

Corrigendam -Date extension

NIT - AEML/MDB/2021-22/01

Package- Supply, Installation, Testing and Commissioning of assorted ratings of Package Substations

1) All Bidder kindly note that the last date for tender submission is hereby extended to 31-01-2021 ,16:00 hrs & Bid opening date will be 01-02-2021.

Pls note , further date extension will not be given after this date.

Minutes of Virtual M S Teams Meeting between M/s AEML and CSS Bidders for Prebid Meeting against NIT No- AEML/MDB/2021-22/O1 on 15.01.2021

Vendors Present – M/s ABB I Ltd, Siemens Ltd and Schneider Electric, L&T and C&S Ltd

Tendor Doc No - AEML/MDB/202-22/O1

Member Present:

AEML

1. Umesh Joshi - CES
2. Yogesh B. Deshmukh - CES
3. Rajendrasing Girase - CES
4. Deep Muntode -CPG

Bidders

1. Nakul Upasni – ABB Ltd
2. Bhagyesh Mehandale – ABB Ltd
3. Avinash Kulkarni – Siemens Ltd
4. Victor Paul – Siemens Ltd
5. Raturaj Gadekar – Schneider Electric
6. Sachin S Patil - Schneider Electric
7. Sachin Tungikar - Schneider Electric
8. Ashsih Chawla -L&T Ltd
9. Sumit Biyani – L&T Ltd
10. Nilesh Gholap – C&S Ltd

Discussion on the following points was done against various bidder's queries in pre-bid meeting. Clarifications to the queries are made as under-

1. In LV Panel VSF outgoing, tinned copper spreader link suitable for 25 sq.mm to 300 sq. mm Aluminium cable lug – with 1 no. 8.8 Grade, HDG M10 nut bolt with plain and spring washer. Two VSF shall be separated by 60 mm spacing. Model No. SL3-3x/3A – Jean Muller make.
2. Space provision for APFC component is not to be considered from this tender. Accordingly, revised GA for LV Panel shall be offered and same shall be discussed during detailed engineering.
3. For DG connection main horizontal busbar extension in LV Panel at one end with shrouding suitable for 1CX6300 sq mm cable to be provided (about 100 mm length)
4. From unloading point to installation at foundation, suitable capacity crane shall be used; In the event of PSS Manual leading due to site constraint, vendor shall ensure that MV/LV and transformer doors alignment shall be intact.

5. For all configurations, 11 kV RMU shall be with motorized LBS and Manual type VCB.
6. Limiting dimensions and no. of RMU, CRT and LV Panels for Customised PSS shall be as below-

Code	Material Description	Qty	UOM	Max. Dim. (LWH)
2100115644	SYS,DISTR,PCK SS DRYDT,630KVA,RTUMDM	59	NOS	3.3 X 2.2 X 2.5 Mtr
2100076653	SYS,DISTR,PAD MNTD DRYDT,630KVA,RTUMDM	7	NOS	3.5 X 2.3 X 2.3 Mtr
2100239607	SYS,DISTR,PCK SS ,630KVA,G PLUS 1,1CRT	2	NOS	2.5 X 2.2 X 4.4 Mtr
2100239608	SYS,DISTR,PCK SS ,630KVA,G PLUS 1,2CRT	2	NOS	3.3 X 2.6 X 4.4 Mtr
2100239610	SYS,DISTR,PCK SS ,2X630KVA,GRND	2	NOS	4.5 X 2.7 X 2.3 Mtr

Material Code	Material Description	No. of RMUs	No. of CRTs	Nos. of LV Panels
2100115644	SYS,DISTR,PCK SS DRYDT,630KVA,RTUMDM	1	1	1
2100076653	SYS,DISTR,PAD MNTD DRYDT,630KVA,RTUMDM	1	1	1
2100239607	SYS,DISTR,PCK SS ,630KVA,G PLUS 1,1CRT	1	1	1
2100239608	SYS,DISTR,PCK SS ,630KVA,G PLUS 1,2CRT	1	2	2**
2100239610	SYS,DISTR,PCK SS ,2X630KVA,GRND	1	2	2**

** No. of LV Outgoings can be 4 Nos. instead of 6 Nos. in conventional PSS

7. Approved make of equipment and components shall be as per tender technical specification.
8. Battery charger shall be without BHMU feature.
9. Following data for AR/VR (Augmented /Virtual Reality) implantation at AEML end shall be submitted in the event of order during detailed engineering stage-
 - a. 3D Engineering Files in IGES or STP format
 - b. Product images
 - c. Operation and Recommended Maintenance videos
10. Signed and stamped copy of Service Scope and SLA shall be submitted along with tender submission.

Service Level Agreement: Package and Pad Mounted Substations

Sr. No.	Description
1	Work Environment:
	Mumbai Atmospheric Condition: Tropical area of Mumbai in close proximity to sea with its high humidity and following prevailing climatic conditions.
a	Average Grade Atmosphere: Salt laden.
b	Ambient Air Temperature: Highest 45° C, Average 35° C
c	Relative humidity: 95% Maximum
d	Rainfall: 3000 mm (Concentrated in 4 months)
e	Basic wind speed as IS:875 : 44m/sec.
f	Seismic Zone: 3
2	Mandatory Terms and Conditions for ITC Services :
a	Service kick-off meeting shall be arranged by AEML upon release of Contract Order. Tentative site details with overall readiness status and site activity schedule shall be furnished by AEML to vendor for deputation of ITC teams. Vendor shall submit Organisation Chart and Escalation Matrix for ITC Services.
b	Vendor shall depute OEM payroll engineer at sites for overall coordination, formal communication of Services against Contract Order amongst divisions and shall strictly follow all rules and regulations mentioned in CEA Regulations, 2010 (Measures relating to Safety and Electric Supply) and shall be responsible for supervision of every activity executed at site.
c	It is expected that Vendor Factory Team and Service Team are well synchronised as far as planning of factory inspections, site survey remarks, overall condition /readiness and dispatch intimation for site unloading for seamless execution of project
d	Vendor shall generate weekly report of ITC activities status with challenges at sites to be addressed by AEML. Monthly review meeting shall be arranged by AEML for ITC Services and Product Quality Points for smooth execution of project.
e	Service team shall be responsible for intimation about any short supply, design defect or technical /quality issue immediately to Factory team and responsible till resolution of the same. Such issue shall be reported to Factory team immediately with copy to Divisional and Engg Team
f	Vendor shall carryout joint site survey 15 days prior to expected site delivery for all possible locations shared by Head- HT Construction AEML for assessing civil foundation, access for unloading, earthing pits availability, any other hindrances for overall site readiness.
g	AEML and Vendor to depute authorized/responsible personnel for joint survey and vendor shall submit joint survey report for all sites jointly-surveyed.
h	Vendor shall depute adequate teams for unloading, earthing, testing and commissioning activities considering work quantum of 7 Divisions of AEML as per scheduled deliveries
i	Direct unloading on to the plinth using hydra may not be feasible in most of the locations. Manual leading up to 40 Mtrs using labour with all tools and tackles to be considered in all locations

j	30 T crane with high boom may be required in some locations to move equipment from ground level to podium level and while unloading in locations in sloping road.
k	In at least 50% locations, there will be live LT pillar installation in PSS foundation, near LT side and it may be required to unload the PSS in nearby location, carryout pre-commissioning checks and then on shutdown of LT pillar move the PSS to foundation.
l	Only one unloading i.e at site or stores shall be in vendor's scope of service
m	In some locations, sleepers to have temporary platform may be required to move the equipment to foundation if foundation is elevated
n	Vendor shall submit invoices of ITC Services rendered within 3 days upon completion of works in all aspects to respective divisional coordinator with necessary compliance documents. AEML shall provide details of divisional coordinators.
o	Scope alongwith timelines against each ITC activity are mentioned in Service Scope Matrix.
p	Testing team shall be supervised by Vendor payroll engineer and shall consists of competent members and agency shall strictly follow all rules and regulations mentioned in CEA Regulations, 2010 (Measures relating to Safety and Electric Supply)
q	All the testing equipment for testing of 11 kV RMU, Dry Transformer and LV Panel shall be with valid calibration and reports of the same shall be submitted to Head-HT Construction and Engg Team
r	Commissioning report signed by AEML and Service Engineer at site shall be submitted for each site to AEML Head-HT Construction and Engg Team
3	Other Terms and Conditions:
a	Work should be carried out as per the instructions given by officer in-charge.
b	Display board mentioning Work details with timeline as per the instructions given by officer incharge
c	PPE like safety shoes, Helmet, material handling gloves, First aid kit for workmen
d	Workmen engaged by vendor should follow the EMS norms as per the company guidelines
e	Workmen engaged by vendor should be covered under personal accident policy
4	Contractor Safety At AEML :
	The Contractors shall comply with all the central & state legal provisions applicable at the location - where work is undertaken. The contractor shall also comply with all the additional statutoryprovisions, applicable to his work, e.g. Indian Electricity Act / Rules / Code, CEA regulations 2010, Factory act, Indian Explosives Act/ Rules, Motor Vehicles Act and Rules, AEML Electrical & Mechanical Safety Rules and any other applicable statute, Rules/ Checklists framed by AEML relating to working at sites. Contractor shall adhere to safe working practice and guard against hazardous, and unsafe working conditions and shall comply with AEML's safety rules as set forth herein.
	Contractor shall adhere to safe working practice and guard against hazardous, and unsafe working conditions and shall comply with AEML's safety rules as set forth herein. The contractor should ensure before start of work:

a	That Safety Shoes and Safety Helmets, all IS marked, are provided to each worker brought by him to the work place, before start of the work on the first day itself. He shall purchase and keep adequate number of Safety Harnesses/ other Person Protective Equipments, including Safety Goggles and Ear Protection, all IS Marked, in his store and it shall be used, when any worker is to work at height or forcing hazards
b	All the Lifting equipments/ tackles are tested by Competent Person, approved by the local state government; also required periodic testing as per the statute applicable to the local land & submit those to the respective & concern Departments & shall be produced a copy on site when demanded.
c	All the workers are provided with at least one day Safety Training at the local work place.
d	The contractor shall ensure & conduct Medical Examination of the workers and submit the necessary report & certificates to the medical officer of the organization. Required tests and examinations at the start and subsequently with the frequency, as mentioned in central & state legal provision
e	Submit Safety Plan to AEML Engineer In Charge, which shall consist of following
i	Conduct risk analysis (HIRA) in job, and action plan to mitigate the risks;
ii	Name of persons responsible for implementing safety provisions and their specific responsibilities.
iii	Methodology of conduct of Safety Training to his workers;
iv	Methodology of taking action against intentional erring employees;
v	List of names of Safety Representative, supervisors, competent electricians, operators of lifting equipments such as Cranes, Truck Mounted cranes & hydras, Vehicle Drivers etc.
f	The Contractor shall ensure during the work:
i	Adequate supervision with the supervisors having adequate qualification required for the task is provided at all times to work / site.
ii	All the Contractor's worker are provided with required Personal Protective Equipments, and the workers use these issued Personal Protective Equipments, at all times of work, at the site, If Safety in-charge suggests any other PPE's required for the particular task pertaining to the specific work hazard if necessary, then the same type of PPE's are to be provided by the contractor at his cost.
iii	Barricading to be provided by contractor in connection with his operations to guard or to protect persons from excavations, Hoists & crane operations, Falling materials, AEML's existing Property subject to damage by Contractors operations.
iv	Their workers always keep their identity card with them
v	Any worker will not be allowed under the influence of alcohol & any drugs.

vi	Explosives and any inflammable material should not be used on work or on site without the permission of Site - Engineer in writing. If any explosives and any inflammable material is to be used on work place & Site, while handling & storing of such material proper safety precautions to be taken as per the local land statutes.
vii	First-Aid facilities to be provided by the contractor on his workplace / Sites
viii	Any handling of gas having health hazard to the workers & people around the work place is not permitted without prior written permission from site-engineer and handling & storage of such gas will be as per the statute requirements of the local land
ix	The employees of the contractor shall be skilled / competent in accordance with the job requirement to the satisfaction of Department in charge . Department in charge shall have the right to remove any employee of the contractor, whom he feels to be incompetent and appears to be indulging or aiding violation of the prescribed or statutory safety norms.
5	Special Safety Provisions for Working at Heights:
a	All working platforms, passages etc shall be free from accumulations of any material causing obstructions and tripping hazards. The permit System devised by AEML for working at height shall be implemented by the Contractor
b	To prevent fall of workers into water, where they work near or in vicinity of water body, the contractor shall provide Life Jackets to the workers, and ensure its use. The contractor shall provide boat or launch equipped with sufficient number of life buoys, life jackets etc., manned with trained personnel for rescue operations, at the site of such work
c	Wherever there is a possibility of falling of any material, equipments or workers while working at heights, suitable safety net shall be used. The safety net shall be for required load and shall comply with BIS Standards
d	The Contractor shall provide safe ladders/stairs meeting IS requirements, for workers to ascend/descend and he shall ensure that the workers use them, for these purposes. The workers shall be provided with appropriate safety harness fitted with suitable fall arresting system (Fall arrestors) in case the elevation difference is more than 8 Ft
e	The contractor shall provide and maintain safe scaffolding or working platforms to ensure prevention of fall of person from there. The contractor shall ensure that scaffolding erection and repairs are done by the expert supervision in accordance with IS provisions
6	Special Safety Provisions for Electrical Hazards:
a	Minimum one ELCB/RCCB for all each electrical distribution ts etc., shall be used to prevent electrical shocks to the workers. More such ELCB/ RCCB shall be used, when required
b	The contractor shall use single / double insulated body hand tools or low voltage of ISI mark standards

c	No supply shall be taken with any loose connection like taking supply by inserting wires in the socket. In such cases suitable plug tops shall be used for making such connections
d	The electrical wires shall not lie on ground, where they can be damaged by persons/ vehicles moving over it
7	Right To Stop The Work:
a	Site in charge & Safety Officer shall have right, at his sole discretion, to stop the work, if in his opinion the work is being carried out in such a way that it may cause imminent danger to the person and / or property and /or equipments. In such cases, the contractor shall be informed in writing about the nature of hazards and possible injury/ accident and he shall comply to remove shortcomings promptly.
b	The Contractor shall not be entitled for any damaged / compensation for stoppage of work, solely due to safety reasons and the period of such stoppage of work shall not be taken as an extension of time for Completion of the Facilities and will not be the ground for waiver of levy of liquidated damages.
c	He shall submit Occupational Health Examination record of victim within 15 days of its conduct and found fit by Doctor
d	Whenever asked by AEML, the contractor shall send his employees to depose in any enquiry arising out of any injury / facility / loss etc., without any reservation.
8	Reporting of Incidents, accidents, Near-Miss and Medical Treatment:
	In case of any injury including the fatal injury, the contractor shall inform the same to Safety Officer, Unit head, Department in charge & Divisional head within two hours of its occurrence & to Electrical Inspector in case of electrical accident . In case of fatal injury, the Contractor shall inform it to the Local Police Station, relatives of deceased worker, Workmen Compensation Commissioner and District Collector also in addition to Safety Officer In charge, Divisional Engineer In charge.
a	Contractor shall arrange transportation, medical treatment, in case of accident to his work force. AEML is not responsible or have any obligation in such accident
b	Required Personal Protective Equipments
i	Head protection- Hard Hat Helmet, Vehicular Helmet
ii	Eye Protection- Panaroma Goggle, Welding Goggle, Face Shield
iii	Hand Protection:
	Electrical- Rubber Gloves
	Material Handling Gloves- Cut Resistance Gloves, Cotton knitted polka doted gloves, Heat Resistance Gloves

	Special Purpose Gloves Welding Gloves, Masonry Gloves, Acid/Alkaline Gloves
	Footwear- Safety Shoes with hard toe cap, Gumboot with hard toe cap
	Hearing Protection- Ear Plugs, Ear Muffs
	Full Body Protection- Boiler Suit, Welding suit, Rain Suit
	Fall protection- Full Body Harness
	Respiration- Mask, Respirators
9	Safety & Quality Rating For Site Performance
	Following Safety & quality rating is applicable shall be jointly filled up after every site work completion

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Parameter	Weightage	Rating	Total Marks = Weightage x Rating
Availability of responsible personnel for joint site survey and submission of site report	15	5	75
Overall Quality Of Work	15	5	75
Availability of Competent Supervisor at site supervision amongst AEML Divisions for unloading, installation, earthing, testing and commissioning activities	10	5	50
Completion of unloading of unit on same day of receipt at site	10	5	50
Completion of Earthing work within two days post unloading of equipment	10	5	50
Completion of Testing work within two days post earthing of equipment	10	5	50
Competent manpower for testing and commissioning activities	10	5	50
Submission of invoices with report upon completion of job	10	5	50
Usage of Safety Shoes /Gumboots, helmets, ELCB for supply	5	5	25
Usage /Condition of Tools and Tackles	5	5	25
Total	100		500

Safety & Quality Score Calculator

If Total Score= 500	105%	Total Bill Amount
500 > Total Score >= 450	95%	Total Bill Amount
450 > Total Score >= 400	90%	Total Bill Amount
400 > Total Score >= 350	80%	Total Bill Amount
350 > Total Score >= 300	75%	Total Bill Amount

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