

Annexure 1

Part - A

General Conditions & Scope of work

1.1.0 The scope of work/facilities under this contract broadly covers providing best in class servicing relating to services including Commissioning activities as well as repairing, servicing including modification/safety related works & observation/defects notification compliances time to time as desired for respective system/components/equipments for Turbine-Generator (TG) & Aux & BOP, general mechanical system including equipment up keeping.

1.2.0 **Detailed scope of work:**

Scope of work is as specified below for providing complete Assistance in commissioning activities /servicing/repair for;

1. Turbine –Generator along with auxiliaries like Lube oil system, Jacking oil system, control oil system, condensate system including condenser & LP Heaters, gland sealing system, seal oil system, stator water system, TDBFP, MDBFP, Air evacuation system, Feed water system including HP Heaters, cooling water system including PHE, chemical dosing system, CPU system, all associated valves & piping etc.
2. Air Washer System including Fans, related pumps, ducts, valves ,blowers and related duct and piping
3. CW system, ACW system, Raw water, river water system, cooling towers, DM Plant, chemical dosing system, PT plant, ETP, ETP RO system clarifier and auxiliaries, service water & potable water system, chlorination system, associated valves & piping etc.
4. Fire fighting system including AC Pumps, diesel driven pumps, diesel engines, jockey pumps, foam pumps and all its auxiliaries, associated valves and piping.
5. Compressed air system including instruments air system, service air system, drier, receiver tanks and associated valves & piping.
6. Welding of pipeline/valves as per approved quality plan
7. Assisting in Servicing, overhauling & breakdown maintenance of major equipments like CW Pumps, ACW pumps, DMCW pumps, TDBFP, MDBFP, CEP, Vacuum pumps, Booster pumps, etc. Repair of EOT cranes, electrically operated hoists, manual operating hoist, and crane related system. If required contractor has to arrange experienced manpower to attend and complete such works within time without any additional cost implication to owner
8. Repair, modification and strengthening of existing pipe and its supports.
9. Repair, maintenance and operation of oil purifier provided at different location like MOT, COT, DOT, control oil system. Shifting of oil drums from owners store to site and return of empty drums to owners store/designated place shall be in the scope of contractor.
10. Servicing/replacement of high pressure/low pressure gate, globe, ball, butterfly, control, safety valves etc.



11. Safety related works, like fabrication of hand railings, platforms & approaches wherever required.
 12. Repairing, rectification, servicing and break down maintenance of all dewatering pumps and other temporary equipments using in plant.
 13. Other job/work in TG & Aux and BOP area equipments & systems.
 - A) Contractor shall provide assistance for commissioning activity of electrical and C&I department which involves mechanical related works like coupling & decoupling, alignments, removal & fixing of actuators, welding of impulse line etc.
 - B) Fabrication & erection of structural steel and piping works like approach platform, support, temporary platform, safety related works etc.
 - C) Housekeeping after every job shall be ensured by the contractor.
 - D) Contractor has to make any special fixture or arrangement if requires to carry out any repair work.
 - E) Contractor shall be responsible for removal & refixing of insulation limited to area of contractor's works, insulation material will be provided by owner.
 - F) Any modification of system/performance improvement work as instructed by EIC to be carried out by contractor within the time limit as indicated by EIC without any additional cost implication to owner.
 - G) Contractor shall carry out necessary scaffolding erection/dismantling work and other temporary approach platform as per site requirement. Scaffolding material shall be in the scope of contractor.
 - H) All required NDT methods such as DPT, MPT, UT, RT, Preheating & stress relieving shall be under contractor scope.
 - I) Shifting of all spares, material, tool & tackles from owners store to site shall be in contractor's scope.
 - J) Shifting of all metal/non-metal scrap and used oil to designated place after completion of work shall be ensured by contractor
 - K) Non sparking tools shall be used by contractor when working in hydrogen prone area, and it shall be in the scope of contractors
- 1.2.1** The scope of work is to understand overall of job involved in the contract, any other work though not specially covered above but required to complete subjected work/facilities and other associated works as per the instruction by owners EIC.
- 1.2.2** The scope and frequency of work mentioned in the contract are for the overall understanding for the job involved. The actual scope, schedule for commissioning activities, servicing, repair and major/minor modification/safety related works shall be as specified by owners EIC and same shall be performed by the contractor without any cost implication on the owner.
- 1.2.3** The essence of the contract is to carry out commissioning activities of Turbine-generator & auxiliaries and BOP area equipment & system of unit 3 & 4 with an objective to maintain safe, efficient & reliable working condition of the same and increased availability of plant/equipment and improvement in the same over a period of time.



- 1.2.4** The time schedule for the completion of each activity/job shall be predefined by owner's EIC/Planning department and the contractor shall have to complete the same within stipulated schedule.
- 1.2.5** The Contractor has to provide full assistance to Owner for reverse engineering of equipment/ components installed/ available at the Owner's plant, by identifying the components, taking dimensions etc. as per the direction of the Owner's EIC. The Contractor shall carry out the reverse engineering activity as per the directions of the Owner's EIC, whenever equipment is disassembled, for stand by equipment for all components/ equipment available at plant & plant stores.
- 1.2.6** The daily/weekly/monthly reports shall be submitted by the contractor to owner in mutually agreed format. Shift log books/register shall also be maintained by the contractor.
- 1.2.7** All activities which are carried out by the Contractor should conform to best engineering practices and be carried out in minimum possible time
- 1.2.8** Contractor has to provide full assistance to owner on emergency services. Contractor has to mobilize & take up the works immediately as per the instruction of owners EIC.
- 1.2.9** Supervision of works and manpower deployed shall be in the contractor's scope. Contractor shall be required to coordinate with owner's commissioning/maintenance engineer on day to day basis for proper execution of work. They should be capable of looking after safety of person, equipment and nature of work handled
- 1.2.10** Material Management: Contractor shall follow OPGC procedure of material issue/return to & from the store/site/workshop, safe shifting to be ensured by contractor with all lifting/shifting tools & tackles, trolley and vehicle shall be in contractor's scope.

Contractor shall maintain sufficient quantity of consumables at their stores inside OPGC premises. Contractor shall keep track, maintain and submit records of spares and consumable used, available.

Contractor shall also support owners EIC for preparation of equipment list and spares list with specifications by collecting and providing details. Contractor shall support development of spares by noting, measuring and collecting details from site

- 1.2.11** Standards, Best practices and SOPs: Contractor shall follow all relevant practice maintained/initiated by owner.
Contractor has to follow owners OEM manual, guidelines, Best practices, SOP/SMPs and FQP. Accordingly checklist to be submitted from time to time in assigned format
- 1.2.12** Contractor shall ensure best possible technical and safety related skill of his staff and he shall keep updating the same from time to time. Contractor shall arrange at least one training programme per month for his staff and technicians. Contractor shall attend trainings/awareness programme arranged by owner.
- 1.2.13** Contractor shall provide all necessary safety appliances to his staff. All safety appliances should be conformed to Indian standard and approved by owner. Personnel protective equipments (PPEs) such as safety shoes, Safety helmets, safety goggles, Hand gloves, ear plug, dust mask,



- safety belts, chemical & electrical resistant safety shoes, rubber gloves, chemical resistance gloves, welding screens, reflective jackets, rain protection equipments like gum boots, rain coats, umbrella , etc. for each person shall be in contractors scope.
- 1.2.14** Transportation of material from store to sites/service location and Vice-versa within the plant area shall be in contractor's scope.
- 1.2.15** After issue of material (FIM) to the Contractor for carry-out assigned work, Contractor shall be its custodian and has to take care against theft of materials etc. till the work is completed in all respect &. Balance/unutilized material is handed over to the Owner along with FIM reconciliation statement.
- 1.2.16** Weekly Audits shall be conducted for minimum agreed category-wise manpower and housekeeping activities. Monthly Audits shall be conducted for minimum agreed Tools & Tackles /Equipment and Consumables. Audit forms shall be issued by Owner's EIC. Contractor will ensure closure of follow-up actions from audits as per the timelines defined at the point.
- 1.2.17** Work area are to be kept clean by the work men of contractor
- 1.2.18** The Contractor shall, unless specifically excluded in the Contract, perform all such works and/or supply all such items and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Completion of the Works/ Facilities as if such works and/or items and materials were expressly mentioned in the Contract.
- 1.2.19** The Works/ Facilities shall be completed in every respect with all associated works normally completed with such Works/ Facilities even though not specifically detailed in the Specifications unless included in the list of excluded items. The Contractor shall not be eligible for any extra payment in respect of completion of such associated works which are needed for the safe operation of the Works/ Facilities as required as per the Contract, though they may not have been included specifically in the Contract.
- 1.2.20** Contractor should start the work after getting the necessary permit to work, which shall be given to Contractor by the concerned Engineer-In-Charge. For any dispute regarding this work contract decision of Owner's EIC shall be final & binding to Contractor.
- 1.2.21** Work areas are to be kept cleaned by workman of Contractor all the time i.e. before start of work, during the work in progress and after completion of work.
- 1.2.22** During the Contract period, if the labor cost or any of the material price increases, then the responsibility lies with the Contractor to carry out the works as per Contract value without having any extra financial implication to Owner.
- 1.2.23** Contractor shall fulfill/meet all requirements as per statutory norms/regulations issued by state or central Government and other authorities from time to time. All statutory compliances shall be fulfilled by Contractor from time to time at their cost.



- 1.2.24** If the Contractor breaches the above mentioned notification then the authority may take legal action against the Contractor.
- 1.2.25** The Contractor has to follow all safety rules and regulation strictly and they shall be fully responsible for any damage/injury to company's equipment or their labors during execution the work.
- 1.2.26** Contractor is not allowed to provide the Contract Labours without valid Labour license and registration and the organizations are forbidden to deploy the Contract Labour from the Contractors not having valid license and registrations.
- 1.2.27** Contractor must possess valid Labour License. PF Code. ESI code. WC Policy. Owner Identity Card etc. for all the personnel deployed in Owner's plant premises under the Contract
- 1.2.28** In case of violation of Labour laws. Safety rules and statutory requirements etc. penalty shall be imposed on Contractor by the Owner at its sole discretion.

1.3.0 Facilities to be Provided By Contractor

1. Contractor shall provide all required Manpower which includes all necessary facilities like accommodation. Lodging and boarding, local conveyance, Safety equipment's and PPE, and shall comply with all statutory requirements like PF, ESI, Insurance, Minimum wages etc vehicle for transportation, loading / unloading etc.

1.4.0. Facilities to Be Provided By Owner:

1. Unfurnished Space shall be provided for construction of office for management team. Space for Stores and change room facilities for employees.
2. Access to Owner's first aid center.
3. Spares & consumables likely to be permanent shall be provided by Owner
4. Inside and outside workshop arrangement for machining of components.
5. All required permits to work.
6. Compressed air & electric power supply will be provided

1.5.0 Safety and other information's

1. The Contractor shall take all necessary safety precautions for the deployed workers working inside the factory premises and shall be responsible for any first aid /emergency treatment for his employees engaged by him. The Contractor shall have workmen compensation policy for all his workmen. The Contractor shall abide by all fire, Safety and environment policies and standards of Owner. The Contractor shall provide adequate nos. of safety shoes, safety helmets. Ear plugs, nose masks, safety belts, hand gloves, grinder's glasses for all his workmen. He should ensure all his workers using the PPE's during the execution of the work failing which the



Engineer-in-Charge /Safety Officer will stop the work and penalize the Contractor as per our Factory norms, OHS and also levy penalty for intentional delay for the work.

2. Site induction safety training shall be imparted before start of work to all workers by Owner. All necessary safety training and general health shall be checked. Any person found unsuitable shall not be allowed to work and the Contractor shall arrange suitable replacement immediately.

1.6.0 Environmental Compliance:

1. The Contractor will perform the Services in a manner that gives appropriate regard to the protection of the natural environment.
2. The Contractor will comply with all Statutory & Regulatory requirements and codes of practices relating to the products and services being offered as may be relevant.
3. The Contractor will follow all Environmental Operational Controls while carrying out the activities within Owner's premises as per the instruction by user dept.

1.7.0 Energy Management Compliance:

Owner Values Energy and appreciates products/services with Energy Efficient Features. Hence in view energy management system:-

1. Contractor shall use energy efficient plant, tools and machineries for performing the work and related activities and execute the work in such a manner so as to optimize the energy consumption.
2. Contractor shall comply with all the Statutory & Regulatory requirements and codes of practices, as may be relevant for Energy Efficiency and conservation, relating to the products and services being offered.