of the works, including occupation of lands, structures or otherwise to any other contractor employed by the Purchaser and his workmen or for the workmen of the Purchaser who may be employed in the execution on or near the site of work not included in the contract, or of any contract in connection with or

specially to the works and in default, the contractor shall be liable to the Purchaser for any delay or expenses incurred by reason of such default. The contractor shall not however, on account of any such modified, new or extra work executed by or for the sake of the Purchaser be entitled to claim relief from the obligation to execute the works.

The Contractor shall also co-operate with other contractors with all fairness and mutual understanding and use the common facilities like access roads to quarries, water supply arrangements etc.

The Contractor shall also not cause advertently or inadvertently any obstruction or impediments in the progress of the other works being executed by Purchaser or through other agencies. In the event of dispute regarding the claim, the responsibility, liabilities, etc, in respect of such facilities, the decision of the Purchaser shall be final.

In cases where performance of the erection work by the contractor affects the operation of the system facilities of the Purchaser, such erection work of the Contractor shall be scheduled to be performed only in the manner stipulated by the Purchaser and the same shall be acceptable at all times to the Contractor. The Purchaser may impose such restrictions on the facilities provided to the contractor such as electricity, water etc, as he may think fit in the interest of the purchaser and the contractor shall strictly adhere to such restrictions and co-operate with the purchaser.

The Purchaser shall be notified promptly by the Contractor of any defects in the other Contractor's work that could affect his own work. The Purchaser shall determine the corrective measures, if any, required to rectifying this situation after inspection of the works and such decisions by the Purchaser shall be binding on the Contractor.

4.37 CO-ORDINATION WITH OTHER CONTRACTORS

The Contractor should note that there may be other agencies including Purchaser, working in the same area for works other than that included in this contract. The contractor shall co-operate with these agencies to the fullest extent and shall allow them reasonable facility and co-ordination for execution of work, simultaneously and satisfactorily as intended in the contract conditions, specifications and drawings.

Should there be a dispute or disagreement between the Contractor and other agencies for any cause whatsoever, the same shall be referred to the Purchaser whose decision regarding co-ordination and facilities to be provided by all the contractors to others shall be final and binding on all parties and such decision shall not vitiate any contract or absolve the contractor of his responsibility under the contract, and shall not form ground for any claim or compensation.

4.38 OTHER WORKMEN

The Purchaser shall have full authority to depute workmen on work site to execute other works not included in the contract. The Contractor shall offer every reasonable facility to enable such

workmen to carry out the other works, provided that such works shall be carried out in such a manner as not to impede the progress of the works included in the contract. The Contractor, however, shall not be liable for any damage which may happen to or be occasioned by such other works provided, he complies with the instructions in connection therewith and provided that the damage is not caused by the contractor or his workmen.

4.39 INCOME TAX

Income tax is to be deducted at source from the sums to be paid to the contractor for works carried out of the gross amount from each bill along with surcharge of such deductions or as amended from time to time. The deductions will be as per rulings of the Income Tax Department.

4.40 GST AND DUTIES.

The rates quoted by the Contractor shall be deemed to be inclusive of SGST & IGST, Excise (if any) and other duties (if any) on all the equipments and the material that will have to be purchased for performance on this contract. The contractor shall quote EX-Works unit price of all equipments of the said project & GST, duties on all the equipment shall be quoted separately.

4.41 TAXES AND DUTIES.

The Contractor shall, unless otherwise specifically provided in the contract pay all duties, tolls, octroy duties, royalties and other taxes on all materials and articles that he may use. These payments are deemed to be included in Contract price. The contractor shall quote EX-Works unit price of all equipments of the said project & all taxes, duties shall be quoted separately.

A Certificate to the extent that the equipment being supplied under this order pertains to Gadnadi Hydro Electrical Project will be issued by the Purchaser.

4.42 STATUTORY VARIATION IN TAXES:

The Tenderer shall furnish in his tender the percentage rates of statutory taxes & duties applicable for various equipment applicable at the time of tendering. In case of variation in these statutory taxes & duties levied by the State, Central Govt. at the time of contractual delivery differential amount of such taxes & duties shall be paid to/recovered from the Contractor. On the basis of proof of variation in percentage rates of statutory taxes, duties & payment of these taxes & duties to the Govt authorities. The adjustment of differential amount is applicable for only those item of equipment for which tenderer has furnished in his tender the percentage rates of statutory taxes & duties. If Tenderer does not give this information in his tender he will not be entitled for payment on account of statutory variation in taxes & duties.

The tender amount quoted by the contractor is also deemed to be inclusive of taxes such as SGST, CGST or any other taxes payable on services to be provided under the turnkey contract as applicable under the law at the time of tendering. Unless the amount of cost of services included in the total lumpsum quoted amount on which the said GST would be applicable is informed in

the tender alongwith the present rate of taxes, no payment on account of statutory variation in the rates of taxes on services would be payable to the contractor.

4.43 OBSERVANCE OF LAWS, LOCAL REGULATIONS, NOTICES AND ATTACHMENTS.

All local laws in force at the time of entering into the contract and those enacted thereafter shall be binding on the Contractor and he shall abide by the same.

The Contractor shall conform to all laws of land, regulations and bye-laws of any local authority. He shall before making any variations from the drawing or specifications, that may be necessitated for so conforming give the Purchaser written notice, specifying the variation proposed to be made and the reasons for making them and apply for instructions thereon. In case the contractor shall not receive such instruction within seven days from receipt of notice, he shall proceed with the work conforming to the provisions, regulations or bye-laws in question and any variations in the drawing or specifications so necessitated shall be dealt with under respective clause in the tender. The Contractor shall give all notices required by the said acts, regulations or bye-laws and pay all fees in connections therewith.

He shall also ensure that no attachments are made against materials or works related to the contract. In every case referred to in this clause, the Contractor shall protect and indemnify Purchaser against any claim or liability arising from or based on the violation of such law, ordinance, regular decree or attachment by him or by his employees.

4.44 PATENTS RIGHTS, ETC.

The Contractor shall fully indemnify the Purchaser against all actions, suits, claims, demands, costs, charges and expenses arising from or incurred by reason of any infringement for any letters, patent designs, trade mark or name, copy right or other protected rights in respect of any machine, plant, work material, thing or system or method of using, fixing working or arrangement used or fixed or supplied by the contractor, but this indemnity shall not extend or apply to any action, suit, claim, demand, cost charges or expenses arising from or incurred by reason of use of the works or any part thereof otherwise than in the manner or for a purpose contemplated by the contract. All royalties and other similar payments which may have to be paid for the use of any such machine, plant, work, material, thing, system or method as aforesaid (whether payable in one sum or by installments or otherwise) shall be covered by the contract price and payable by the contractor.

In the event of any claim or demand being made or action or suit brought against the Purchaser in respect of any such matter or matters as aforesaid the contractor shall be duly notified thereof, and he shall conduct all negotiations for the settlement of such claims or demand and such action of suit shall also be conducted by him and as far as the Purchaser shall think proper, to the supervision and control of the Purchaser through the officer duly authorised on behalf of Purchaser.

4.45 SAFETY PROVISIONS:

The Contractor will notify the Purchaser of his intention to bring on the site any equipment or any container, with liquid or gaseous fuel or other substance, which may create hazard. The Purchaser shall have the right to prescribe the conditions under which such equipment or container may be handled and used, during the performance of the works and the contractor shall strictly adhere to such instructions. The Purchaser shall have the right to inspect any construction plant and to forbid its use, if in his opinion, it is unsafe. No claim due to such prohibition shall be entertained by the Purchaser.

Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosives, the contractor shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulations laid down in Petroleum Act 1934 and further amendments of Explosive Act 1948 and petroleum and car bide of calcium manual published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the Purchaser. In case any approvals are necessary from the Chief Inspector of Explosives or any statutory authorities, the contractor shall be responsible for obtaining the same.

4.46 ELECTRICAL SAFETY REGULATIONS

In no circumstances will the Contractor interfere with fuses and electrical equipment belonging to the Purchaser or other Contractors. Before the Contractor connects any electrical appliances to any plug or socket belonging to the other Contractor or Purchaser he shall -

- a) Satisfy the Purchaser that the appliance is in good working condition.
- b) Inform the Purchaser of the maximum current rating, voltage and phases of the appliances
- c) Obtain permission of the Purchaser detailing sockets to which the appliances may be connected.

The Purchaser will not grant permission to connect until he is satisfied that

- d) The appliance is in good condition and is fitted with a suitable plug
- e) The appliance is fitted with a suitable cable having two earth conductors. One of which shall be an earthed metal sheath surrounding the cores.
- f) No electric cable in use by the Contractor/Purchaser will be disturbed without prior permission. No weight will be imposed on any cable and no ladder or similar equipment will rest against or be attached to it.
- g) No work will be carried out on any live equipment. The equipment must be made safe and a permit to work is issued by the Purchaser before any work is carried out.

The Contractor shall employ the necessary number of qualified, full time electricians to maintain his temporary electrical installation.

- h) The Contractor shall comply with the provision of the Indian Electricity Rules and Indian Electricity Acts in force in respect of electrical installations. The Contractor shall at his own

expense arrange for the safety in his operations as required including the provisions of the safety code published by the Central Water Commission, New Delhi (latest edition). In case the contractor fails to make such arrangements, the Purchaser shall be entitled to cause them to be provided and to recover the cost thereof from the contractor. *Tenderer will have to arrange all permissions from Electrical Inspector, Factory Inspector and Pollution Boards.* The cost thereon is deemed to have been included in the Bid Price.

4.47 RELEASE OF CLAIMS.

After completion of work and prior to final payment, the Contractor shall furnish to the Purchaser a certificate for release of claims against the Purchaser arising out of the contract, other than claims specifically identified, evaluated and exempted from the operation of the release by the contractor. Such claims shall be as actual.

4.48 REPLACEMENT OF DEFECTIVE PARTS & MATERIALS

4.48.1 If during the progress of the works and/or within warranty/guarantee period after commissioning, the Purchaser shall decide and inform in writing to the Contractor that the Contractor has manufactured or installed any plant or part of the plant unsound or imperfect or has furnished any plant inferior then the quality specified then supplier on receiving details of such defects or deficiencies shall at his own expense within seven (7) days of his receiving the notice or otherwise, within such time as may be reasonably necessary for making it good, proceed to alter or re-construct or re-install or remove such work and furnish & install fresh equipment upon the standards of the specifications. In case the Contractor fails to do so, the purchaser may on giving seven (7) days notice in writing of his instructions to do so, proceed to remove the portion of the works so complained of and at the cost of Contractor perform all such work or furnish all such equipment provided that nothing in this clause shall be deemed to deprive the Purchaser of or affect any rights under the contract which the Purchaser may otherwise have in respect of such defects and deficiencies.

4.48.2 The Contractor's full and extra liabilities under this clause shall be satisfied by the payment to the Purchaser of the extra cost, of such replacement procured including erection as provided for in the contract, such extra cost being the price paid by the Purchaser for such replacement. Should the Purchaser not so replace the defective plant the Contractor's extra liability under this clause shall be limited to repayment of all sums paid by the Purchaser under the contract for such defective plant/goods.

4.49 DEFENCE OF SUITS

If any action is brought against the Purchaser or any officer or agent of the Purchaser for the failure or neglect on the part of the Contractor to perform any act, matters covenant or things under the contract or for damage or injury caused by the alleged omission or negligence on the part of the Contractor or in connection with any claim based on lawful demands of sub-



Contractor, workmen, or employees, the Contractor shall in all such cases indemnify and keep the Purchaser and/or his representative harmless from all losses, damages, expenses or decrees arising out of such action.

4.50 JURISDICTION

No legal proceedings to enforce any claim and no suit arising out of any contract shall be instituted except in court of competent jurisdiction under the *High Court of Mumbai*.

4.51 DELAYS IN THE CONTRACTOR'S PERFORMANCE

4.51.1 Delivery of the goods and performance of services shall be made by the Contractor to suit the completion of work in accordance with the time schedule specified in the contract.

4.51.2 An unexcused delay by the Contractor in the performance of delivery obligations and services, shall render the Contractor liable to any or all of the following action :

- Forfeiture of performance security
- Imposition of liquidated damages, and
- Termination of the contract for default.

4.51.3 If at any time during performance of the contract the Contractor or his subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services the contractor shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Contractor's notice the Purchaser shall evaluate the situation and may at his discretion extend the Contractor's time for performance, in which case the extension shall be ratified by the parties by amendment of the contract.

4.52 LIQUIDATED DAMAGES

4.52.1 FOR NON ACHIEVEMENT OF MILESTONE ACTIVITIES

The Contractor shall have to pay as liquidated damages for non completion of the critical activities specified below as milestone activities, as per programme stipulated in the contract.

For the purpose of liquidated damages on account of failure to complete the milestone activities within the stipulated period following activities will be observed as milestone activities.

Sr. No.	Milestone activity	Percentage of Contract value to be considered for calculating liquidated damages	Period from Work order Unit
1	Submissions of general layout of Power House & switch yard for approval	5	1 months
2	Submission of all drawings of EOT Crane, MIV, Turbine, Oil Pressure Unit generator, HT & LT panels, Power & Auxiliary Transformers and outdoor switch yard equipment for approval	5	3 months

3.	Supply and installation of Earth mat at Power House and switch yard.	5	4 months
4	Factory Testing, Supply & unloading at site of E.O.T. Crane .	5	8 Months
5	Factory Testing, Supply & unloading at site of MIV (valve) .	5	9 Months
6	Factory testing, supply and unloading at site of Turbine with allied equipment.	10	10 months
7	Factory testing, supply and unloading at site of Generator with allied equipment.	10	10 months
8	Factory testing, supply and unloading at site of HT & LT panels with allied equipment.	10	10 months
9	Factory testing, supply and unloading at site of Oil Pressure Unit(OPU) with allied equipment.	5	10 months
10	Factory testing, supply and unloading at site of Power & Auxiliary Transformers with allied equipment & materials	5	10 months
11	Factory testing, supply and unloading at site of All types of cables, cable trays, connections with allied equipment & materials	5	10 months
12	Factory testing, supply and unloading at site of Switchyard & earthing materials with allied equipment & materials	5	10 months
13	Factory testing, supply and unloading at site of required capacity DG set & battery bank with allied equipment & materials	5	10 months
14	Erection, dry spinning & ready for commissioning of all above equipment like Turbine, generator, panels, switch yard and all other allied equipment.	10	12 months
15	After commissioning of project 6 month of operation, maintenance & given training of Purchaser employees	10	From 12 to 18 months

4.52.2 THE LIQUIDATED DAMAGES WILL BE CHARGED AS FOLLOWS :

- a) If the erection or completions of aforesaid activities are delayed beyond the stipulated period the liquidated damages will be charged at 0.5% per week on the percentage of contract value shown above as provisional liquidated damages. The purchaser may consider termination of the contract on provisional liquidated damages reaching ten (10%) percent of the contract price on account of delays in completion of aforesaid milestone activities. However, if the completion of the first milestone activity is delayed by four months beyond stipulated period, and/or amount of liquidated damages exceed 10% of total contract price, Purchaser may also consider termination of the contract.
- b) Above liquidated damages will be, at first instant charged on the provisional basis for non-achievement of target set for milestone activities. However, if the contractor makes up the

Delayed period of such milestone activities and complete the same along with next milestone activities as per programme specified for the next milestone activity, the liquidated damages so deducted for the delayed milestone activity on provisional basis will be released after completion of entire work specified in the contract.

- c) Total recovery of liquidated damages on account of (a) above shall be limited to the maximum of 10% (Ten percent) of value of contract and further action resulting such recovery of the liquidated damages will be taken against contractor as per other terms & conditions of the contract.

4.52.3 FOR FAILURE TO MEET PERFORMANCE GUARANTEES

If the goods under the contract fail to meet the performance guaranteed by the Contractor he shall agree to pay to the purchaser liquidated damages as per the provisions stipulated in Annexure - IX. This will be apart from L.Q. for late deliveries and completion of works.

4.53 TERMINATION FOR DEFAULT.

4.53.1 The Purchaser may, without prejudice to any other remedies for breach of contract by written notice of default sent to contractor terminate the contract in whole or in part.

(a) If the Contractor fails to carry out the work within the time period(s) specified in the contract or any extension thereof granted by the Purchaser.

(b) If the contractor fails to perform any other obligation(s) under the contract.

4.53.2 In the event of the Purchaser terminating the contract in whole or in part, Purchaser may procure the goods and services of similar description upon such terms and in such manner as deemed appropriate required so as to complete the contract. Under such circumstances, the contractor shall be liable to the Purchaser for any excess costs involved. However, the contractor shall continue performance of the contract to the extent not terminated.

4.54 FORCE MAJEURE.

4.54.1 Notwithstanding the provisions of Clause 4.53 and 4.54 the Contractor shall not be liable for forfeiture of performance security, liquidated damages termination for default, if and to the extent that his delay in performance or other failure to perform obligations under the contract is the result of an event of force Majeure.

4.54.2 For purpose of the clause "Force Majeure" means an event beyond the control of the Contractor and not involving the Contractors fault or negligence and not foreseeable. Such events, may include, earthquake, wars or revolutions, fires, floods, epidemics, quarantine, restrictions and foreign embargoes, strike, ocean perils, riots and civil commotion all or any one of the above not caused by Purchaser or Contractor or its representatives.

4.54.3 If a force Majeure situation arises, the Contractor shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Contractor shall continue to perform his obligations under the contract as far as is

reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

4.55 TERMINATION FOR INSOLVENCY

In the event contractor becomes bankrupt or otherwise insolvent, the Purchaser may at any time terminate the contract by giving written notice to the contractor and without being liable for compensation. Such termination will not prejudice or affect any right or action or remedy, which has accrued or will accrue there after to the Purchaser.

4.56 TERMINATION FOR CONVENIENCE

4.56.1 The Purchaser, may by a written notice sent to the contractor, terminate the contract, in whole or in part, at any time for his convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of work under the contract is terminated and the date upon which such termination becomes effective.

4.56.2 The goods that are complete and ready for shipment dispatch within 30 days after the Contractor's receipt of notice of termination shall be purchased by the Purchaser at the contract terms and prices.

For the remaining goods, the Purchaser may elect:

- (a) To have any portion completed and delivered at the contract terms and prices, and/or
- (b) To cancel the remainder and pay to the contractor an agreed amount for partially completed works and for materials and parts previously procured by the Contractor.

4.57 RESOLUTION OF DISPUTES

4.57.1 The Purchaser and the contractor shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the contract.

If after thirty (30) days from the commencement of such informal negotiations, the Purchaser and the Contractor have been unable to resolve amicably a contract dispute; either party may require that the dispute be referred to resolution to the formal mechanisms as described in foregoing paras.

4.57.2 If the Contractor considers any work demanded from him to be outside the requirement of the contract or consider any drawing, record or ruling of the Purchaser or his representatives on any matter in connection with or arising out of the contract or the carrying out of work to be unacceptable, he shall promptly ask the Purchaser or his representative in writing for written instruction or decision. There upon, the Purchaser or his representative shall give his written instruction or decision within a period of thirty (30) days of such request. Upon receipt of the written instructions or decision the Contractor shall promptly proceed without delay to comply with such instruction or decision.

All disputes or difference in respect of which the decision is not final and conclusive shall on the initiative of either party be referred in the adjudication of sole arbitrator. The arbitrator will be an independent authority in Government of Maharashtra to be nominated by the Purchaser. The arbitration will be conducted in accordance with provisions of Arbitration and Conciliation Act 1996 with any statutory modification there of and shall be held in Mumbai/Pune and at time as the Arbitrator may determine.

4.57.3 The decision of the Arbitrator shall be final and binding upon both the parties and shall be enforceable in any court of competent jurisdiction. The expenses of the arbitrator shall be paid as may be determined by the arbitrator.

4.57.4 Performance under the contract shall, if reasonably possible continue during the arbitration proceeding and payments due to the Contractor by the Purchaser shall not be withheld, unless they are subject of the arbitration proceedings.

All awards of the claim shall be in writing and shall state reasons for the amount awarded. Neither party is entitled to bring a claim to arbitration if arbitrator has not been appointed within thirty (30) days after the expiration of warranty period.

4.58 GOVERNING LANGUAGE

The contract shall be written in ENGLISH language as specified in the “Instructions to tenderers”.

All correspondence & other documents pertaining to the contract which are exchanged by the parties shall be written in the same language.

4.59 APPLICABLE LAW

The contract shall be interpreted in accordance with INDIAN laws.

4.60 COMPLETION OF CONTRACT

4.60.1 Unless otherwise terminated under the provisions, or any other relevant clause, this contract shall be deemed to have been completed at the expiration of the warranty period.

4.60.2 The final settlement of payment by the Purchaser in pursuance of the contract shall mean the release of the Contractor from all his liabilities under the contract. The Contractor shall have to provide Bank Guarantee of equivalent amount, for any short coming/short supplies etc. observed after effecting 100% payments. This warranty shall also be discharged after successful settlement of final liabilities & responsibilities of Contractor at the end of warranty period. All payments made under contract shall be treated as progress payments & shall be subject to final adjustment.

4.61 PERSONNEL OF THE CONTRACTOR

The Contractor shall, at all times, maintain on the work, a staff of duly qualified supervisors of sufficient experience of similar other jobs to assure that the quality of work turned out shall be as intended in the specifications. The contractor shall also maintain at the work, a Works

Manager of sufficient status, experience and office and duly authorise him to deal with all aspects of the day to day work, all communications and commitments by this Works Manager shall be absolutely binding on the contractor.

The Contractor shall supply to the Purchaser details of names, qualifications and experience in regards to all supervisory staff employed by the contractor and notify changes when made and satisfy the Purchaser regarding the quality and sufficiency of staff thus employed.

The Purchaser will have the unquestionable right to ask for changes in the quality and number of contractor's staff. The Contractor shall on the written directives of the Purchaser, remove from the works any person employed thereon, who may in the opinion of the Purchaser be incompetent or has misconduct himself. Such person shall not be employed again, on the work, without the written permission of the Purchaser.

4.62 UNDERTAKING UNDER CONTRACT LABOUR ACT.

The Contractor shall furnish the undertaking towards implementation of Contract Labour Act.

4.63 PHOTOGRAPHS OF THE WORKS.

The Contractor will not be allowed to take photographs showing fieldwork or the general location of the work. The Purchaser, may however, at his discretion, allow a few construction photographs to be taken for the purpose of the Contractor's record. Prior approval of the Purchaser should be obtained in such cases and also in case such photographs are to be exhibited in public literature and calendars etc. In all such cases, soft copy of the photos shall be submitted to the Purchaser.

4.64 THE CONTRACTOR TO SUPPLY AND BE RESPONSIBLE FOR THE SUFFICIENCY OF THE MEANS EMPLOYED.

The Contractor shall supply and take upon himself the entire responsibility of the sufficiency of the tools, lifting tackles, handling equipment, machinery, implements and generally of all the means irrespective of whether such means may or may not have been approved of or recommended by the Purchaser and the Contractor must accept all risks of accidents or damages from whatever cause they may arise, until the completion of this contract.

4.65 COVERING OF WORK.

The Contractor shall give notice within 7 days in writing to the Purchaser of the work which is proposed to be covered up so that the approval from Purchaser may be taken before the work is covered up. No work shall be covered up before approval from purchaser any work covered up without such notice having been given or consent obtained, the same shall be uncovered at the Contractor's expenses and in default thereof no payment or allowance shall be made for such work or for materials with which the same was executed.

4.66 SUNDAYS AND HOLIDAYS.

No work shall be done on weekly local holidays or on other Government holidays duly gazette or on holidays observed by local usage without the prior sanction of the Purchaser. Withholding of such sanction shall not form any grounds for compensation or extension of time limit.

If on the other hand, the Purchaser directs that the work shall be proceeded with on days and during hours otherwise not permissible under this contract, the Contractor shall proceed with the works as directed, without in any way violating this contract or forming any grounds for compensation or claim.

The Contractor shall, in his dealing with labour at all times during the period of this contract, have due regard to local festivals and other customs.

4.67 LIMIT OF CONTRACT.

Equipment furnished shall be complete in every respect with all mountings, fittings, fixtures and standard accessories normally provided with such equipment and/or needed for erection, completion and safe operation of the equipment as required by applicable National and International codes though they may not have been specifically mentioned in the detailed specifications. All similar standard equipment provided, shall be interchangeable with one another. The contractor shall provide concerned national / international codes / standard.

4.68 DESIGN CO-ORDINATION.

The Contractor shall be responsible for the selection and design of appropriate equipment to provide the best co-ordinated performance of the entire system. The basic design requirements are detailed out in detailed item wise specifications. The design of various components, subassemblies and assemblies shall be so done, that it facilitates easy field assembly and maintenance.

4.69 WARRANTY/DEFECTIVE LIABILITY PERIOD

4.69.1 The Contractor shall warrant that the Goods, supplied and installed under the contract are new, unused, of the most recent or current models and incorporate all recent improvement in design and materials unless provided otherwise in the contract. The Contractor shall further warrant that the goods supplied under this contract shall have no defects arising from design, materials or workmanship or from any act or omission of the supplied goods in the conditions obtaining at the final destination.

4.69.2 This warranty/defective liability period shall remain valid for 12 months after the date of commissioning of project. Contractor shall solely be responsible for setting rights the defects in basic design, manufacture and/or installation observed during warranty period and execute remedial measures or replace free of cost the defective goods or its components.

4.69.3 The Purchaser shall promptly notify the Contractor in writing of any claim arising under this warranty. Upon receipt of such notice, the Contractor shall with all reasonable speed, repair or replace the defective goods or parts thereon without cost to the Purchaser.

If the Contractor, having been notified, fails to remedy the defect(s) within a reasonable period, Purchaser may proceed to take such remedial action as may be necessary, at the Contractor's risk and cost and without prejudice to any other rights which the Purchaser may have against the Contractor under the Contract.

4.69.4 In the event of an emergency where in the judgement of the Purchaser, delay would cause serious loss or damage, repairs or adjustment may be made by the Purchaser or third party chosen by the Purchaser without advance notice to the Contractor and the cost of such work shall be paid by the Contractor, or by the surety. In the event of such action being taken by the Purchaser, the Contractor will be notified promptly and he shall assist whenever possible in making the necessary correction. This shall not relieve the Contractor from liability under the terms and conditions of the contract.

4.69.5 Under this clause, if it becomes necessary for the Contractor to replace or renew any defective portions or part from the plant the contractor shall replace or renew the portion or part of the plant. Similarly the Contractor shall extend warranty of this part or portion of the plant by including the period during which plant could not be operated due to reasons of replacement, repairs renewals and testing period thereon.

4.69.6 The cost of any special or general overhaul rendered necessary during the guarantee period due to defects in the Plant or defective installation work carried out by the Contractor or under his supervision, shall be borne by the Contractor without extra cost to Purchaser.

4.69.7 The acceptance of equipment by the Purchaser shall in no way relieve the Contractor of his obligations under this clause.

4.69.8 In case of those defective parts, which are not repairable at site but are essential for the commercial operation of the equipment, the Contractor and the Purchaser shall mutually agree to a programme of replacement or renewal, which minimize interruption in the operation of the equipment.

4.70 REGISTRATION AND STATUTORY INSPECTION :

All registration and statutory inspection fees, if any in respect of his work pursuant to this contract shall be to the account of the Contractor. However, any registration, statutory inspection fees, lawfully payable under the provision of any statutory laws and its amendments from time to time during erection in respect of the plant and equipment ultimately to be owned by the Purchaser, shall be borne by the Contractor. Should any such inspection or registration need to be re-arranged due to the fault of the contractor or his Sub-Contractor, the additional fees for such inspection and/or registration shall be borne by the contractor.

**4.71 TRANSPORTATION.**

4.71.1 The Contractor, wherever applicable, shall after proper painting, pack and crate all equipment in such a manner as to protect them from damage and deterioration in transit by road, or rail and during storage at the site till the time of erection. The contractor shall be held responsible for all damages due to improper packing. While packing all the materials, the limitations from the point of view of availability of railway wagons, size and other modes of transport should be taken into account. The packing and protection should be in conformity and requirement of Insurance Companies and Transport Agencies.

4.71.2 The Contractor should prepare detailed packing list of all packages and containers, bundles and loose material forming each and every consignment dispatched to site. The Contractor shall further be responsible for making all necessary arrangements for loading, unloading and other handling, right from his works to the site and also till the equipment is erected, tested and commissioned. He shall be solely responsible for proper storage and safe custody of all equipment.

4.71.3 All demurrage, wharf age and other expenses incurred due to delayed clearance of the material or any other reason shall be borne by the contractor.

4.72 MATERIALS HANDLING AND STORAGE.

4.72.1 All the equipment furnished under the contract and arriving at site shall be promptly received, unloaded and transported and stored in the storage shed constructed by the Contractor. Storage space will only be provided by Purchaser. As per nature of equipment/material storage shall be done as per storage norms.

4.72.2 Contractor shall be responsible for examining all the shipment and notify the Purchaser immediately of any damage, shortage, discrepancy, etc. for the purpose of Purchaser's information only. The Contractor shall submit to the Purchaser every week a report detailing all the receipts during the week. However, the contractor shall be solely responsible for any shortages or damage in transit, handling and or in storage and erection of the equipment at the site.

4.72.3 The Contractor shall maintain an accurate and exhaustive record detailing out the list of all equipment received by him for the purpose of erection and keep such record open for the inspection of the Purchaser at any time.

4.72.4 All equipment shall be handled very carefully to prevent any damage or loss. No bare wire ropes, slings, etc. shall be used for unloading and/or handling of the equipment without the specific written permission of the Purchaser. The equipment stored shall be properly protected to prevent damage either to the equipment or to the floor where they are stored. The equipment from the store shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at site.

- 4.72.5** Such other devices shall be protected against moisture ingress and corrosion during storage and periodically inspected. Heavy rotating parts in assembled conditions shall be periodically rotated to prevent corrosion due to prolonged storage.
- 4.72.6** All the electrical equipment, such as motors, generators, etc shall be tested for insulation resistance at least once in three months from the date of receipt till the date of commissioning and record of such measured insulation values maintained by the contractor. Such record shall be open for inspection by the Purchaser.
- 4.72.7** The consumable and other supplies likely to deteriorate due to storage must be thoroughly protected and stored in a suitable manner to prevent damage or deterioration in quality by storage.
- 4.72.8** All the materials stored in the open or dusty location must be covered with suitable weather proof and flame proof covering material wherever applicable.
- 4.72.9** The Contractor shall be responsible for making suitable indoor storage facilities to store all equipment, which require indoor storage. Normally all the electrical equipment, such control panels, generators, exciters and consumable like electrodes, lubricants, etc. shall be stored in the closed storage space. The Purchaser, in addition, may direct the Contractor to move certain other materials, which in his opinion will require indoor storage, to indoor storage areas, which the Contractor shall strictly comply with.
- 4.72.10** It shall be responsibility of the Contractor to provide watch and ward on all the locations till the plant is taken over by the Purchaser.
- 4.73 CONTRACTOR'S MATERIAL BROUGHT ON THE SITE.**
- 4.73.1** The Contractor shall bring to site all equipment, components, parts, materials, , tools and tackle for the purpose of the works under intimation to the Purchaser. All such goods shall, from the time of their being brought, vest in the Purchaser, but may not on any account be removed or taken away by the Contractor or his sub-Contractors without the written permission of the Purchaser. The Contractor shall nevertheless be solely liable and responsible for any loss or destruction thereof and damage thereto.
- 4.73.2** The Purchaser has a lien on such goods for any sum or sums, which may at any time be due or owing to Purchaser by the Contractor, under, in respect of or by reasons of the contract. After giving a fifteen (15) day's notice in writing of his intention to do so, the Purchaser shall be at liberty to sell and dispose of any such goods in such a manner as he shall think fit including public auction or private treaty and to apply the proceeds in or towards the satisfaction of such sum or sums due as aforesaid.
- 4.73.3** After the completion of the works, the Contractor shall remove the material such as erection tools & tackles, equipment parts etc. from the site under the direction of the Purchaser and with the written permission of the Purchaser. If the Contractor fails to remove such materials, within

(15) fifteen days of issue of a notice by the Purchaser to do so, then the Purchaser shall have the liberty to dispose of such materials and credit the proceeds thereof to the account of the Contractor.

4.74 PROTECTIVE GUARDS.

Suitable guards shall be provided for protection of personnel on all exposed rotating and/or moving machine parts. All such guards with necessary spaces and accessories shall be designed for easy installation and removal for maintenance purposes.

4.75 NOISE AND VIBRATIONS.

The equipment supplied and erected by the tenderer will comply with the best design and erection practice and its working shall be within permissible noise and vibration levels. The vibration shall not exceed the limits specified in the relevant standard of American Hydraulic Institution or B.S. (British Standards).

4.76 EQUIPMENT BASES.

A cast iron or welded steel base plate shall be provided for all equipment, which is to be installed on a concrete base unless otherwise agreed to by the Purchaser. Each base plate shall support the unit and its drive assembly and shall be of a neat design with pedestal anchoring the unit.

4.77 RATING PLATES, NAME PLATES AND LABELS.

Each main and auxiliary item of each equipments is to have permanently attached to it in a conspicuous position, a rating plate of non-corrosive material upon which is to be engraved an identifying manufacturer's name, equipment, type or serial number, together with details of the loading conditions under which the equipments in question has been designed to operate and such diagram plates as may be required by the Purchaser.

4.78 LUBRICANTS LEVEL INDICATORS.

Equipment shall be lubricated by systems suitable for duties of the equipment. Lubricant level indicators wherever provided shall be furnished and marked to indicate proper levels under both, stand still and operating conditions.

4.79 OPERATION AND MAINTENANCE INSTRUCTIONS.

The Contractor shall furnish to the Purchaser on or before the delivery of the plant to the site store, the operation and maintenance instructions, erection manual, instructions for conservation of material stored at site together with the detailed drawings of spares and units and other sketches in sufficient details to enable the Purchaser staff to operate the plant in a smooth and trouble free manner and to maintain, dismantle, reassemble and adjust all the parts or units. The Contractor shall also furnish the maintenance schedule for preventative maintenance of plant. The plant shall not be considered as taken over by Purchaser until the operation and maintenance instructions have been supplied to the Purchaser.

4.80 MAINTENANCE TOOLS AND TACKLES.

The Contractor shall supply with the equipment two complete sets of all special tools and tackles for the erection, assembly, disassembly and maintenance of the equipment. However, these tools and tackle shall be separately packed and brought on to site.

4.81 ROLE AND RESPONSIBILITY:

It shall be full responsibility of the Contractor to exhibit excellent management and to make proper coordination in between the Electrical and mechanical activities so that the work under this contract will be completed as per stipulated completion period. As the completion period is essence of this contract.

4.82 DESIGNATED PROJECT CONSULTANT.

Purchaser has employed **Diwan Khadilkar Consultants Pvt. Ltd., Kolhapur** as consultant for design and execution aspect of the project. Address of the Consultant is as follows:-

“Diwan Khadilkar Consultants Pvt. Ltd.; 221B/1A, E-ward, Center One, Tarabai Park, Kolhapur-416003. Tel-+91-231-2666422, Email: dkahydro@gmail.com, sby@dkahydro.com Web - www.dkahydro.com”

4.83 SERVICES OF THE EXPERTS AFTER WARRANTY PERIOD

The Contractor shall have to Depute/provide Services of the Experts such as Engineers, Supervisors, Artisans or any other skilled staff within 48 Hrs. to the site on receipt of the intimation of the fault of particular equipment by the purchaser. Such services are to be rendered by the Contractor on chargeable basis after completion of Warranty period for next four(4) consecutive years. Rates shall be inclusive of travelling, lodging and boarding charges and any other taxes etc. which shall be firm for four(4) years.

4.84 PRICE VARIATION

No Price Variation is applicable during Currency period of Contract and for all purposes prices shall be firm.

4.85 TERMS OF PAYMENT.

10% advance of the overall contract amount will be paid against furnishing irrevocable Bank Guarantee of equivalent amount issued by any Bank of Repute approved by the Purchaser the bank guarantee for the same can be released after recovery of advance payment. The purchaser reserves the right to verify the Bank Guarantee issued by the concerned bank.

The payment will be released generally within 20 days from the date of receipt of RA bill duly appeared proof & documents with custom duty (as required), excise duty & other taxes paid by the EPC contractor along with measurement book duly signed by authorized Engineer in charge along with shipping list, shop test reports certified by the Inspection authority of GMEPL, Ratnagiri as per Price break up given by contractor and approved by the Purchaser in **Annexure No. VII** as follows.

- 10% - Advance payment
- 50% - Equipment arrival at site
- 30% - Erection of Equipment
- 05% - Successful commissioning & commercial operation of unit
- 05% - Six month O&M successfully

The 10 % advance payment will be recovered through running bill so that 100% advance payment is adjusted by the time 90% work is completed.

4.86 PURCHASER'S RESPONSIBILITY AND CONTRACTOR'S RESPONSIBILITY

4.86.1 Purchaser's Responsibility :-

1. To take various clearances/permissions during execution of contract.
2. Coordination between GoM authorities, civil contractor, State Electricity Board in case of any dispute.
3. To make available measurement book for recording quantity of work executed.
4. To make available space for Execution of Electro Mechanical Equipment.
5. Purchaser will make available space for storage of Electro Mechanical Equipment & site office.
6. Civil contractor of power station building, Tail race channel, Draft Tube gate leveling of surrounding area as all connected civil engineering work will be responsibility of purchaser.
7. To make available water up to BF valve after clearances from contractor for completing Electro Mechanical work for commissioning of Power plant.

4.86.2 General guide lines, Responsibility of Contractor & Philosophy of scope of the work of Gdnadi Hydro Electro Project (1X1800 KW+10%COL) for the tenderer are as follows:-

The tenderer before entering in to price bid competition; it is presumed that EPC contractor is well acquainted with the site work which is Turnkey for water to wire for all Electro Mechanical Equipments required to put into commercial operation of **GADNADI HEP (1X1800 KW+10% COL)**. Tenderer shall visit site & get acquainted with present status of Project, land available with Gadre Marine Export Pvt Ltd, Ratnagiri, additional land required during erection, testing & commissioning of project which in scope of tenderer/EPC contractor. Tenderer shall furnish certificate of assurance for visit to site in the form as given.

The successful tenderer now called as EPC contractor shall complete in all respects the Turnkey work of **Gdnadi Hydro Electric Project** within 12 month commissioning of entire project & 6 month commercial operation of the plant for **GADRE MARINE EXPORT PVT LTD, RATNAGIRI**.

EPC Contractor has to

1. To get acquainted with site conditions
2. To design & supply all interfaces of various equipments involved in this project.

3. Proper coordination between purchaser, purchaser's consultant, civil contractor and Govt. authority where ever required.
4. To supply all equipment in proper package, proper storage, Insurance.
5. To carry out cleaning, oiling, greasing before taking up Erection.
6. To clean daily working space, remove packaging material. Store in proper place to keep environment clean.
7. To employ qualified Engineer, Technician at proper time.
8. To provide proper safety devices, helmets, safety belts for safety of contractor's persons.
9. To furnish biodata of various personnel to the purchaser before taking up of entire work.
10. To keep the sets of working/contract drawing & documents at the site during the contract period.
11. To arrange all Tools Tackles & consumable for testing for commissioning & 6 month O&M of Power station.
12. To provide medical Aid to contractor staffs.
13. To provide conveyance to site for contractor staffs.
14. To keep First Aid box at Service bay, Power House & working places.
15. To paint all the equipments/piping/ladder Racking with primary coat & painting as per IS code practices.
16. To arrange oil filtration plants, testing kits at proper time.
17. Purchaser will provide 1 point of electrical connection further onwards your responsibility. The recurring bills shall be paid by the contractor. A 2000 Sqm leveled ground shall be given by Purchaser. One tap for drinking water shall be provided by Purchaser.
18. To provide Bulk head, closing of manhole safety railing, cat walk where ever necessary during EPC & OM of power station.
19. To provide safety instruction visible from distance in power station for staff & visitors
20. To provide siren with loud sound in power station to operate on 230 Volt AC 50 Hz for warning to working staff in case of emergency.
21. To arrange high voltage testing devices/water flow measurement calibration devices.
22. To keep daily programme, Equipment storage record with in flow as well as outgoing with date for erection.
23. To furnish weekly progress report to purchaser & compliance of remarks raised by the purchaser.
24. To provide proper Earthing to all testing Equipment
25. Still photography & video photography of major activities of EPC work & to provide two sets of all such photographs & videos etc to purchaser.

26. To establish, storage facility, site office, watch & ward & communication facility with Inter net before taking up EPC work.
27. To co-ordinate with state Electricity Board Authority during operation & maintenance for 6 months.
28. Dismantling of defective equipment and then its erection after rectification including transportation, loading unloading at manufacturers works will have to be arranged by the contractor at his cost, No extra payment will be made on this account.

4.87 ERECTION, TESTING AND COMMISSIONING

4.87.1 APPLICATION

The following shall supplement the conditions already contained in General Conditions of Contract, Special conditions of contract and the other parts of these specifications and documents and shall govern the scope of contract related to the erection, testing and commissioning at site, supervision up to putting of units in commercial use and operation & maintenance for 6 months period of all the equipment covered under volume II. Technical Specification included in the contract.

Scope of services after receipt of plant & equipment at site in respect of Erection, Testing and Commissioning etc. up to putting into commercial use of generating Plant & Equipment to be supplied under the contract and 6 month operation & maintenance period.

1. Verification of equipment delivered at site within 2 weeks and lodging of insurance claim if any for loss/shortage/damage etc within time stipulated in insurance policy terms & conditions.
2. Handling, loading, transport, unloading of consignments/packages at site from storage sheds/yards at project site to the place of installation of equipment.
3. Trail assembly, erection, testing and putting into operation the entire turbine-generating equipment of single unit (1x1800kW+10%COL) along with auxiliaries, switchyard equipment and associated equipment covered under supply portion of contract.
4. Providing supervisory services during the trial operation of the plant for SIX operating months after successful commissioning of the plant and to carry out any maintenance work required during the trial period : and
5. Provide services for post commissioning inspection of the equipment before the expiry of warranty period and also to carry out the required rectification/repairs/modifications etc.
6. The limit of erection work in power house on upstream side of turbine shall be to erect and weld the penstock piece with the pipe line laid by GoMWRD, including its edge preparation welding testing etc.
7. The following typical works which are parts of total erection work are deemed to have been included in the erection charges.

8. Embedment in foundation of various equipment.
9. Modification to the equipment to suit the site erection condition.
10. Rectification/replacement including the dismantling and re-erection of the equipment in the event of damage/theft etc.
11. Cleaning of equipment including shot blasting, descaling, flushing, degreasing before taking up erection.
12. Cleaning of foundation pockets, block outs and such other opening prior to erection of respective equipment.
13. Slings, handling of equipment during erection work.
14. Arranging and providing all the tools, tackles measuring and testing instruments, platforms, scaffolding, etc, required during erection, testing before commissioning, commissioning and trial operations during conductance of field acceptance tests on turbine and generator and other equipment to ascertain guaranteed performance and during post commissioning inspection and rectification of equipment within guaranteed period.
15. The spares handed over to purchaser shall be use during the erection of machine.
16. Erection of oil, air and water pipe lines including
 - a) Trial assembly and tack welding.
 - b) Full welding.
 - c) Hydraulic testing.
 - d) Inside cleaning by wire brushes where possible or by sand cleaning.
 - e) Acid cleaning (for oil piping).
 - f) Neutralizing.
 - g) Oil flushing of assembly (for oil Piping)
 - h) Dismantling if required.
 - i) Final assembly in position.
17. Providing supports and clamping arrangement for all air, oil & water piping, conduits, cabling, wiring.
18. Providing adequate quantity of paints and carry out all the painting of equipment after erection.
19. Supply of consumable such as welding electrodes, oxygen, acetylene gas, grease of all kinds. Lubricants, petrol, cotton waste, kerosene, diesel, synthetic oil, dye penetrants, wooden planks, oil stones, tools bits, grinding discs, emery paper, insulation materials, adhesives, acids and chemicals of all kinds, cotton and asbestos cloth, plastic sheets, rubber mats, M.S/Stainless steel packing supports, temporary jigs, nuts, bolts etc. in adequate quantity required for erection, testing commissioning, trial operation, post commissioning inspection.

- 20. Arrange dewatering of work area after commencement of erection work.
- 21. Terminal connection preparation including cable gland, lugs, ferrules etc. for the control and power cables to be connected to various equipment and panels.etc. Covered under the scope of supply. Unless otherwise mentioned in the specification the cables up to the respective equipment/panel will be procured and laid by the purchaser.
- 22. Physical connections of cables in all panels' equipment/devices etc. included in scope of supply of contract.

4.87.2 ADVANCE INTIMATION TO CONTRACTOR AND SUPPLIER ABOUT READINESS OF SITE.

The Purchaser will give an advance intimation of 8 weeks to the Contractor/Supplier prior to the readiness of work site for generating unit to start the work. This date of readiness of site for unit shall be reckoned as reference date for counting the completion period for unit.

Completion period for the Erection, Testing, and Commissioning and putting in use the Generating Plant Equipment along with operation & maintenance period.

The completion period for the erection testing and commissioning of generating unit reckoned from the date of notification of award shall be as below:

<i>Particulars.</i>	<i>Completion period from notification of Award</i>	<i>Completion date</i>
T/G set	10 months total in stages	
Transformer	10 months	
Switchyard Equip.	10 months	
Auxiliaries, Misc, Panels etc.	8 months	

The deliveries of the goods shall be suitable for above referred completion dates for Equip/units and the schedule of key dates of civil construction works as indicated in the contract.

The total erection period the unit from earth mat to commissioning shall be inclusive of 10 months period of civil works including concreting of embedded parts.

Supplier shall submit the detailed erection network showing all activities and period with monitory outflow.

- 1 Delivery schedule of equipment
- 2 Schedule of key dates.
- 3 Availability of space on service bay and how the supplier intends to make use of space for various assembly activities.
- 4 Erection periods for related equipment of turbine and generator, auxiliaries and piping's, other equipment covered in scope of contract.
- 5 Parallel working in switchyard, control room etc. with civil construction work

This will be jointly reviewed with the Purchaser considering interface key dates for civil construction work and mutually agreed erection network programme would be evolved for contractual purpose.

In case the civil construction schedule affects the key dates and erection programme, the completion dates shall be accordingly evolved on mutual agreement with the Purchaser.

Supplier shall submit before start of site works, detailed erection schedule for each subassembly giving all activities with duration, manpower to be deployed, tools & tackles required etc. along with write up explaining in detail methodology of erection testing & commissioning.

4.87.3 ACCELERATION OF WORK

In the judgment of Purchaser if it becomes necessary at any time to accelerate the work, the Supplier/Contractor when ordered and directed by the Purchaser shall cease the work at any particular point and transfer his own men to such other points and execute such portion of his work as may be required to enable others to hasten and properly engage and carry on their work as directed by the Purchaser. Under such condition if the acceleration of work puts any additional financial burden on the supplier then such additional financial burden on the supplier then such acceleration of work shall be carried out at mutually agreed price before its starting.

When due to reasons solely attributable to Purchaser the completion schedule for the work is getting delayed then the Contractor shall when ordered in writing by the Purchaser, accelerate his work by putting in extra personnel and working beyond normal working hours at extra price which shall be mutually agreed before its starting.

Should the delay in completion schedule is due to reasons attributable to the Contractor/Supplier he shall accelerate his work by putting in extra personnel and working beyond normal working hours , without any extra price to the Purchaser.

When the work covered by this contract is being carried out by the Contractor/Supplier to suit completion schedule and the purchaser desires to get the remaining work to be carried out by completion period, the supplier when ordered in writing by the purchaser shall accelerate his work by putting in extra personnel and working beyond normal working hours at extra price which shall be mutually agreed before its starting.

4.87.4 ERECTION

Prior to erection copies of instruction manual for site assembly installation erection of plant & equipments along with flow chart etc. shall be furnished to the purchaser. Proper sequence and procedure of working assembly, installation and erection shall be followed carefully

4.87.5 TO COMPLETE THE WORK TIMELY, ACCURATELY AND PRECISELY.

- 1 Handling of parts, packages with care according to the markings. Protection of the important parts with suitable covers.
- 2 Cleaning of parts, machine faces with rust proof solvents, volatile oil or by using cloth.

- 3 While lifting, shifting or putting down, parts or components should not damage. For avoiding damages wooden block cushions shall be used.
- 4 At working sites, all safety measures & rules shall be followed to avoid accidents.
- 5 Before concreting, stator coils, rotor coils, stampings, piping's, equipment etc. shall be covered properly to prevent from exposure to rains, wind, dust, fresh concrete etc. No feet or tools shall be kept on delicate parts such as coils, leads, stampings, gauges etc.
- 6 Tolerances shall be within prescribed limits.
- 7 Cut edges of pipes, plate supports etc. shall be finished by grinding machines.
- 8 Surfaces to weld shall be thoroughly cleaned to remove oil, rust, dust or scale.
- 9 Welding shall be by gas or arc welded. Welding rod shall be compatible with parent to be welded material. Welding faces must be dry. Separate earthing arrangement shall be made for welding work.
- 10 Welder must be qualified.
- 11 On completion of the welding wherever stipulated by the specifications hydraulic test shall be conducted with the pressure as stipulated in relevant I.S.
- 12 Scale and dust inside the pipe shall be cleaned by wire brush, or tube cleaner and acid pickled and oil flushed where ever needed.
- 13 Records of various measurements, treatments, observations readings etc. shall be maintained and furnished to Purchaser.
- 14 Proper tightening spanners, wrenches etc. shall be used for tightening studs, bolts & nuts etc. & appropriate standard lightning torques as per specification shall be applied.
- 15 Painting shall be executed according to the specification. After finishing of the job or part of the job or works re-painting shall be applied where ever peeled off or spoiled.
- 16 Foundation bolts shall be well covered & kept at prescribed mounting height during concreting process.
- 17 No alterations are practicable after concreting on the embedded parts, piping, air ducts, openings, base plates etc. and hence shall be concreted after perfect confirmation of the relative positions, levels, height etc. as per drawings. Higher grade special quality cement mixture (viz. not-shrink or shrink-comp etc.) shall be used where ever required.
- 18 During installation/erection of equipment, necessary measuring instruments, valves, level gauges, level switches, limit switches, thermometers/temperature detectors, space heaters, relays etc. duly calibrated shall be mounted properly.
- 19 After installation of every part/equipment checking and cleaning of entire area shall be carried out for dust debris and residual materials and left over.
- 20 Low voltage hand lamps shall be used during working at site.
- 21 Daily cleaning and removal of scrap material from site shall be carried out.

- 22 Identity cards shall be issued by the Contractor for all workers, supervisors and technicians at site.
- 23 Sufficient fire extinguishers shall be kept ready at site during working at site.
- 24 Sufficient security arrangements shall be made at site including Package sheds, Switchyard, and power house complex.
- 25 Contractor shall arrange for fixing and removal of penstock bulk-heads as and when needed. Necessary De-watering if required will have to be made by Contractor. Thorough inspection of water conductor system, Intake structure, & stop log gates with their lifting arrangement before pressuring shall be carried out by the Contractor. If needed Divers shall be engaged.
- 26 Proper locking of embedded parts such as D.T., liners, housings, etc. shall be done before start of concrete and position is watched during concrete so as to avoid deformations.
- 27 Utmost cleanliness shall be maintained at the time of erection of bearings, stator, rotor etc. Cleanliness shall also be maintained at the time of centering, alignment and rotor balancing etc.
- 28 All the area sufficiently larger and safe shall be cordoned during H.V. Test to avoid accidents.
- 29 All consumable materials such as lubrication oil, grease, emery papers, cotton wastes, paints etc. required at the time of erection, commissioning and operations, maintenance shall be arranged by the Contractor.

4.87.6 OPERATION & MAINTENANCE.

After 72 hrs continuous run & commissioning the project as will be directed by Purchaser, the Contractor shall carry on operation & maintenance and repairs for the period of six month after the completion of 72 hrs continuous run.

O&M for the period of six month shall be carried out after the commissioning & 72 hrs continuous run of entire plant as per availability of water in the reservoir and according release programme decided by Purchaser and GoMWRD. Six month shall be completed after commissioning of entire plant. During this six month period if O&M cannot be carried out due to non-availability of water, decision of further extension shall be mutually decided.

- 1) The Contractor shall prepare operation schedule, arrange his skilled persons and Engineers in shift duties round the clock. The operation responsibility will fully be with Contractor. The Contractor shall co-operate with GOMWRD, MAHADISCOM and Purchaser for O&M. At least one Engineer having Degree/Diploma in Electrical Engineering shall be posted in each shift. Contractor shall bear the charges towards upkeep and maintenance of drinking water and toilet facilities established by Purchaser for his shift personals. Purchaser's personal would supervise frequently the operation of the machines. In case of emergencies if the machine is operated by the Purchaser, he will no way be responsible for the same. Entire responsibility rests with the Contractor during six months O&M period. During such

operations men and machineries shall be provided by the Contractor free of cost to Purchaser.

- 2) Maintenance schedule as provided by Manufacturer of each Machine and Auxiliaries for daily, weekly, forth nightly, monthly, quarterly shall be followed by the Contractor. Similarly preservation maintenance for long shut down of the machine shall be followed. The supervisor carrying out Electrical maintenance shall be with B and C Electrical Supervisory License Holder. Men, materials, tools and plants required for maintenance shall be provided free of cost by the Contractor. For executing maintenance permit system should be strictly followed. Permits shall be issued by the Shift In-Charge on duty. All day to day and time to time activities shall be reported and perused from the Purchaser.

Contractor shall take utmost care that the generation is not lost due to unwanted or deferrable maintenance. If the maintenance is unduly prolonged to result in shut down for more than 24 hours when generation was possible the Contractor is liable for penal charges at the rate of sale of energy stipulated by MAHADISCOM at that time.

- 3) Any repair needed and or essential shall be carried out the Contractor at his cost. For repairs the permit system should be strictly followed. Detailed records of cause of fault, damages, rectifications/repairs carried out shall be maintained and submitted to the Purchaser at once. As far as possible before carrying out the repairs/rectifications the damages shall be got inspected by the Purchaser. Depending on volume and gravity of the damages the decision shall be taken in consultation with Purchaser for repairs. Purchaser's decision shall be final. Maintenance personals shall be provided withal safety equipments as per rules.
- 4) Detailed loggings and maintenance/repairs/rectification records shall be got vetted from the Purchaser. Drawback
- 5) There will not be any claim of the Contractor on Electricity generation generated from plant.
- 6) The Contractor shall remove the entire drawback from the Equipment/Machine/Plant within the six month O&M period.
- 7) In case of maintenance and repairs the O&M period spills over the period of six months, the Contractor's liability will not seize over.



GADRE MARINE EXPORT PVT LTD

GADNADI HYDRO ELECTRIC PROJECT
1 x 1800 KW+ 10%COL

SECTION - V

FORMS



SECTION - V
PRICE BID FORM FOR TURNKEY WORK

(To be submitted in Envelope No - 2)

NAME OF WORK :- Design, Manufacture, Test at Shop, Supply at site including Transport, handling, Insurance, loading/unloading, Installation, Storage at site, watch & ward transportation from storage to site, Putting to Operation & Supervision, Erection, Testing, Commissioning of Turbine/Generator sets along with all associated switch gear, protections & auxiliary equipments and six months commercial operation and maintenance after successful commissioning of ***Gadnadi Hydro Electric Project (1x1.80 MW+10%COL)*** on Turnkey basis.

Sir,

I/we hereby submit price bid for **Turnkey work** for supply, Erection testing & commissioning & 6 months O&M of ***Gadnadi Hydro Electric Project (1x1.80 MW+10%COL)*** in Ratnagiri District, Maharashtra state as per scope of work & in line with Name of work as above.

Our Total bid for this work is

(In words) Rs.

(In Figure) Rs.

I/We have furnished Earnest Money Deposit (EMD) in the form of irrevocable bank guarantee from Bank of Branch for an amount of Rs. 6,30,000/- (Rs. Six Lakhs Thirty thousand only) The Bank has its branch in Ratnagiri, Maharashtra.

Should this Bid be accepted I/we do hereby agree & bind myself/ourselves to abide by & fulfill all the condition annexed in this tender document with amendments if any and/or in default thereof to forfeit and pay to ***Gadre Marine Export Pvt Ltd, Ratnagiri*** the penalties or sums of money mentioned in the same conditions.

Seal

Signature of Authorised Representative with Address

Date

Signature of Witness with Address

**FORM OF TENDER FORWARDING LETTER**

(To be submitted in Envelope No - 1)

To,

Gadre Marine Export Pvt Ltd,

Plot No. FP-1, Mirjole Block,

MIDC, Ratnagiri-415639, Maharashtra

Subject :- Design, Manufacture, Test at Shop, Supply at site including Transport, handling, loading/unloading, Installation, Putting to Operation Supervision during Erection, Testing, Commissioning of Turbine/Generator sets along with all E&M equipment required for Hydel power station and switchyard for **Gadnadi Hydro Electric Project:**

Ref: - Tender No.GMEPL-01/2025-26

Dear Sir,

1. Having examined the Tender Document, amendments date _____ the receipt of which is hereby duly acknowledged we the undersigned undertake Design, Manufacture, Test at Shop, Supply at site including Transport, handling, loading/unloading, Installation, Putting to Operation, Supervision during Erection, Testing, Commissioning of Turbine/Generator sets along with all E&M equipment required for Hydel power station and switchyard for **Gadnadi Hydro Electric Project**
2. We, the undersigned hereby bid in accordance with the said instruction, conditions of contract, specifications, schedule and drawings and information provided in bid submitted by us is correct and true.
3. We undertake, if our tender is accepted to commence work and to complete the work for the items specified in the contract reckoned from the date of "Acceptance of Tender" as communicated by you. Further, we undertake to provide a "Performance Security" for an amount of 10 % (Ten Percent) of the total contract price.
4. We agree to abide by our tender for period of 120 days fixed from deadline for submission of tender and in default, agree to forfeit to **Gadre Marine Export Pvt Ltd, Ratnagiri** the amount of ' Earnest Money ' furnished with the tender.
5. Until a formal contract is prepared and executed, this tender together with your written acceptance thereof and your notification of award constitute a binding contract between us. Earnest Money for an amount Rs. 6.30 Lakh in favour of Purchaser enclosed herewith.

Yours faithfully,

Signature _____

Designation _____

For and on behalf of (Name of Company)



POWER OF ATTORNEY

(To be submitted in Envelope No. 1)

I/We hereby certify that Mr./Ms. _____ is authorized to sign the bid documents and represent the Firm/Company to do all things necessary for the incidental to submit, negotiate and finalize the bid.

I/We hereby agree to confirm and ratify all and whatsoever the said attorney shall do or cause to be done in the bidding process.

(SEAL)

Authorized Signatory



SOLVENCY/NET WORTH CERTIFICATE

(To be submitted in Envelope No.1)

This is to certify that, to the best of our knowledge and information M/s. _____ (Company Name),
having their registered Office at _____ (Address of Company) _____ is a customer of our Bank,
having branch at _____, who is respectable and can be treated as good up-to a sum of
Rs. 6,30,00,000/- (Rs. Six Crores Thirty Lakhs only)

This Certificate is issued at the specific request of M/s. _____

PLACE:-

DATE: -

SIGNATURE OF GENERAL MANAGER,
Name of Bank & Branch



LETTER OF AUTHORITY FROM MANUFACTURER
(To be submitted in Envelope No.1)

To,
Gadre Marine Export Pvt Ltd,
Plot No. FP-1, Mirjole Block,
MIDC, Ratnagiri-415639, Maharashtra

Dear Sir,

We, _____ (Name of the Manufacturer) a manufacturer duly organized under the laws of _____ (Name of country) and having its principal place of business at _____ (Address of the manufacturer) hereby make, constitute and appoint _____ (Name of Company) a company duly organized under the laws of _____ (Name of the country) & having its principal place of business at _____ (Address of company) to be our true and lawful attorney to do the following acts and deeds.

1. To represent us to negotiate and conclude the contract on our behalf with you against document no. **GMEPL-01/2025-26**. To represent and bind us in the Republic of India for supply of goods and services proposed which we manufacture or produce, when tender is awarded to us.
2. That as a manufacturer we bind ourselves as co - maker of the tender and are jointly and severally responsible to each other and to the purchaser for the compliance of the said tendered work.
3. That we hereby give and grant to the said _____ (Name of the company) full power and authority to do and perform all/ every act and things, whatsoever requisite, necessary and proper to be done in the premises, as fully to all intents and revocation, hereby ratifying and confirming all that _____ (Name of the Company) of its duly authorized representatives shall lawfully do or cause to be done by virtue hereof.

In testimony thereof we have hereto signed this document on _____

(Seal of the Company)

(Name of Manufacturing Company)

(Signature)

(Name and Designation)

Note: - Letter of Authority shall be submitted from principal manufacturer of Turbine and Generator only.



DECLARATION OF THE CONTRACTOR

(To be submitted in Envelope No. 1)

- 1.0 I/We _____ Contractor(s), hereby undertake that I/We shall pay the labourers engaged on the work, wages as per Minimum Wages Act. 1948 and amendments thereto applicable to the zone in which work lies and act accordingly. I/We also undertake to abide by the various laws in force and extend necessary facilities and amenities to the staff and workers employed by me/us.

- 2.0 I/We hereby declare that I/We have made myself/ourselves thoroughly conversant with the local conditions regarding all materials and labour on which I/We have tendered my/our rates for this work. The specifications of this work have been carefully studied and understood by me/us before submitting this tender.

- 3.0 I/We hereby undertake to indemnify and hereby indemnify the Purchaser against all liabilities arising out of application of all labour viz. The minimum wages act, the workman's compensations act, the payment of wages act, ESIS and PF act and all other applicable Laws with reference to labour engaged on subject Work.

Signature of the Contractor



BANK GUARANTEE FOR SECURITY DEPOSIT CUM PERFORMANCE GUARANTEE BOND

(To be submitted on stamp paper after award of Contract)

To,

Gadre Marine Export Pvt Ltd,

Plot No. FP-1, Mirjole Block,

MIDC, Ratnagiri-415639, Maharashtra

In consideration of the **Gadre Marine Export Pvt Ltd, Ratnagiri** exercising the executive power of the Company (hereinafter referred to as "Purchaser") having agreed and notified the award of Design, Manufacture, Test at Shop, Supply at site including Transport, handling, loading/unloading, installation, Putting to Operation, Supervision during Erection, Testing, Commissioning of Turbine/Generator sets along with all E&M equipment required for Hydel Power Station and Switchyard for **Gadnadi Hydro Electric Project** to_____

a company/Supplier/Contractor/ Manufacturer/society/partnership firm carrying on business of Hydro Power Stations & to Act/Shri _____Sole Director/proprietor of registered office at _____(hereinafter referred to as

"the Contractor" which expression shall unless repugnant to the subject or context include his heirs, executors, administrators and assigns/its successors and assigns) on the terms and conditions contained in the tender submitted by the Contractor/s under his/its/their letter No. ____

_____ dated the _____day of _____ 2026 and accepted by the Purchaser by its letter No. _____ dated the _____ day of _____ 2027 addressed to the

contractor/s (hereinafter referred to as "the said Agreement") providing, inter alia, that any scheduled Bank in India of a sum of Rupees _____(Rupees _____ only) as security for due observance and

performance by the contractor/s of the terms and conditions of the said Agreement, the contractor/s hereby furnishes to the Purchaser a Bank Guarantee from a Nationalised/Schedule Bank in India in like amount in the manner hereinafter contained.

1. We the undersigned _____incorporated under the _____act and having one of our local office at _____do hereby guarantee to the Purchaser,

- a. Due performance and observance by the contractor/s of all the terms and performance by the Contractor/s including the covenant by the Contractor/s to duly carry out and make good the defect in the said instruments which may be found during the warranty period on account of faulty materials or parts used in the said instruments of defective workmanship and/or any deviation from the approved design or any cause whatsoever.



- b. Due and satisfactory performance of the said instruments including maintenance and repairs thereof during the warranty period of **12** months from the date of project commissioning.
 - c. due and punctual payment by the Contractor/s to the purchaser of all sums of money, losses, damages, costs, charges, penalties and expenses that may become due or payable to the purchaser by or from the Contractor/s by reason of or in consequence of any breach, non-performance or default by the Contractor/s of the terms, covenants and conditions of the said Agreement.
2. And we do hereby agree and undertake that we shall pay to the purchaser forthwith on demand an amount not exceeding Rs. _____ (Rupees _____ Only) or such lesser sum as may be demanded by the purchaser from us and by way of indemnity on account of any loss or damages caused to or suffered by the purchaser by reason or any breach, non-performance or default by the Contractor/s of the terms, covenants and conditions contained in the said Agreement including the aforesaid covenant for satisfactory performance of the said instruments, repairing and making good any part of the said instrument/s which is found to be defective during the Warranty period and/or of the due and punctual payment by the Contractor/s to the Purchaser of all sums of money, losses, damages, costs, charges and expenses that may become due and payable by the Contractor/s to the purchaser under the said Agreement.
3. And we hereby further agree that:
- a. The demand made by the Purchaser (***Gadre Marine Export Pvt Ltd, Ratnagiri***) in the event of revocation of the BG amount will be binding on us and we shall not dispute our liability as to the amount or raise any objections on the ground that the Contractor/s has/have not committed any breach or default of the said terms and covenants and conditions of the said Agreement or any other ground whatsoever.
 - b. This guarantee shall be valid for the entire period during which the said Agreement is in operation including the warranty period specified for the said instruments.
 - c. The Guarantee shall continue to be enforceable till all the dues of the purchaser under or by the virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till _____ and on behalf of the Purchaser and the purchaser certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the Contractor/s and accordingly discharges the guarantee.
 - d. We shall not be released or discharged from the liability under this Guarantee by reason of :
 - 1) Any change in the constitution of the Bank or the Contractor/s.



- 2) Any arrangement made between the purchaser and the Contractor/s with/without our consent.
 - 3) Any forbearance or indulgence shown to the Contractor/s.
 - 4) Any variation in the terms, covenants or conditions contained in the said Agreement
 - 5) Any time given to the Contractor/s
 - 6) Any other conditions, or circumstances under any law under which a surety would be discharged.
- e. Our liability hereunder shall be joint and several with that of the Contractor/s as if we were the principal debtors in respect of the amount so ascertained as aforesaid and
- f. We shall not revoke this guarantee during its currency except with the previous consent in writing of the Purchaser PROVIDED ALWAYS that notwithstanding anything herein before contained, our liability under this Guarantee shall be limited to the said sum of Rs. _____ (Rupees. _____ only) and shall remain in force until the _____ day of _____ 2027 _____ we shall be discharged from all liability under this Guarantee thereafter.

IN WITNESS WHEREOF the common seal of _____ bank has been here in to affixed this _____ day of _____

The common seal of _____ Bank was pursuant to the resolution of its Board of Directors passed as its meeting duly convened.

and held on the _____ day of _____ hereto affixed in the presence of : _____ & _____ being respectively _____ & of the Bank who, in token thereof, have here to set their respective hands in the presence of

- 1) _____
- 2) _____



FORM OF BANK GUARANTEE FOR EARNEST MONEY

To be submitted in Envelope No.1
(To be furnished on a "Stamp Paper")

To,
Gadre Marine Export Pvt Ltd,
Plot No. FP-1, Mirjole Block,
MIDC, Ratnagiri-415639, Maharashtra

Whereas _____(Name of the tenderer) has submitted his tender No. **GMEPL-01/2025-26** dated _____ for the work of **Gadnadi Hydro Electric Project** of Design, Manufacture, Test at Shop, Supply at site including Transport, handling, loading/unloading, Installation, Putting to Operation, Supervision during Erection, Testing, Commissioning of Turbine/Generator sets along all E&M equipment required for Hydel Power Station and Switchyard for **Gadnadi Hydro Electric Project.**

(Name of the tender) KNOW ALL MEN BY these presents that we _____
(Name of Bank) having our registered office at _____
(Name of the place) are bound to _____(Name of the Purchaser) for a sum of Rs. _____(Amount in figure) Rs. _____
(Amount in words) for which a payment well and truly to be made to **Gadre Marine Export Pvt Ltd, Ratnagiri** herein after called as the "Purchaser" the bank binds itself, its successors and assigns by the said Bank this _____ day of _____ 2025.

1. The obligations of this guarantee as :

If the Tenderer withdraws his tender during the period of tender validity specified by the Tender on the Tender Form.

OR

If the Tenderer have been notified of the acceptance of his tender by the Purchaser during the period of Tender validity :

- a) Fails or refuses to execute the contract Forms, if required and/or
- b) Fails or refuses to furnish the performance security in accordance with the instructions to Tenderer :

We _____(Name of the Bank) under-take to pay to the purchaser the above amount upon receipt of his first written demand without any other demur and without the purchaser having to substantiate his demand.



2. We _____(Name of the Bank) undertake to pay to the Purchaser any money so demanded notwithstanding any dispute or disputes raised by the tenderer in any suit or proceeding pending before any Court of Tribunal relating thereto or liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the tenderer(s) shall have no claim against us for making such payment.

3. This guarantee will remain in full force upto and including one year from the date of deadline for submission i.e. upto _____ (date) in the first instance.

4. This guarantee shall be extended: if required. The demand, if any must be made before the date of expiry of first written or the extended date as may be applicable.

5. The guarantee will not be discharged due to the change in the constitution of the Bank on Contractor(s)/Supplier(s).

6. We _____ (Name of the Bank) lastly undertake not to revoke the guarantee during the currency specified period.

Date the _____ day of _____ for _____

Seal of the Bank.

(Name & Designation of the Signing authority.)



BANK GUARANTEE FOR ADVANCE PAYMENT

(To be submitted on stamp paper after award of contract)

To,
Gadre Marine Export Pvt Ltd,
Plot No. FP-1, Mirjole Block,
MIDC, Ratnagiri-415639, Maharashtra

Guarantee No.

Amount of Guarantee Rs.

Last date for lodgment of claim.

This Deed of guarantee executed by (Name of the bank) having its central office at _____ and amongst other the branch at _____ (hereinafter referred to as "the Bank") in favor of _____ (hereinafter referred to as "the Beneficiary") for an amount not exceeding Rs. _____ (Rupees _____) at the request of _____ (hereinafter referred to as the contractor/s.)

This Guarantee is issued subject to the condition that the liability of the Bank under this Guarantee is limited to a maximum of Rs. _____ (Rupees _____) and the Guarantee shall remain in full force upto _____ (Date of expiry) cannot be invoked otherwise than by a written demand or claim under this Guarantee served by the Bank on or before the _____ (Last date of Claim).

In consideration of the **Gadre Marine Export Pvt Ltd, Ratnagiri** (hereinafter called the "Purchaser") having accepted the tender of _____ (hereinafter called the "Contractor") for supply, install and set to operation of _____ and communicated the acceptance vide letter No _____

And whereas the terms of payment contained in the said letter of acceptance of the tender inter-alia provides as follows:

- 1) Advance payment to be made as per contract provisions amounting to 10% i.e. (Rs. _____ Lakhs) of the contract value against a Bank Guarantee for an equivalent amount in the approved form from a Nationalised/Schedule Bank to be furnished by the contractor.
- 2) AND WHEREAS before making such payment the contractor is required to furnish a Bank Guarantee for the amount equal to such payment AND WHEREAS the purchaser having agreed to pay to the contractor the advance as aforesaid on the Contractor's furnishing a Bank Guarantee for the amount of Rs. _____ (Rs. _____ only.)



3. In Consideration of above, we (Name & Address of Bank) _____
_____ hereby guarantee and agree to the event of the Contractor falling to supply the equipment in accordance with the contractual conditions to pay to the purchaser immediately on demand and without demur the said sum of Rs. _____ (Rupees _____ only) being the full amount of advance payment made by the purchaser as aforesaid & we do hereby further agree that the guarantee herein contained shall operate on and from the day on which the amount of Rs. _____ (Rupees _____ only) are advanced to the contractor. The guarantee shall remain in full force and effect during the period the said equipment is to be supplied till all consignments of the said equipment have been effected and all claims of the purchaser in respect of such delivery are satisfied or discharged.
4. And further more it is a condition of this guarantee that claims, if any, hereunder must be received by us in writing on or before the date.
5. And we do also agree that we shall not be discharged or released from this guarantee by any arrangement made between the Contractor and the Purchaser with or without our consent or by any alterations of the obligation under taken by the Contractor under the said agreement or any forbearance whether as to payment, time, performance or otherwise.
6. NOTWITHSTANDING anything herein above contained our liability under this guarantee is restricted to Rs. _____ (Rupees _____ only.) Our Guarantee shall remain in force and until and unless an action to enforce a claim under this guarantee is filed against us before _____ all rights of the purchaser shall be for effected and we shall be released and discharged from all liabilities.
7. And we lastly undertake not to revoke this guarantee during its currency except with the previous consent of the purchaser in writing.

Date :-

Place :-

**CONTRACT FORM**

(To be submitted after award of Contract)

THIS AGREEMENT made on _____ day of _____ 2026 _____ between M/s. _____
_____ (hereinafter referred to as 'Contractor') of one part and the _____
(hereinafter called the Purchaser) of the other part.

WHEREAS the Contractor has offered to Design, Manufacture, Test at Shop, Supply at site including Transport, handling, Insurance, loading/unloading, Installation, Storage at site watch & ward transportation from storage to site, Putting to Operation & Supervision, Erection, Testing, Commissioning of Turbine/Generator sets along with all associated switch gear, protections & auxiliary equipments and six months commercial operation and maintenance of **Gadnadi Hydro Electric Project (1X1.80MW+10%COL)** on Turnkey basis as detailed in the tender documents hereinafter called the "Work" mentioned, enumerated, or referred to in the conditions of the contract, specifications, schedules, drawing, covering letters and schedules of prices and further correspondence which for the purpose identification signed by _____ on behalf of the Contractor and on behalf of the Purchaser all of which are deemed to form this contract as though separately set out herein and are included in expression 'Contract' wherever herein used.

AND WHEREAS the purchaser has accepted the offer of the contractor for the provisions and the execution of the said work, for prices and upon the terms and conditions hereinafter mentioned in the contract documents.

NOW THIS AGREEMENT WITNESSETH AND IT is hereby agreed and declared as follows, that is to say, in consideration of the payment to be made to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Purchaser, his successors and assignees, that the Contractor shall and will duly complete supply and installation of the said works and shall do perform all other works and things in the contract mentioned or described which are implied therefrom or therein respectively or may be reasonably necessary for the completion of the said works within the times in the manner and subject to the terms, conditions and stipulations mentioned in the said Contract.

The Purchaser hereby covenants to pay the Contractor in consideration of the provisions of the works & services and the remedying of the defects therein, the contract price or such other sum as may become payable under the provisions of the contract at the time and in manner prescribed by the Contract.

IN WITNESS WHERE OF the parties hereto have caused this agreement to be executed in accordance with their respective law on the day and year first above written.



SIGNED SEALED AND DELIVER BY THE SAID;

FOR THE PURCHASER

In the presence of;

1) _____

2) _____

Place:

Date:

SIGNED SEALED AND DELIVER BY THE SAID;

FOR THE CONTRACTOR

In the presence of;

1) _____

2) _____

Place :

Date :



UNDERTAKING FOR PROVIDING SERVICES OF EXPERTS AFTER WARRANTY PERIOD

(To be submitted in Envelope No.2)

We _____ hereby Undertake to provide services of expert personnel of various equipment as and when called by Purchaser for four(4) consecutive years as per Clause No. 4.83 of Section-IV of Vol-I after completions of Warrantee Period.

Place: - -----

Date ...:- -----

Signature of Tenderer -----



CERTIFICATE FROM EPC CONTRACTOR

FOR

SITE VISIT GADNADI HYRO ELECTRIC PROJECT (Mandatory)

(To be submitted in Envelope No.1)

This is to certify that, We/I have visited site of ***Gadnadi Hydro Electric Project (1x1.8 MW+10%COL)*** near village-Kuchambe Tal.-Sangameshwar, Dist-Ratnagiri, Maharashtra, India. On (date) _____, we are well acquainted & aware with site conditions, availability of local labours, roads, water, Electricity, weather conditions, transportation and storage facility at site.

SEAL

DATE: -

SIGNATURE OF CONTRACTOR,



GADRE MARINE EXPORT PVT LTD

GADNADI HYDRO ELECTRIC PROJECT

1 x 1800 KW+ 10%COL

SECTION - VI

➤ ANNEXURES



SECTION - VI
ANNEXURE - I

DEPARTURE FROM TECHNICAL AND COMMERCIAL TERMS & CONDITIONS.

(To be submitted in Envelope No.1)

Item No.	Clause No.	Text as per Tender	Departure

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.



ANNEXURE - II

PERCENTAGE RATES OF GST

Sr. No.	Description of Item	CGST in Percentage	SGST in Percentage	IGST in Percentage

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.

ANNEXURE - III**LIST OF ACCEPTABLE MAKES FOR VARIOUS EQUIPMENTS**Standard Manufactures As acceptable to Owner.

- Bearings -- Zolnem, Germany, Rank, Germany.
- Control Panels -- ABB, Siemence, MM Engineers, Bajaj Fedtech, PCE
- Generator -- TDPS, WEG.
- Turbine -- Andritz, BFL,KBL, Flovel or having proven facility
- Governor -- Heinzmann Hydrotech Pvt. Ltd, Aims or proven indigeneous
- Gearbox -- Elecon, Triveni
- E.O.T. Crane -- Electromech, Pune, Century, Unique, Sahil Crane
- O.P.U. -- Rexroth/Parker
- LAVT, NG PANEL -- MM Engineers, HT Switch Gear, Lotus
- BFV -- B.Fouress, KBL, Andritz, Weg
- Protection and Systems -- ABB, Siemens
- 33KV CT's & PT's -- CGL, ITC
- Lightning Arresters -- Lampco, ELPRO Oblum
- Isolators -- Kiran, Danke
- Circuit Breakers -- ABB, Areva
- Control System -- ABB
- Transformer -- Power Engineers- Kolhapur, PETE Hammond,
- Cables -- Polycab
- Diesel Generator -- Kirloskar, Supernova, Ashok Leyland
- Battery & Charger -- Excide,

Bidder is free to quote any equivalent with technical justifications. Owner will have first priority for above list. "Equivalent or Reputed" word is not accepted.

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.

ANNEXURE - IV**SERVICES OF THE EXPERTS.**

**Rates for the Services of the Experts to be provided for Four (4)
consecutive years by the contractor after Warranty Period**

Sr. No.	Category.	Rate per man day.
1.	Engineer.	
2.	Supervisor	
3.	Electrician	
4.	Artisan	
5.	Fitter	
6.	Welder (X-Ray)	

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.



ANNEXURE - V
DETAILS OF BOUGHT OUT ITEMS
(To be submitted in Envelope No.1)
Please refer ANNEXURE III

Sr. No.	Description of Bought out items	Make	Name and Address of Manufacturer	Place of Testing

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.



ANNEXURE - VI

LIST OF TESTING EQUIPMENTS AVAILABLE WITH CONTRACTOR

To be submitted along with tender

Sr.No.	Description
1.	
2.	
3.	
4.	

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.

ANNEXTURE - VII

**BREAK UP OF CONTRACT PRICE
ELECTRICAL AND MECHANICAL WORKS.**

Sr. No.	Name of Activity	% Cost to be released	Cumulative % cost after completion of each activity.
<p>1 1.1</p>	<p align="center">TURBINE & GENERATOR PLANT</p> <p>Turbine:- Horizontal Francis type turbine of rated output not less than 1x1800 KW+10%COL for 46.810 meter design head with Governor and associated equipments complete with Turbine auxiliaries comprising of compressed air system, cooling water system, drainage and dewatering system, H.M.C., servomotor, oil and water piping, valves, strainer, bends, flow meter relay, etc. complete.</p> <p>Sub components of Turbine</p> <ul style="list-style-type: none"> ✚ Draft Tube-----1.0 % ✚ Scroll casing-----4.0 % ✚ Turbine parts-----20.0 % ✚ Governing System-----5.0 % ✚ Auxiliaries-----5.0 % <hr/> <p>✚ Total 35.0%</p>	<p align="center">35</p>	<p align="center">35</p>
<p>1.2</p>	<p align="center">Hydro Generator:-</p> <p>Horizontal shaft alternators of capacity 1x1800 KW+10%COL at 0.866 PF., 3.3 KV, 50 Hz, three phase suitable for coupling directly to the turbine complete with fully static excitation system, digital automatic voltage regulator with Generator auxiliaries comprising S.S.G. unit, Unit Control Board, CO2 fire extinguishers, H.S. Lubrication system, Line/neutral end cubicles, brake/jack system, railing & staircases, coolers, heaters, bus-duct etc. complete.</p> <p>Sub components of Generator</p> <ul style="list-style-type: none"> ✚ Rotor ----- 15.00 % ✚ Stator----- 15.00 % ✚ Excitation-----05.00 % ✚ Auxiliaries-----05.00 % <hr/> <p>✚ Total : 40.00 %</p>	<p align="center">40</p>	<p align="center">75</p>



1.3	Main Inlet Valve:- Butterfly type valve suitable diameter along with inlet pipe, outlet pipe, dismantling joint, servomotor, O. P. U. Control cabinet etc. complete. Mandatory spares & tools tackles for above items.	5	80
2.	3.3 KV SWITCHGEAR EQUIPMENTS 3.3 KV Switchgear comprising control & relay panels. 3.3 KV circuit breaker cubical 3.3 KV. Motor operated isolator. Draw out type P.T. 2 core $\frac{3.3 \text{ KV}}{\sqrt{3}} / \frac{110}{\sqrt{3}} / \frac{110 \text{ V}}{\sqrt{3}}$ ratio Metering & relay panel with protective relays annunciation facia. Panel for synchronizing. Mandatory Spares. Tools & Tackles.	5	85
3.	GENERATOR, TRANSFORMER FEEDER PROTECTION & SYNCHRONISING PANELS ALONG WITH MOSAIC CUM UNIT CONTROL BOARD. Generator Protection Panels, comprising Protection scheme, alarm facia, meter, complete wired & tested as per specification. Transformer panel comprising, Protection scheme, alarm facia meters complete wired & tested as per specification. Line protection cubicles for 11 KV lines comprising protection scheme alarm facia meters complete wired & tested. Synchronising Panels. Mandatory Spares.	10	95
5.	Transport, handling, loading, unloading at site, Installation, Putting to Operation and Supervision during Erection, Testing, Commissioning	5	100
	Total	100.00	100.00

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.

ANNEXURE - VIII**EVALUATION OF THE TENDERS ON ACCOUNT OF TECHNICAL PERFORMANCE DATA AND
GUARANTEES OF TURBINE & GENERATOR OFFERED****A. Evaluation of Turbine Bids:**

In comparison of Tenders the equalization on account of difference in output of various offers will be made on the basis of weighted average efficiency.

Weighted average efficiency shall not be less than 94%. The bidder will be required to submit the calculations based on his data. Highest efficiency at rated output and rated head quoted by any one bidder will form the base for evaluation.

Short fall in the efficiency quoted by tenderer at 100% load at rated head shall be compared and burden shall be imposed at the rate of 0.5% of the contract price per 1% shortfall on pro-rata basis for fraction if any.

B) Evaluation of Generator Bids:

For the purpose of evaluation of tenders, the equalization on account of difference in

1. The losses guaranteed by different tenderers and
2. The full load rated output of generator corrected to specified value of temp rise (in case temp rise indicated by the tenderer is different) will be made by selecting best value as a common base values. Any variation from such base values shall be accounted for in the evaluation at the rate of Rs. 1,05,000/- per each kW or pro-rata thereof in case of fractions. The variation will be suitably accounted for upward or downward values, as the case may be.

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.

**ANNEXURE - IX****LIQUIDATED DAMAGES FOR FAILURE TO MEET PERFORMANCE GUARANTEE****A) TURBINE GENERATOR:**

Performance tests of the generator shall be carried out in shop before dispatch, in the presence of the representative of purchaser. If the performance is not as per guaranteed output and losses, dispatch of generator to site will not be permitted. However, this shop testing shall not mean the total acceptance by the purchaser.

Turbine/Generator equipment once commissioned, the contractor has to conduct all routine test, performance test as specified in the specifications. The Generator output will be measured during performance test with the calibrated measuring instruments. The performance of the Turbine/Generator set (each) shall give output as per performance curve Output V/s Discharge for different head condition. Contractor & purchaser will jointly record Generator output measurements for head available at the test and varied discharge conditions. If the average Generator output of the above said findings is less than 4% of the guaranteed output, purchaser may accept the generator at his discretion by levying the penalty. Penalty will be levied at the rate of Rs. 2,10,000 Per KW shortfall and pro-rata thereof in guaranteed output.

If the short fall in output is more than 4% of guaranteed output the generator shall be rejected. It is mandatory on the part of the contractor to replace the defective items in its entirety within 3 months from the notice from the Purchaser.

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.

**ANNEXTURE - XII****LIST OF T/G SETS MANUFACTURED AND INSTALLED IN LAST 5 YEARS**

Sr. No.	Name of Project	Shaft Vertical or Horizontal	Nos. X Capacity	Date when Commissioned	Succeeding Operation Years	Name of Client
A- Turbine						
B- Generator						

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.



ANNEXURE - XIV

CONSTRUCTION PROGRAMME

(To be submitted in Envelope No.2)

PROGRAMME CHART PERT FOR SUPPLY, ERECTION AND COMMISSIONING OF THE GENERATING PLANT SHALL BE SUBMITTED BY TENDERER.

SIGNATURE OF THE CONTRACTOR

Name, Address & Designation of the Contractor.