

Prebid Queries Reply

NITNo. AEML/MTB/2021-22/11– Supply and Services of Construction of 220KV GIS Substation at BKC, Mumbai along with Double Circuit 220KV Cable Connectivity with AEML 220KV Chembur Substation

- 1) All Bidder kindly note that the last date for tender submission is Here by extended to 11-11-2021 ,1700 Hrs. & Bid opening date 12/11/2021
- 2) Amendment in ITB Clause No.2 of D-2 Section -II- NIT document No. AEML/MTB/2021-22/11 (Amendment Enclosed).
- 3) Reply of Prebid Technical & Commercial Queries enclosed.

Amendment in ITB Clause No.2 of D-2 Section -II- NIT document No. AEML/MTB/2021-22/11

1. Eligibility Criteria for Joint Bidding

| Eligibility Criteria | Documents to be submitted |
|--|---|
| <p>Bidder(s) to be an individual commercial entity. Bidder(s) can form consortium while submitting its proposal. “Consortium” means firms jointly and severally bound to the AEML for the fulfillment of the provisions of the Contract and such firms shall designate one of such firms to act as a lead bidder with authority to bind the consortium. The composition or constitution of the consortium shall not be altered without the prior consent of the Client. The consortium of bidders should not exceed Three inclusive of the Lead Bidder itself. The qualifying requirements can be met either by lead bidder or the consortium partners in totality. In case of consortium, bidder(s) shall</p> <ul style="list-style-type: none"> i) Provide clarity on the roles and responsibility of each consortium member. ii) Enforce that all the members are part of the contractual arrangement between themselves before submitting the bid iii) Submit jointly signed agreement. <p>Bidder may also use the credentials of consortium members or OEMs (which whom it had partnered to execute this project) to meet the “Technical qualification criteria”</p> | <p>Declaration from the bidder(s), whether quoting as a stand-alone firm, or as part of a Consortium, name(s) and number of partners of the Consortium and details of their authorized executives, offices and manufacturing facility addresses, and other details.</p> <ul style="list-style-type: none"> 1) Declaration Letter Reference Noand Date 2) Joint bidding / consortium agreement. (Annexure-I) 3) Power of attorney for Lead member Of JV / Consortium. (Annexure-II) |

2. Financial Qualifying Criteria

- 2.1 Net Worth for last 3 financial year should be positive.
- 2.2 Minimum Annual Turnover for **last** three (3) years of the bidder should be **INR 500Cr.**

#Note: Annual total income as incorporated in the profit & loss accounts except non-recurring income e.g. sale of fixed assets.
- 2.3 Bidder shall have liquid assets (L.A.) or/and evidence of access to or availability of Credit facilities of not less than **INR 50Cr.**

In case bidder is a holding company, the Financial Position criteria referred to in clause 2.2 above shall be that of holding company only (i.e. excluding its subsidiary / group companies). In case bidder is a subsidiary of a holding company, the Financial Position criteria shall be that of subsidiary company only (i.e. excluding its holding company).

Note: In addition to Financial Qualifying Criteria bidder has to meet Qualification requirement mentioned in Annexure-24D-Qualification Requirement.

3. Joint Venture/ Consortium Bids

- 3.3 In case a bid is submitted by a Joint Venture (JV)/ Consortium of two or more firms as partners, joint venture must comply the following minimum criteria as per 3.2
- 3.2 All the partners of the JV/Consortium Bids shall individually meet the financial position criteria given at 2.1 above.
- 3.3 The lead partner shall meet the minimum criteria stipulated not less than 40% of the minimum criteria given at Clause no. 2.2 and 2.3

The joint venture/consortium must satisfy collectively the Criteria of clause 2.2 for which purpose the relevant figure of average annual turnover and liquid assets/credit facilities for each of the partners of the JV shall be added together to arrive at the Joint Venture total capacity.

**ANNEXURE I
JOINT BIDDING AGREEMENT**

[TO BE SUBMITTED BY BIDDER ON A STAMP PAPER OF APPROPRIATE VALUE IN THE FORM PROVIDED HEREIN IN CASE THE BIDDER IS A CONSORTIUM OR JOINT VENTURE]

(ORIGINAL TO BE SUBMITTED IN A SEPARATE SEALED ENVELOPE)

This JOINT BIDDING AGREEMENT ("**Agreement**") is entered into on this [●] day of [●], at [●], by and between:

1. [NAME], a company duly incorporated and existing under the laws of [●], with its registered office at [●] and its principal place of business at [●], (hereinafter called the "**Consortium Member A**" or "**Lead Partner**" which expression shall unless excluded by or repugnant to the context, be deemed to include its legal successors in title and permitted assigns) of the **FIRST PART**;

AND

2. [NAME], a company duly incorporated and existing under the laws of [●], with its registered office at [●] and its principal place of business at [●], (hereinafter called the "**Consortium Member B**" which expression shall unless excluded by or repugnant to the context, be deemed to include its legal successors in title and permitted assigns) of the **SECOND PART**;

AND

3.
.....;

(Consortium Member A, Consortium Member B, and Consortium Member are collectively referred to as the "**Parties**" and individually as "**Party**").

WHEREAS:

- (A) [Insert name of Owner] ("**Owner**") is intends to Construction of 220KV GIS at BKC & 220KV EHV Cable Connectivity between BKC & Chembur Substation Project in Mumbai, Maharashtra, India ("**Plant**"). In furtherance to the same, the Owner intends to appoint a single contractor for undertaking the complete engineering, procurement, supply and construction and other associated services for the satisfactory erection, testing and commissioning of Construction of 220KV GIS at BKC & 220KV EHV Cable Connectivity between BKC & Chembur Substation Project on a single turnkey basis.
- (B) The Owner had accordingly initiated a bidding process by issuing a Tender on [●], and invited proposals from bidders for selecting a contractor for undertaking the Works.

- (C) The Parties are interested in jointly bidding for the Project as members of a consortium and in accordance with the terms and conditions of the Tender Documents in respect of the Project; and
- (D) Therefore, the Parties are now desirous of entering into this Agreement and recording their entire understanding with respect to jointly bidding for the Project as members of a consortium, as more specifically defined in this Agreement.

NOW THEREFORE in consideration of the premises and the mutual covenants herein contained, the Parties agree as follows:

1. DEFINITIONS

In this Agreement, capitalized words and expressions used but not specifically defined herein shall have the same meanings as are respectively assigned to them in the Tender Documents and all other documents hereinafter referred to and attached, as an integral part of the Tender Documents.

2. CONSORTIUM

- 2.1. The Parties hereto agree to consolidate their resources and constitute a consortium solely for the purposes of jointly participating and bidding for the Project in accordance with the terms of the Tender Documents issued by the Owner. On successful award of the Contract (*as defined in the GCC*), the consortium shall carry out all the responsibilities and obligations in accordance with the terms of the Contract.
- 2.2. The Lead Partner represents and warrants that it has the necessary qualification to fulfil the technical and financial qualification criteria of the Project, as detailed in the Tender Documents. The Lead Partner shall be the leader of the consortium and shall be authorized to act on behalf of the consortium as their representative for preparation of the bid & its submission, bidding for the Project and implementation of the Project. If required by the Owner in terms of the Tender Documents, the Parties (other than the Lead Partner) agree to provide a Power of Attorney (PoA) in a form approved by the Owner in favour of the Lead Partner and agree and authorise the Lead Partner to take all actions required under the Tender Documents for submission of the bid in respect of the Project. In case of any conflict with respect to the working of the consortium between the Parties, the instructions and directions of the Lead Partner shall prevail and the other Parties shall be bound by the decisions of the Lead Partner.
- 2.3. The Parties hereby undertake to participate in the bidding process only through this consortium and not individually and/ or through any other consortium constituted for this Project, either directly or indirectly or through any of their affiliates.
- 2.4. The Parties agree and acknowledge that there shall be no change to the composition, management and control of the Parties, as well as the consortium, as specified in the Tender Documents. The Parties agree to provide to the Lead Partner (and to procure from their affiliates and parent companies (as applicable)) such records and information as may be required under the Tender Documents in order

to meet the technical and financial qualification criteria set out in the Tender Documents.

2.5. After the submission to the Owner of the consortium's bid, the Parties shall, in good faith, negotiate definitive documents setting forth their respective rights and obligations in respect of their further participation in the consortium and the additional terms and conditions.

2.6. The Parties hereby agree that the sharing of responsibility and obligations shall not in any way be considered as a limitation to the joint and several responsibilities of the members of the consortium.

3. **JOINT AND SEVERAL LIABILITY**

The Parties hereby undertake and agree to be jointly and severally liable and responsible for all obligations and actions that are to be performed by the selected bidder, in relation to the Project and in accordance with the terms of the Tender Documents, including entering into the separate Contract(s) and be bound by the terms contained therein.

4. **REPRESENTATIONS OF THE PARTIES**

Each Party hereby represents and warrants that:

- (a) such Party is duly organised, validly existing and in good standing under the laws of its incorporation and has all requisite power and authority to enter into this Agreement;
- (b) the execution, delivery and performance by such Party of this Agreement has been authorised by all necessary and appropriate corporate or governmental action and will not:
 - (i) require any consent or approval not already obtained;
 - (ii) violate any applicable law;
 - (iii) violate the memorandum and articles of association, by-laws or other applicable constitutional documents thereof of such Party; or
 - (iv) violate any clearance, permit, concession, grant, license or other governmental authorisation, approval, judgement, order or decree or any mortgage agreement, indenture or any other instrument to which such Party is a party or by which such Party or any of its properties or assets are bound or that is otherwise applicable to such Party;
- (c) this Agreement is the legal and binding obligation of such Party, enforceable in accordance with its terms against it; and
- (d) there is no litigation pending or threatened to which it or any of its affiliates is a party that presently affects or which would have a material adverse effect on the financial

condition or prospects or business of such Party in the fulfilment of its obligations under this Agreement.

5. TERMINATION

This Agreement shall be effective from the date of execution of this Agreement and shall continue in full force and effect until: (i) the termination or expiration (as the case may be) of the Contract in accordance with the terms therein, if the consortium is the selected bidder by the Owner; or (ii) on final rejection of the consortium's bid by the Owner where the consortium is not the selected bidder, or (iii) upon any of the Parties being declared bankrupt or insolvent by a court of competent jurisdiction; or (iv) upon any of the Parties materially breaching the Agreement, such breach being incapable of being cured, or if capable of being cured, not cured within [thirty (30)] days.

6. GOVERNING LAW AND DISPUTES

6.1. This Agreement shall be governed by and construed in accordance with the laws of India.

6.2. Any dispute, in respect of which a notice of intention to commence arbitration has been given, shall be finally settled by arbitration conducted in accordance with the arbitration rules of Singapore International Arbitration Centre for the time being in force. The venue of arbitration shall be Singapore. The number of arbitrators shall be three, with each of the Parties appointing one (1) arbitrator each and the two nominated arbitrators appointing the third arbitrator. The language to be used in the arbitral proceedings shall be English. The arbitrators shall submit their determination in writing and such determination shall be binding and conclusive upon the Parties. **(For Foreign Bidders) Or**

Any dispute arising out of or in connection with the provisions of this Agreement, including any question regarding its validity, existence or termination, shall be finally settled by arbitration conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and rules and regulations made thereunder. The venue of arbitration shall be [Mumbai, Maharashtra, India.]. The number of arbitrators shall be three, with each of the Parties appointing one (1) arbitrator each and the two nominated arbitrators appointing the third arbitrator. The language to be used in the arbitral proceedings shall be English. The arbitrators shall submit their determination in writing and such determination shall be binding and conclusive upon the Parties. **(For Domestic Bidders)**

6.3. The Parties of the Consortium will maintain their respective requisite documents/records as per the requirement of the respective law.

7. EVENT OF DEFAULT

The Parties hereby acknowledge and agree that upon any breach or non-compliance by either Party of the terms and conditions of this Agreement, the Owner shall have the right to, *inter alia*, disqualify the consortium's bid or treat such breach and/or non-compliance as a breach of the Tender Documents.

8. COUNTERPARTS

This Agreement may be executed in counterparts, all of which shall be considered one and the same instrument and shall become effective when one or more counterparts have been signed by each of the Parties and delivered to the other Party.

9. AMENDMENT AND MODIFICATION

This Agreement may not be amended, modified or supplemented, except with the prior written consent of the Owner.

10. WAIVER

No failure or delay of either Party in exercising any right or remedy hereunder shall operate as a waiver thereof. Any such waiver by a Party shall be valid only if set forth in writing by such Party.

11. INVALIDITY

Where any provision of this Agreement is or becomes illegal, invalid or unenforceable in any respect under the applicable laws of any jurisdiction then such provision shall be deemed to be severed from this Agreement and, if possible, replaced with a lawful provision which, as closely as possible, gives effect to the intention of the Parties under this Agreement and, where permissible, that shall not affect or impair the legality, validity or enforceability in that, or any other, jurisdiction of any other provision of this Agreement.

12. FURTHER ACTIONS

The Parties, acting in good faith, shall, when necessary, exercise their powers of voting and any other rights and powers they have to procure that the provisions of this Agreement are properly and promptly observed and given full force and effect according to the spirit and intention of this Agreement.

13. ASSIGNMENT

No Party shall assign, transfer or dispose of this Agreement, or any of its rights and obligations under this Agreement, without the prior written consent of the Owner.

14. SEVERABILITY

The invalidity, illegality or unenforceability, for any reason, of any provision of this Agreement shall not prejudice or affect the validity, legality or enforceability of its remaining provisions.

15. It is agreed that nothing in the agreement shall be deemed to constitute, create, give effect to, or otherwise recognize a corporation, association, partnership joint venture or formal or informal business entity of any kind (incorporated or not incorporated) between Parties of the consortium. Nothing shall be construed

between Parties as providing for common management and the sharing of profits or losses arising out of the contract.

16. It is agreed and accepted that each Party of the consortium expressly agrees that it is not their intention through the joint venture to carry on business in common with the other Party with a view to profit. Each Party shall bear its own losses and retain all profits arising from the performance of its respective scope of work and shall report its own income and expenses separately.

IN WITNESS WHEREOF THE PARTIES ABOVE NAMED HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN

SIGNED, SEALED AND DELIVERED

For and on behalf of:

[•]

By:

Name: _____

Title: _____

Date: _____

In the presence of:

1.

SIGNED, SEALED AND DELIVERED

For and on behalf of:

[•]

By:

Name: _____

Title: _____

Date: _____

In the presence of:

2.

Note:

1. Power of Attorney or Board Resolution of each of the person signing this Joint Bidding Agreement, shall be furnished along with this Joint Bidding Agreement.

ANNEXURE II

POWER OF ATTORNEY FOR LEAD MEMBER OF JV / CONSORTIUM

[TO BE SUBMITTED BY BIDDER ON A STAMP PAPER OF APPROPRIATE VALUE IN THE FORM PROVIDED HEREIN]

(ORIGINAL TO BE SUBMITTED IN A SEPARATE SEALED ENVELOPE)

This power of attorney ("POA") is made at _____ on this____ day of _____, 20__.

BY

[NAME], a company duly incorporated and existing under the laws of [●], with its registered office at [●] and its principal place of business at [●], (hereinafter called the "Consortium Member B" which expression shall unless excluded by or repugnant to the context, be deemed to include its successors and permitted assigns);

AND

.....
.....
.....
.....

IN FAVOUR OF:

[NAME], a company duly incorporated and existing under the laws of [●], with its registered office at [●] and its principal place of business at [●], India (hereinafter called the "Consortium Member A" or "Lead Partner" which expression shall unless excluded by or repugnant to the context, be deemed to include its successors and permitted assigns).

Consortium Member B, Consortium Member, and the Lead Partner are hereinafter collectively referred to as the "Consortium" and Consortium Member B and Consortium Member, are hereinafter collectively referred to as "Consortium Members".

WHEREAS:

- A. [insert name of Owner] ("Owner") is intends to Construction of 220KV GIS at BKC & 220KV EHV Cable Connectivity between BKC & Chembur Substation Project in Mumbai, Maharashtra,India ("Plant"). In furtherance to the same, the Owner intends to appoint a single contractor for undertaking the complete engineering, procurement, Supply and construction and other associated services for the satisfactory erection, testing and commissioning of Construction of 220KV GIS at BKC & 220KV EHV Cable Connectivity between BKC & Chembur Substation Project on a single turnkey basis.

- B. The Owner had accordingly initiated a bidding process by issuing a Tender on [●], and invited proposals from bidders for selecting a contractor for undertaking the Works..
 - C. The Consortium Members and the Lead Partner had entered into a joint bidding agreement dated [●], for the purpose of constituting a consortium solely for the purposes of jointly participating and bidding for the Project in accordance with the terms of the Tender Documents issued by the Owner.
 - D. In furtherance of the joint bidding agreement, the Consortium Members have further agreed to irrevocably appoint the Lead Partner as its true and lawful attorney, to exercise all or any of the powers for and on behalf of the Consortium with respect to the Project, and the Consortium Members are accordingly executing these presents in favour of the Lead Partner.
1. NOW KNOW YOU ALL AND THESE PRESENTS WITNESS THAT WE, the Consortium Members, do hereby nominate, appoint and constitute the Lead Partner and/or any principal officers and/or any other person or persons that may be appointed by the Lead Partner, as the Consortium's true and lawful attorney to do all such acts, deeds and things which the Lead Partner may deem necessary or expedient or incidental or conducive to the Project, including the following acts, deeds and things for and on the behalf and in the name of the Consortium in relation to the Project, that is to say:
- (a) To submit the bid and participate in the bid of the Owner on behalf of the Consortium;
 - (b) To negotiate with the Owner on the terms and conditions for award of the contract(s) pursuant to the aforesaid bid and to sign and execute the contract(s) with the Owner for and on behalf of the Consortium and to do any other act or submit any document in relation to the same;
 - (c) To take any action, obtain all approvals and clearances, execute such documents and deeds, do things and to take decisions that may be required and necessary for the performance of the contract(s) and completion of the works;
 - (d) To manage or conduct all communication, correspondence and dealings on behalf of the Consortium with respect to and in connection with the execution of the contract(s);
 - (e) To generally use the name of the Consortium Members in the exercise of all or any of the powers by these presents or by law conferred on the Lead Partner;
 - (f) To expend such sums as the Lead Partner may think fit, in the exercise of any of the above powers; and
 - (g) To generally do or cause to be done every other acts, deeds, matter or thing (including, without limitation, signing and executing all documents and

deeds) which the Lead Partner may deem necessary or expedient or incidental or conducive to any of the matters or powers aforesaid.

2. We, the Consortium Members, further agree that all or any of the powers hereby conferred upon the Lead Partner may be exercised by any officer or officers of the Lead Partner nominated in that behalf.
3. We, the Consortium Members, further ratify, confirm and agree that commitments made and liabilities incurred by the Lead Partner shall be binding on the Consortium and the Consortium Members shall be jointly and severally responsible for the faithful performance of the contract(s) and shall, jointly and severally, discharge the liabilities under the contract(s).
4. We, the Consortium Members, further agree and undertake that the POA shall not be amended or cancelled unilaterally and without the written consent of the Owner.
5. We, the Consortium Members, further agree and undertake that this POA shall remain valid, binding and irrevocable till the completion of obligations of all the Consortium Members under the contract(s) in respect of the Project.
6. We, the Consortium Members, do hereby declare that this POA has been irrevocably granted in favour of the Lead Partner to undertake all and whatsoever acts, deeds, matters and things the Lead Partner shall do or purport to do or cause to be done by exercising the powers contained in these presents.

IN WITNESS THEREOF the Consortium Members as aforesaid have executed these presents on this _____ under the common seal(s) of their companies.

For and on behalf of the Consortium Members

Signature

Name

Designation

Signature

Name

Designation

Accepted by:

Signature

Name

Designation

[The common seal of the above Consortium Members have been affixed hereunto in the presence of]¹

¹ If required in terms of the charter documents and applicable law.

WITNESS

1. Signature :
Name :
Designation :
2. Signature :
Name :
Designation :

Notes:

1. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.
2. Wherever required by the Owner, the bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/ power of attorney in favour of the person executing this Power of Attorney evidencing the delegation of power hereunder on behalf of the bidder.
3. For a Power of Attorney executed and issued overseas, the document will also have to be attested by the Indian Embassy in the jurisdiction of the issuer and notarised in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by bidders from countries that have signed The Hague Legalisation Convention, 1961 are not required to be attested by the Indian Embassy if it carries a conforming Apostille certificate.

Prebid Clarification on Commercial Queries

ANNEXURE 1 - PREBID COMMERCIAL QUERIES / CLARIFICATIONS / CONSIDERATIONS

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML |
|------------------------|--|--|---|---|
| General Queries | | | | |
| 1 | Inspection Charges | | Travelling, hotel charges & Local transport for inspection of material at the manufacturer's factory location shall be borne by AEML. Kindly Confirm | Inspection charges means charges to carry out agreed Tests as per approved QAP & specifications at Vendors works. |
| 2 | | | Also all cost for client personnel towards inspection at our works like boarding, lodging, travelling etc shall not be in our scope of supply | All the expences i.e.(Travelling, hotel charges & Local transport) of AEML representative for inspection of material at the vendors work will be in AEML scope. |
| 3 | General | DPIIT Registration | "As per the order from Ministry of Finance has issued on subject of insertion of Rule 144 (xi) in the General Financial Rules (GFRs), 2017 dated 23/07/2020. As per this order, Bidders sharing a land border with India has to do registration with Department for Promotion of Industry and Internal Trade (DPIIT). and registration documents are required for bid submission. The above clause is applicable for MSETCL,PGCIL and other reputed organisations.We understand that same shall be applicable for this tender also.Kindly confirm if our understanding is correct" | Bidders may consider the guidelines as and where applicable for this tender. |
| 4 | General | Price Adjustment | Kindly allow price adjustment as per IEEMA clauses on major items like. Steel Structure, reinforcement steel, CT, PT, CVT, LA, PVC and XLPE Cable, EHV Cables, Earthing, Cement etc. As you may aware price fluctuation of major comodities in market is highly volatile since last few years. | Prices will be FIRM during entire contract & Extension period. |
| 5 | General | Due Date of Bid Submission | We request you to extend bid submission validity for next 15 days after clarification given by AEML to prepare complete bid in line with requirements. | Bid date extended up to 11.11.2021 |
| 6 | General | | As the offer is to be submitted on FIRM Price basis, please confirm the date of finalization of Contract. | Tentative date of Finalization of Contract latest by Dec 2021 |
| 8 | | | | |
| 9 | Tender NIT | Page no-7 of 25 Table - EMD clause (Rs.200 Lacs /- (Rupees Two Crore only) (refundable without interest) (EMD, only in the form of Online NEFT Transfer / Bank Guarantee, to be valid up to 180 days from the date of techno-commercial bid opening). All the suppliers will have to pay EMD before bid end date, without which, their price bid shall not be opened. No interest will be paid on such deposits.) | As per GOI circular no. F.9/4/2020-PPD dated 12.11.2020, Bid Security/ Earnest Money Deposit submission is exempted for all tenders issued. In view of the same, we request you to kindly exempt the Earnest Money Deposit for this tender. | EMD is applicable as mentioned under Tender NIT documents |
| 10 | Annexure-24D-Qaulification requirement | Joint venture / consortium | During discussion in the pre bid meeting AEML informed that Joint venture / consortium is applicable for this tender , but we have not seen any clause related to JV & also no format given for the JV agreement , JV POA etc. in the said tender . Please clarify & provide the same . | Please refer Amendment in ITB Clause No.2 of D-2 Section -II- NIT document No. AEML/MTB/2021-22/11 |
| 11 | General | Regarding separation of GIS & cable scope. | These two activities are very diverse & require expertise to execute the job work, it will be difficult for any single agency/contractor to complete the project in TOTO. As you are aware that GIS SS work is to be executed at single allotted space, while 220kv EHV UG cable work will execute throughout the roadside, including crossing of railway, river / nala etc. with various approvals, permissions which are involved in this work. This being 2 separate and distinct work activities specialized expertise is required. Further these activities if not bifurcated the cost also will not be competitive. As the main contractor will load his margin to our cable margin and quote rather than our price being competitive if quoted directly to you. Also this 2 separate jobs being distinct and specialized GIS manufacturer will have his Credential for the QR required rather than for Cable laying job and vise-versa. This will restrict the competition if combined for such big project job. Hence considering the above we request you to kindly split/separate the EHV cable work scope from the above tender, which will not only reduce the cost but also help in smooth execution and project completion. | Splitting of total scope in two different packages is not acceptable. Bidders has to quote for Complete scope. |
| 12 | General | Joint site visit on dt.18/10/2021 | Please clarify about Price variation , QTY variation & any extra item require to do this job . We assume it shall be paid by AEML extra as actual . Also please provide the details BOQ along with the require QTY , which will help bidder to arrive on proper estimate & same will help AEML for proper comparison . | Being a turnkey contract bidders has to calculate detailed BOQ for Completion of Complete scope. Quantity variation to complete given scope will be in Contractors scope. In case any change in scope of work same will be communicated by AEML |
| 18 | | GENERAL TERMS AND CONDITIONS (Payment terms) | Not cleared mentioned : Payments terms for supply | Please refer Annexure -25 Part-1 & 2 -STC |

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML |
|------|--|--|---|--|
| 19 | | GENERAL TERMS AND CONDITIONS (Payment terms) | Not cleared mentioned : Payments terms for Service | Please refer Annexure -25 Part-1 & 2 -STC |
| 21 | Right of way | | We request AEML to exclude ROW from bidders scope. Kindly confirm. | Not acceptable Bidders has to quote for Complete Scope of work as mentioned under Tender documents |
| 22 | 220KV Cable between BKC & Chembur Station | | We request AEML to exclude cable from bidders scope (or) to release a separate tender for cable works, which will be commercially beneficial for AEML. Kindly confirm. | Not acceptable Bidders has to quote for Complete Scope of work as mentioned under Tender documents |
| 23 | Approval & Permissions | | We request AEML to keep approvals, permissions & their fees in their scope and any documentary support required will be provided by Contractor. Kindly confirm. | Not acceptable Bidders has to quote for Complete Scope of work as mentioned under Tender documents |
| 25 | STC – High Value Domestic On-site Works- Payment Terms | Regarding Submission of 10% Performance Bank Guarantee and 10% Advance Bank Guarantee | We bring to your kind notice that disruption of Supply chain due to outbreak of Corona Virus/COVID-19 virus would be considered as extraordinary events or Circumstances beyond human control and would be termed as a natural calamity. GOI to facilitate the Domestic operations under Aatmairbhar scheme announced a series of stimulus measures, including reduction in performance security to support for stressed sectors. Considering the liquidity issues, Government of India, Ministry of Finance issued office Memorandum on 13th May 2020 and reemphasized by issued another office Memorandum "Subject: Performance Security." dt. 12th Nov 2020 Ref No. F.9/4/2020-PPD. To honour the circular issued by the Ministry of Finance, Govt. of India and to support Govt. of India development policy, we seek your acceptance to amend Performance security BG value from 10% to 3%. | Contract Performance Cum Performance Bank Guarantee and Advance Bank Guarantee shall be applicable as per Tender Document . No deviations are acceptable on the same. |
| 26 | STC – High-Value Domestic Supply- Payment Terms | 8.1 10% of the Contract Price (excluding F&TI charges) shall be paid as an initial advance through RTGS within Thirty (30) days | We presume that advance is interest free. Kindly Confirm | Advance against ABG as per T&C of contract shall be interest free, |
| 27 | STC – High-Value Domestic Supply- Payment Terms | 8.1 10% of the Contract Price (excluding F&TI charges) shall be paid as an initial advance through RTGS within Thirty (30) days..... By owner. 8.2. 80% of Contract Prices along with GST shall be paid on pro-rata basis within 60 days after receipt of material at site and submission respective payment under this clause. 8.3 Balance 10% of the Contract Price including GST shall be paid upon successful completion of handing over with in 30 days againstof the works/ facilities | As per present situation of Covid-19 , there is major impact on economic situation with liquidity crisis due to the continued lockdown in the past. Hence, in order to have better working capital of prospective bidders, we hereby request you to accept the changes in certain commercial terms as mentioned. 8.1. 8.2. 80% of Ex-Works Contract Value value (incl 100% freight & applicable Taxes) shall be paid within 60 days after receipt of material at site, through irrevocable Letter of Credit (LC) 8.3. 10% of Ex-Works Contract Value shall be paid through irrevocable Letter of Credit (LC) of 30 days upon successful completion of handing over against submission of PBG valid till completion of DLP. | Bidders has to consider AEML Standard payment terms as mentioned under tender documents however in specific case if LC payment terms asked by vendor, appropriate financial cost shall be added for price bid evaluation.(bidder has to consider 90days usance period) |
| 28 | STC – High-Value Domestic On site Works- Payment Terms | 7.1 90% of the contract price along with applicable GST shall be released against monthly progressive Running Account (RA) Bills on pro-rata basis within Sixty (60) days after receipt of clear RA bills..... RA Bills submitted without these documents. C)Balance 10% of the contract price along with GST shall be paid within Thirty (30) days upon successful taking over of the works and submission.....Owner's Project Manager. | We understand that 10% Interest free advance is applicable for Service portion also. As per present situation of Covid-19 , there is major impact on economic situation with liquidity crisis due to the continued lockdown in the past. Hence, in order to have better working capital of prospective bidders, we hereby request you to accept the changes in certain commercial terms as mentioned a. 10% Advance (interest free) of Service portion shall be paid within 15 days from LOA & against submission of ABG & CPBG b. 80% of Contract Value (incl applicable GST) shall be paid on Monthly progressive bill payment for works on pro-rata basis within 60 days after receipt of clear RA bills, through irrevocable Letter of Credit (LC) c. 10% of Contract Value (incl applicable GST) shall be paid through irrevocable Letter of Credit (LC) of 30 days upon successful completion of handing over against submission of PBG valid till completion of DLP | For Services LC payment is not acceptable, bidders has to consider AEML Standard payment terms as mentioned under Tender Docs. |
| 30 | Annexure-24C-Price Schedule-Services | AMC Charges | As per price schedule bidder has to quote for AMC changes for 60 months. We request you make this line item as an optional and same should be excluded for the evaluation. | Not acceptable Bidders has to Quote for Complete scope |
| 31 | Annexure-24C-Price Schedule-Services | Liasoning Services for 220KV EHV Cable System and for Construction of 220KV GIS Substation at BKC & Extension of 220KV GIS Chembur Substation | We understand that mentioned line item is for charges under ROW, Statutory permissions for various Govt bodies etc. required for the execution of the Project scope. Kindly Confirm. | Bidders understanding is correct. |

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML |
|------|--|--|---|--|
| 32 | STC – High-Value Domestic Supply /STC – High Value Domestic On-site Works | - | We understand that there shall be two different contracts shall be awarded Supply and Service . Kindly Confirm. | Bidders understanding is correct. |
| 33 | STC-Taxes & GTC 6. Taxes | GST shall be paid at actuals, as per the rates specified in the Price Schedule set out in 'Annexure 24C: Price Schedule'. BOCW Cess, if applicable, shall be In Contractors scope. Except GST and BOCW Cess, all applicable Taxes shall be solely payable by the Contractor, unless otherwise specified in the Service Order. The Parties agree that the BOCW Cess shall be directly paid to the relevant Government Authorities by the Employer. | With reference to the clause stated, responsibility of BOCW is contradictory. We understand that same is in Employer scope and same shall be directly paid to relevant Govt Authorities by employer. Also We understand the BOCW cess is applicable on civil works only . Please confirm. | Note STC superceded GTC: BOCW shall be in Contractors Scope. Contractors has to consider BOCW on total Service cost. |
| 34 | Annexure-24C-Price Schedule-Supply & Services and Turnkey Tender Document- 46. General BOQ | Detailed qty of the Bays and Cable length are mentioned in the General BOQ. | As per Annexure 24C Price schedule bidder is required to quote as a lot, wherein route length and detailed BOQ is not available, however as per General BOQ each quantity are mentioned. We presume that we have to quote as per General BOQ and in case on any variation in terms of quantity/scope and same shall be payable as additional works. | Bidder has to quote as per Annexure-24C, general BOQ mentioned in tender is indicative .Bidder has to calculate & specify detailed Bill of Quantity to Complete entire scope and quote lumpsum price as per pricebid format. |
| 35 | GTC- Basic Price | The Basic Price payable to the ----- ---- If the quantity variation results in an increase in the estimated value of the Basic Price, as set out in the Price Schedule, the Parties shall mutually agree upon the revised quantities to be availed under the BOQ and effect necessary amendments to the SO Documents in accordance with Clause 10. | Kindly confirm the ceiling limit for the quantity variation. | Variation in quantites for the tender scope is in bidders scope. Change in Scope if any will be communicated and discussed separately. |
| 36 | ANNEXURE-24A QUALIFYING REQUIREMENTS 2.2.1 | As per the order issued by Government of India (GoI) MOP (Ministry's Order No.25-17/6/2018- PG dated 2-7-2020), to protect critical Power Supply System & Network in the country, All equipment, components, and parts imported for use in the power Supply System and Network shall be tested in the country to check for any kind of embedded malware/trojans/cyber threat and for adherence to Indian Standards. All such testings shall be done in certified laboratories that will be designated by the Ministry of Power (MoP). Central Power Research Institute The Bidder should provide latest performance certificates from the Owner (issued in last 6 months) for the work completed & specified under clause no 2.2.1. | As per information available there is no information available on the guidelines, we request to provide the details of the equipment for which such certificate is mandatory | Refer Clause no 2.2.2 of Annexure-24 A- QR Document |
| 37 | Turnkey Tender Document 27. STATUTORY APPROVALS (SUBSTATION PART) | 27.1.1 For initiating any construction activity within MCGM / SRA Jurisdiction, Intimation of approval / Commencement Certificate (IOA/CC) is necessary and Same shall be in Turnkey Vendor Scope. AEML will provide Necessary support and documents for obtaining IOA/CC. | We request to consider all required approval for GIS Substation Land shall be in employer scope and encumbrance free land shall be awarded to bidder for commencement of the project. | Bidders has to consider scope as per tender documents. |

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML |
|------|--|---|---|---|
| 38 | Turnkey Tender Document 28. STATUTORY FOLLOW UP: OUTDOOR CABLE SCHEME(CHEMBUR-BKC) | The successful Contractor shall submit proposals for way leaves and right of way. The Contractor is entirely responsible for getting demand note & ROW permission from MCGM, MMRDA/PWD/MHADA /Railways/Forest any other government bodies so that work shall start from 15th October & carried out as per MCGM/statutory authorities' norms. Follow up/meetings with local police, RTO, private authorities, any other agencies like MTNL, etc. and all other government and local bodies. Scope also includes processing/collecting refundable deposit from above said authorities | We request employer to consider all way leaves and right of way in their scope. We understand that required Demand note/Chalan for statutory permissions charges shall be submitted to M/s AEML .M/s AEML will make the payment for the all the Govt Official including MCGM, MMRDA/PWD/MHADA /Railways/Forest. Also incase of any Bank Guarantee requirement by any of the agencies shall be submitted by Employer Kindly Confirm | Not acceptable. Arranging all ROW permission shall be in contractors sope, however statutory charges directly payable to a Govt entity, if any, shall be in AEML Scope. |
| 39 | Turnkey Tender Document 28. STATUTORY FOLLOW UP: OUTDOOR CABLE SCHEME(CHEMBUR-BKC) | The field officials of AEML-T will assist to prepare required letters to apply for permissions. The Contractor shall coordinate with MCGM authorities regarding Reinstatement charges/permissions and submits the demand note/ chalan to M/s AEML .M/s AEML will make the payment. | We understand that required Demand note/Chalan for Road restoration/Reinstatement required as per respective MCGM circle rules shall be paid by AEML directly and MCGM shall complete the Road restoration/Reinstatement works. Also incase of any Bank Guarantee requirement by any of the agencies shall be submitted by Employer Kindly Confirm | Only statutory charges asked by Government entity will be paid by AEML. Coordination with Concerned authorities for getting necessary permissions/demand note shall be in Contractors scope. RI charges for Private properties shall be in Contractors scope. |
| 40 | NIT 3.2 E-Bidding and Reverse Auction | Purchaser reserves the right to use the reverse auction as a part of the entire tendering process. All the bidders who are techno-commercial qualified on the basis of tender requirements shall participate in reverse auction. | Considering the complexity of the project, we request bidding process shall be open bid concept without conducting further reverse auction. Kindly accept. | Commercial process followed shall be at AEML discretion. |
| 45 | Clause 6.1 (C. Preparation of Bid) of Section-II ITB, Page No. 15 of 25 | Bids shall remain valid for 180 days from the due date of submission of the Bid | Please clarify the validity period of Bid. | Bids shall remain valid for 180 days from the date of submission of the Bid |
| 46 | Annexure-25 of STC – High-Value Domestic Supply | Offer validity- [Ninety (90)] days from the date of submission of the final offer | | Final Offer validity shall be Ninety (90)] days from the date of submission of the final offer |
| 47 | Clause 2 (D. Submission of Bid) of Section-II ITB, Page No. 16 of 25 | 2. ONE BID PER BIDDER No Joint Venture is acceptable. | These tenders are for 220 KV cable and GIS substation works and both these works are very specialised work. Therefore, we request you to kindly confirm that we can participate in the bidding as a consortium with following requests: 1. Invoicing/Billing/Payment terms - Each member of consortium partners will raise invoice/bills directly to AEML for their respective scope of work and AEML will pay directly to respective consortium members. 2. Request you to please provide consortium format. The sample consortium format is enclosed for your reference. 3. In case of award the contract to consortium, each member will submit CPBG/ABG to AEML for their respective scope of work. | 1) In case of consortium lead bidder shall be defined and Lead bidder shall solely responsible for execution and handing over of contract. 2) All BGs and invoices shall be submitted by lead bidder for total contract value. |
| 48 | Sl. 8.1 Payment Terms of Annexure-25 of STC – High-Value Domestic Supply | 10% of the Contract Price (excluding F&TI charges) shall be paid as an initial advance through RTGS within Thirty (30) days against submission of the following documents; a. Un-conditional acceptance of the Contract. b. Pro-forma Invoice c. Copy of Owner's acceptance of Advance Bank Guarantee (ABG) of 10% of the Contract Price (excluding F&TI charges) having validity till the end of successful delivery/ completion of entire work/ facilities under the contract with <u>a claim period of Ninety (90) days beyond validity.</u> | We request you to kindly confirm the following conditions for ABG: 1. The claim period will be one month from the end of the validity period. 2. ABG amount (10% Contract Price) should be interest free. 3. ABG is also applicable for Service Order. | 1. Claim period will be three months from the end of the valaidity period. 2) Advance against ABG as per T&C of contract shall be interest free, 3) As per payment terms Advance payment is not acceptable for Servcies hence not applicable |

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML |
|------|---|---|---|--|
| 49 | Para 2 of Annexure-28 ABG Format | with a claim period of 1 (one) month from such date, i.e. up to [●] [insert date which shall be one month from the end of validity period] or till | | Claim period will be as per Annexure-25 STC |
| 50 | Sl. 8 Payment Terms of Annexure-25 of STC – High-Value Domestic Supply 1 & 2 | 8.1. ABG- 10% Contract 8.2. 80% of Contract Prices along with GST shall be paid on pro-rata basis within 60 days after receipt of material at site and submission of following documents by Contractor: 8.3 Balance 10% of the Contract Price including GST shall be paid upon successful completion of handing over with in 30 days | 1. We request you to kindly consider the follow payment term for domestic Supply 1 & 2 as given below: 8.1 ABG- 10% of the Contract Price with interest free 8.2 80% of the contract value along with GST will be paid on pro-rata basis within 30 days after the material is received at site. 8.3 5% f the contract value after commissioning of project. 8.4 5% f the contract value after Taking over certificates. | Retain AEML standard Payment Terms as per Annexure-25 STC. |
| 51 | Sl. 8.2 Payment Terms of Annexure-25 of STC – High-Value Domestic Supply 1 & 2 | The advance released as per clause no. (A) above and retention payment withheld as per clause no. (C) below shall be adjusted on pro-rata basis while making respective payment under this clause. | Retention payment withheld as per clause no. (C) below are not included in the tender document. Please provide | Read Clause A as 8.1 and Clause C as 8.3 of Payment Terms |
| 52 | Sl. 10.1-Delay Liquidated Damages of Annexure-25 of STC – High-Value Domestic Supply 1 & 2 | In the event of delay in Supply of Goods, Installation and Commissioning due to the reasons attributable to the Contractor, the Contractor shall be liable to pay liquidated damages at the rate of Zero point five percent (0.5%) of the Total Contract Price (Supply+Services) which is delayed, for each completed week of delay or part thereof, subject to a maximum of ten percent (10%) of the <u>Total Contract Price (Supply+Services)</u> . GST shall be applicable on LD amount and Contractor is liable to pay the same | STC- Annexure-25 of STC – High-Value Domestic Supply 1 & 2 is applicable only for the supplied part. Hence, we request you to kindly amend the clause as below: In the event of delay in Supply of Goods due to the reasons attributable to the Contractor, the Contractor shall be liable to pay liquidated damages at the rate of Zero point five percent (0.5%) of the <u>Total Supply Contract Price (Supply)</u> which is delayed, for each completed week of delay or part thereof, subject to a maximum of ten percent (10%) of the <u>Total SupplyContract Price (Supply)</u> . <u>LD is to be considered on basic value excluding taxes.</u> | Being Turnkey Contract LD is Applicable on Total Supply+ Service Value . AEML standard LD Terms as per Annexure-25 STC shall prevail. |
| 54 | Para 2 of Annexure-27 CPBG Format | with a claim period of 1 (one) month from such date, i.e. upto [●] [insert date which shall be one month from the end of validity period] | We request you to kindly confirm the claim period of CPBG will be one month from the end of the validity period. | Claim Period shall be Three Months from the end of validity. |
| 55 | Sl. 12 Defect Liability Period of Annexure-25 of STC – High-Value Domestic Supply 1 & 2 & Sl. 10 Annexure-25 STC -HVD On-Site Works | The Defect Liability Period shall be [Sixty] ([60]) months from the date of successful Commissioning and Final handing & taking Over. | As per Annexure-F Annual Maintenance Contract for EHV Cable System, the bidder will provide AMC for 60 months from the date of Commissioning. Hence, We request you to kindly confirm DLP shall be 12 months from the date of successful Commissioning and Final handing & taking Over. | Bidder may kindly note that Defect Liability Period (DLP) and product warranty is 60 months from date of commissioning. However, In case of any damage due to external aggression or repair work any external requirement maintenace contract (mentioned as AMC) shall be operative. |
| 56 | Clause 1.1 - Annexure-F Annual Maintenance Contract for EHV Cable System | The Annual Maintenance Contract (Supply & services) period shall be 60 (Sixty months) from the date of Commissioning of cable scheme between BKC-Chembur. | Please confirm that the AMC period includes the Defect Liability Period. | Bidder may kindly note that Defect Liability Period (DLP) and product warranty is 60 months from date of commissioning. However, In case of any damage due to external aggression or repair work any external requirement maintenace contract (mentioned as AMC) shall be operative. |

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML |
|------|---|--|---|--|
| 57 | Clause 1.10 - Annexure-F Annual Maintenance Contract for EHV Cable System | Contractor shall quote per unit rate for installation of Jointing and termination. Contractor shall submit PBG of Rs 1 Cr with validity period of 5 years from date of commissioning of scheme. Contractor shall submit PBG of contract six (6) months before the commissioning of the scheme | Hence we Request to kindly amend the clause as below: Contractor shall quote per unit rate for installation of Jointing and termination. Contractor shall submit PBG of Rs 1 Cr with validity period of 5 years from date of commissioning of scheme. Contractor shall submit <u>PBG of contract six (1) months before the expiry of defect liability period.</u> | PBG of 1 Cr for Maintenance contract, which shall operative immediately after commissioning, need to be provided before commissioning Date |
| 58 | Sl. No. 10 of Annexure-25 STC -HVD On-Site Works | In the event of delay in Supply of Goods ,Installation and Commissioning due to the reasons attributable to the Contractor, the Contractor shall be liable to pay liquidated damages at the rate of Zero point five percent (0.5%) of the Total Contract Price (Supply+Services) which is delayed, for each completed week of delay or part thereof, subject to a maximum of ten percent (10%) of the Total Contract Price (Supply+Services). GST shall be applicable on LD amount and Contractor is liable to pay the same. | STC- Annexure-25 of STC – High-Value Domestic Supply On-Site Works is applicable only for the Service Order. Hence, we request you to kindly amend the clause as below: In the event of delay in Installation and Commissioning due to the reasons attributable to the Contractor, the Contractor shall be liable to pay liquidated damages at the rate of Zero point five percent (0.5%) of the <u>Total Service Contract Price (Service Order)</u> which is delayed, for each completed week of delay or part thereof, subject to a maximum of ten percent (10%) of the <u>Total Service Contract Price (Service Order)</u> . <u>LD is to be considered on basic value excluding taxes.</u> | Being Turnkey Contract LD is Applicable on Total Supply+ Service Value . AEML standard LD Terms as per Annexure-25 STC shall prevail. |
| 59 | Claim Period for payment terms | Payment terms for Supply & Service Order | Please confirm that the claim period for the payment terms of supply and service order shall be 30 days from the date of invoice. | Refer AEML payment terms mentioned under Annexure-25 part 1& 2 |
| 63 | General | | As the route of the cable may change during execution, unit rate of cable for supply & installation will be applicable. Kindly confirm. | Variation in quantities if any for the tender SOW is in bidders scope. Change in SOW if any will communicated and discussed separately. |

Prebid Clarification on Electrical Queries

ANNEXURE 1 - TECHNICAL QUERIES / CLARIFICATIONS / CONSIDERATIONS

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML dated 21.10.2021 |
|------------------------|--|---|--|--|
| General Queries | | | | |
| 3 | Connections - 220kV GIS to Power Transformer | | 220kV GIS to Power Transformer connections will be through Bus duct and SF6-Oil bushing. Kindly Confirm. | Connectivity to 220kV GIS to Transformer is bus duct instead of cable Bushing at transformer end - SF6-Oil bushing Please refer respective specification for details |
| 4 | Connections - 33kV GIS to Power Transformer | | 33kV GIS to Power Transformer connections will be through 1Cx630 Sq mm Aluminum XLPE cable. Kindly Confirm. | 33kV GIS to Power Transformer connections will be through 1Cx630 Sq mm Aluminum XLPE cable.(Total 30 numbers of cable (5Runs/phase) from each Transformer to GIS) |
| 5 | 220kV Cable Termination for Line feeder | | 220kV Cable Termination Kit supply, installation, testing & Commissioning for Line feeder shall be in AEML Scope. Kindly confirm. | Being a turn key project (Substation + outdoor 220 kV cable), complete supply, installation, testing & Commissioning of 220kV Cable Termination Kit for line feeder shall be in the scope of turnkey Bidder. |
| 6 | 33kV Cable Termination for Line feeder | | 33kV Cable Termination Kit supply, installation, testing & Commissioning for Line feeder shall be in AEML Scope. Kindly confirm. | 33kV Cable Termination Kit supply, installation, testing & Commissioning for Line feeder (Reactor & Capacitor) shall be in Bidder's scope. |
| 7 | Passenger Lifts | | Kindly confirm the capacity of lift and Quantity. | Please refer cl no. 12 of tender doc": TD-SD-TURNKEY TENDR -BKC-720-R2 & substation layout drawing |
| 8 | Scope of Works | ABT meter, 800xA for SCADA application, PD Monitoring, SDH & FOTE, 48V Battery, charger & Distribution board are not considered in our offer. | 1. ABT Metering is not required. 2. 800xA for LS application is removed from Bidder's scope. 3. PD monitoring is not required. 4. SDH, FOTE and associated accessories is removed from bidder's scope. 5. 48V Battery & Battery charger with 48V DCDB is not required. | 1. ABT Metering is not required. - Required 2. 800xA for LS application is removed from Bidder's scope. - It is included. Please refer bid document 3. PD monitoring is not required. - OK 4. SDH, FOTE and associated accessories is removed from bidder's scope. - It is included. Please refer bid document 5. 48V Battery & Battery charger with 48V DCDB is not required. - No required |
| 9 | Capacitor Bank | | Kindly confirm the capacity - 12.37 or 14.7 MVAR. | 12.37MVAR at 33kV and 14.7MVAR at 36kV |
| 11 | Type test - 220kV GIS | | Type test reports are already shared with AEML in previous tender. We have not considered redoing of type test for 220kV GIS. | Redoing type test is not considered in present scope provided Type test report of offered product is valid and there is no change in design done post successful type test of the offered product. If any change in design is envisaged prior to supply of the product, Type test shall be conducted as per relevant IEC |
| 12 | Type test - 33kV GIS | | Type test reports are already shared with AEML in previous tender. We have not considered redoing of type test for 33kV GIS. | Redoing type test is not considered in present scope provided Type test report of offered product is valid and there is no change in design done post successful type test of the offered product. If any change in design is envisaged prior to supply of the product, Type test shall be conducted as per relevant IEC |
| 13 | Type test - Power Transformer | | Testing shall be done as per Siemens Standard FAT Schedule only. Type test shall not be done again for the supplied units. | To be followed as per Technical Specification |
| 14 | Fire retardant paint | | We have considered application of fire retardant paint only on 220kV & 33kV EHV cable at outdoor termination points inside the substation building only. | Fire retardant paint is required for 220 kV cable. For 33 kV cables are having FRLS property as per technical specs. |
| 15 | Measurement of Bus bar dimensions for adaptor panel design | | Please note removal of NHVS GIS cover for measurement for adaptor design shall be under customer scope of supply. | This proposal is Turnkey type. Scope of removal of NHVS GIS cover for measurement for adaptor design is in bidder's scope. Deviation is not accepted |
| 16 | Measurement of Bus bar dimensions for adaptor panel design | | All necessary tools & tackles for opening the end module of existing NHVS make GIS during measurement and installation time shall be arranged by AEML. | This proposal is Turnkey type. Scope of All necessary tools & tackles for opening the end module of existing NHVS make GIS during measurement and installation time shall be in bidders's scope. Bidder may avail service from NHVS if required. Deviation is not accepted |
| 17 | Measurement of Bus bar dimensions for adaptor panel design | | Any type test requirement for the adopter designed is excluded from Siemens scope of GIS. | Adapter is basically kind of bus extension. Any type test is envisaged for this design. Please inform |
| 18 | Measurement of Bus bar dimensions for adaptor panel design | | Necessary consumable items like O rings, Gaskets, Filter bags during installation time & measurement time shall be made available to Siemens as these will be available in NHVS GIS spares. | This proposal is Turnkey type. Scope of supply of Necessary consumable items like O rings, Gaskets, Filter bags during installation time & measurement time shall be in bidders's scope. Bidder may avail service from NHVS if required, Deviation is not accepted |
| 19 | Measurement of Bus bar dimensions for adaptor panel design | | Dilo cart with storage tank & 6 empty cylinders, Gas handling pipe and valve (BN20) to be arranged during gas removal & gas filling work. We request AEML to provide the same as these will be available in their existing substation at Chembur | This proposal is Turnkey type. Necessary tools & tackles to be arranged by bidder. Deviation is not accepted |
| 20 | Measurement of Bus bar dimensions for adaptor panel design | | Customer needs to depute engineer from NHVS for GIS at there own expenses. Suitable shutdown time shall be conveyed by Siemens same shall be arranged by Customer. | This proposal is Turnkey type. Scope of service for the said activity is with bidder. Bidder may avail service from NHVS if required, Deviation is not accepted |
| 21 | 220KV EHV cable Termination at Chembur | | EHV cable, termination kits at NHVS make GIS, arranging NHVS representative for cable termination, cable trench construction for same in Chembur & BKC station shall not be in Bidder's scope. | This proposal is Turnkey type. Scope of EHV cable, termination kits at NHVS make GIS, arranging NHVS representative for cable termination, cable trench construction for same in Chembur & BKC station is in Bidder's scope.. Bidder may avail service from NHVS if required, Deviation is not accepted |
| 24 | CRP SAS | | We have not considered integration with RLDC / Central Load dispatch. | Not required |
| 25 | Liasioning Works | | Drawings shall be approved by AEML only. As it was discussed in meetings, we have not considered liasioning with MSETCL or MSEDCL for the drawings approvals. | Please elaborate specific requirement and which drawign is referred here |

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML dated 21.10.2021 |
|----------------------------|---|---|---|---|
| 26 | Construction Power & Water | | Construction water and electricity will be made available at one point in the proposed new SWYRD in free of cost. Request AEML to provide the same during execution phase. | Refer Clause 39 of Document No: TD-SD-TURNKEY TENDR -BKC-720-R2 39.1.2 At BKC: The Electricity & Water shall be arranged by Bidder, Bidder to consider the same while submitting the proposal. 39.1.3 At Chembur location: The Electricity & Water shall be provided at one point within the plot on chargeable basis at same rate as applicable to AEML, Bidder to consider the same while submitting the proposal |
| 27 | CCTV & Access control System | | We are considering standalone system of CCTV & ACS for BKC substation. Kindly confirm the same. | This will be integrated with Integrated Security Control Room (ISCR) at MIDC-Andheri Division ,and local monitoring at the BKC project gate too. |
| 28 | CCTV & Access control System | | Kindly confirm the make list to be considered for CCTV & ACS System. | Approved List from ADANI GROUP SECURITY , Ahmedabad has been shared to Porjects Team specifically OEM Brands and Genetec Technology (List is attached with this email) |
| Engineering Queries | | | | |
| 1 | General Engineering | Station Transformer | Station Transformer not considered in the scope. (Cable from Stn. Trafo to ACDB is considered) | OK. 2Nos, 11/0.415kV DT is not in present scope of supply |
| 2 | General Engineering | Distribution Transformer | Distribution Transformer not considered in the scope only foundation of 4nos. of Dist. Trafo is in scope, Please confirm. | OK. 4Nos, 33/22/11kV Power transformers is not in present scope of supply |
| 3 | General Engineering | Oil Pit | Whether Common oil pit for ICT (2P+1F) is required and its capacity? | Please clarify this point |
| 4 | General Engineering | LT Switchgear | LT Switchgear(Main ACDB, Normal ACDB, Emergency ACDB * 220V DCDB) considered as per TS LT switchgear & 220V DCDB. | Noted |
| 5 | General Engineering | Battery & Battery Charger | Battery & Battery Charger considered as per Tender doc. & Spec. | Noted |
| 6 | General Engineering | Link Boxes | As Incoming EHV cable is not in Scope, hence Link boxes sheath bonding cable & cable cleats not considered at both ends. | Being a turn key project (Substation project + outdoor 220 kV cable), complete supply, installation, testing & Commissioning of incoming 220kV Cable and associated accessories (Joints/terminations, coaxial cable, Link box, cleats, sheath bonding cable) shall be in the scope of turnkey bidder. |
| 7 | General Engineering | Creepage | 31mm/kV Creepage considered. | Please clarify for which package this data is shared. Please follow details indicated in respective specifications. We can address if there is any specific point |
| 8 | General Engineering | 33kV Cable | 33kV 1Cx630 sq.mm HT cable will be laid in Trefoil formation. | For substaion project, 33 kV cables shall be laid as per cross section drawing mentioned in Annexure E Inside substation, 33 kV cable shall be laid in Flat/trefoil as per site condition considering appropriate load balancing criteria. |
| 9 | General Engineering | HT outgoing feeder | HT cables for Outgoing feeders of 33kV 3Cx400 sq.mm HT cable from 33kV HT boards not considered in scope. | HT cables for Outgoing feeders of 33kV 3Cx400 sq.mm HT cable from existing 33kV HT boards as per Annexure E & Annexure T shall be in the scope of Bidder. However, 33 kV 3C X 400 sq mm cables from new 33 kV GIS board shall not be in the scope of Bidder. |
| 10 | General Engineering | Fire Wall | Fire wall between Power Transformer-2 & Future power transformer not considered in present scope. | To be considered as per civil bid documents |
| 11 | General Engineering | Capacitor Bank | Only 4 nos. of 33kV Capacitor banks are considered in present scope. (11kV Switchboards & Capacitor bank not considered in scope) | OK |
| 12 | General Engineering | | 33/11kV GIS Battery & 33/11kV Scada room is in AMEL scope, please confirm. | As far as building is concerned, it has to be constructed with provision to accommodate Distribution equipment (33/11kV GIS Battery & 33/11kV Scada etc) indicated as per substation drawing |
| 13 | General Engineering | Soil Resistivity | Please provide Soil Resistivity report if available, We assume 50 ohm/m for earthing calculation purpose, kindly confirm. | Soil resistivity report will be shared soon. Soil investigation report is attached for reference. |
| 14 | General Engineering | 33kV Cable runs | No. of runs not mention in 33kV SLD, we considered the no. of cable runs as per earlier SLD, kindly confirm. | It is indicated in 33kV GIS SLD. Please refer documents of present bid. |
| 15 | General Engineering | Termination Kit | Chembur & BKC substation line feeder GIS end 220kV EHV termination kit not considered in scope. | Being a turn key project (Substation project + outdoor 220 kV cable), complete supply, installation, testing & Commissioning of 220kV Cable and associated accessories (terminations, coaxial cable, Link box, cleats, sheath bonding cable) shall be in the scope of turnkey bidder.d. |
| 16 | General Engineering | | Cable Trays and Angle supports structure will be provided for the required 33kV, LT Duct & 33kV Outgoing ducts and in the 220kV Cable cellar. Road cum trench outside shall be in scope of the 220kV Cable laying vendor. | Being a turn key project (Substation project + outdoor 220 kV cable), scope of Road cum trench outside shall be in scope of the turnkey Bidder |
| 17 | General Engineering | Road cum cable trench for 220kV EHV Cable in BKC Substation. | Road cum cable trench for 220kV EHV Cable from Chembur to BKC shall not be in scope of bidder. Kindly confirm. | Being a turn key project (Substation project + outdoor 220 kV cable), scope of Road cum trench outside shall be in scope of the turnkey Bidder |
| 18 | General Engineering | Road cum cable trench for 220kV EHV Cable in BKC Substation. | Please provide the cross section details of EHV cable trench in BKC Substation outside the substaiion building. | Kindly refer Annexure E for cable configuration arrangment for 220 kV & 33 Kv CABLE. However, based on the configuration, RCC trench shall be developed by turnkey bidder |
| FFPS & HVAC | | | | |
| 1 | Turnkey Tender Document Cl.No.:-5.17 & Annexure-17A Cl.No.:-1.2 | A. Pump house- 1E.Main pump + 1D.Main Pump & 2Jockey pumps. B. 1 Booster pump at terrace of the building. C. HVWS for transformers. D. Sprinkler for vertical cable ducts. E. FDA for the building. F. Extinguishers | We have considered scope as per the said clause. Any addition to scope based on the Provisional NOC at a later date shall be executed with additional cost amendment to Siemens. | This point needs to be discussed. There is mismatch in Clause number indicated in query. Please refer revised document floated in NIT |

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML dated 21.10.2021 |
|--|---|--|---|--|
| 2 | Turnkey Tender Document Cl.No.: -5.17 & Annexure-17A Cl.No.: -1.2 | A. Pump house- 1E.Main pump + 1D.Main Pump & 2Jockey pumps. B. 1 Booster pump at terrace of the building. C. HVWS for transformers. D. Sprinkler for vertical cable ducts. E. FDA for the building. F. Extinguishers | Sprinkler system for FFPH, Lobby and office areas are not considered in our scope. This may be required during execution based on NOC requirement. Presently not envisaged in vendor scope as per contract. Hence we have not considered. | This point needs to be discussed. There is mismatch in Clause number indicated in query. Please refer revised document floated in NIT |
| 3 | Turnkey Tender Document Cl.No.: -5.17 & Annexure-17A Cl.No.: -1.2 | - | MVW Spray system is required for cable galleries as per NBC-2016 Guidelines Part-4 Fire and Life Safety Cl.No.-5.1.4 This is presently not envisaged in vendor scope as per contract. Hence we have not considered. | We will revert on this point |
| 4 | Turnkey Tender Document Cl.No.: -5.17 & Annexure-17A Cl.No.: -1.2 | - | MV panels and lift panels are required to be protected with CO ₂ /Inert gas flooding system as per NBC-2016 Guidelines Part-4 Fire and Life Safety Cl.No.-3.4.6.3 Any type of Gas flooding system (room or panel) is presently not envisaged in vendor scope as per contract. Hence we have not considered. | We will revert on this point |
| 5 | Turnkey Tender Document Cl.No.: -5.14.2 & Annexure-14A | Control & SCADA room shall be provided with Air Conditioning System. | Based on the contract scope and the layout issued, we are limiting air conditioning system only to SCADA rooms. Other rooms such as Operation room, Maintenance room, etc. are not considered with Air Conditioning system. | One of the store room also to be air conditioned. In addition to control room |
| 6 | Turnkey Tender Document Cl.No.: -5.14 & Annexure-14A | - | Scope of ventilation system is limited to the rooms/areas defined in contract. We expect that to comply NOC requirements at a later date Liftwell pressurization may be required. If necessary during execution, then same shall be executed with additional cost amendment. | Point is not understood. Kindly elaborate. Which NOC is referred here |
| CRP SAS | | | | |
| 1 | General | | Siemens 6MU8 can act as combined MU+SCU.Hence, instead of taking separate MU & SCU, combined MU and SCU can be taken. It will help in saving significant amount of cost for the customer. | This will be discussed during technical evaluation considering number of ports for process bus & station bus and other related requirements |
| 2 | ff. (Page 36) | | Clarification is needed on the clause: "Multifunction meters communicating on IEC61850-9-2 are needed". Such a solution is not a tried and tested one in market. | Ok. Noted. Please indicate deviation while submitting offer |
| 3 | gg. (Page 37) | | Clarification is needed on the clause: "Energy meters communicating on IEC61850-9-2 are needed". Such a solution is not a tried and tested one in market. | Ok. Noted. Please indicate deviation while submitting offer |
| 4 | 1.1 Scope of supply (Page 4) | | As per clause: "2 No Ethernet switch are needed for each bay." It can be optimised and will help in cost saving for the customer. | Please comply AEML requirement |
| 5 | hh. Busbar Protection (Page 41) | | Upgradation of currently installed Busbar IEDs at Chembur might be required, incase firmware of new bay units is not compatible with the firmware in Busbar IEDs installed presently. (Information of Firmware and P.Set of currently installed Busbar MCU and Bay units at Chembur is needed from client). | Details of existing decentralised bus bar protection is indicated below. New bays to be integrated in existing busbar protection. In addition to this, new bus bar protection of same make to be provided for entire station 1.MLFB of bay unit - 7SS5251-5FA01-OAA1/FF 2.Firmware Version of bay unit - VO3.32 3.Parameter set of bay unit -- (NA) 4.MLFB of Central unit - 7SS5220-5AB92-1BAO-LOR 5.Firmware Version of central unit - VO4.70.O9 6.Parameter set of central unit - VO4.72.O1 |
| 6 | j. Current Differential & Distance Prot. Relays. Page 5 & 14 | | There is a mismatch in statements written on page number 14 (j.a.) and page No.5 (1.2 b). Statement written on page number 5 states that "Distance cum Differential relays at Chembur substation shall also be IEC61850 9-2 compliant" whereas statement written on page number 14 states that "Distance cum Differential relays at Chembur substation shall be conventional". Clarification is needed on this. | Please see specs uploaded at site on 29.09.2021. There is no mismatch |
| 7 | 6.1 A&B (Page 67) | | A separate IED has been listed for Local Breaker Backup/Breaker Failure function. This function can be provided in the Busbar IED itself. Hence cost of providing an additional device for the same can be saved. | Please comply AEML requirement |
| 8 | 7.B.3 (Page 59) | | 2 Spare Merging Units and 1 spare Switchgear Control Unit has been listed in spares of Chembur SS. Conventional solution has been asked for that SS. Hence, are they required? | It is for differential protection relays |
| 9 | General | | 2 nos. Ethernet switch for PB and 2 nos. ethernet switch for SB have been considered per bay. We recommend to consider 2 nos. ethernet switch per PB and 2 nos. ethernet switch per two bays. | Please comply AEML requirement |
| 10 | General | | 2 nos. of ethernet switch per bay in the SB has been considered. We recommend 2 ethernet switches for two bays | Please comply AEML requirement |
| 11 | General | | PRP has been considered for PB and we recommend to use RSTP ring for Station Bus | Station bus shall be on PRP |
| 12 | General | | There are requirement of 8 nos. of Firewall. We recommend to use 2 nos. of firewall for the complete substation. | 8nos firewall shall be considered |
| 13 | General | | 6.14 CCTV INTEGRATION: Video camera shall be available in the Integration Server. It will not be integrated with SCADA. Please confirm. | CCTV Camera to be integrated with SCADA. |
| 220kV GIS Queries / Assumptions | | | | |
| 1 | 1.1.5.1 | Scope of supply shall be delivered within eight (8) months from the date of placement of purchase order. | We confirm to supply GIS within 6 months from the date of drawings approval/manufacturing clearance. However Supply of GIS shall be aligned as per the L2 schedule which will be prepared keeping in mind the civil completion. Request AEML to remove this clause. | Project execution shall be completed as per Overall time line of the project commissioning schedule. Please inform which clause removal is referred here |
| 2 | 5.1.6 | The GIS assembly shall consist of separate modular compartments e.g. Circuit Breaker compartment, Bus bar compartment filled with SF6 Gas and separated by gas tight partitions so as to minimize risk to human life, allow ease of maintenance and limit the effects of gas leaks failures & internal arcs etc. | The busbar proposed for subject tender is a passive three phase encapsulated busbar wherein busbar and disconnector are in separate gas compartment. So the failure possibility in the busbar is very low. Considering this advantage we confirm to you that there shall be compartment/segregation between busbar to disconnector however busbar of one bay to adjacent will not be segregated. We would like to assure you further that all service continuity aspects are met with this configuration. | Noted. Same will be evaluated during technical evaluation |

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML dated 21.10.2021 |
|--|--|---|--|--|
| 3 | 5.3.3 | Continuous bus bar lengths without gas segregation shall not be acceptable | The busbar proposed for subject tender is a passive three phase encapsulated busbar wherein busbar and disconnecter are in separate gas compartment. So the failure possibility in the busbar is very low. Considering this advantage we confirm to you that there shall be compartment/segregation between busbar to disconnecter however busbar of one bay to adjacent will not be segregated. We would like to assure you further that all service continuity aspects are met with this configuration. | Noted. Same will be evaluated during technical evaluation |
| 4 | 5.9.6 | Fast acting earth switch shall have provision for testing of EHV feeder cable at 50kV | Due to design and space constraint 50kV DC withstand FSES cannot be achieved. However we confirm you to provide the insulation strength of 30kV. Please accept. | This point to be complied. It is a requirement for testing |
| 5 | 5.12.7 | The supplied cable voltage detection system shall detect cable energization and de-energization condition and status of the same shall be provided with 4 nos. of potential free contacts for scheme interlocking purpose. | Please note the detection of voltage can be done with the help of CVT/EMVT and the outputs can be transmitted to under voltage relays in CRP. So we do not envisage the requirement of this kind of arrangement. Please confirm. | Please comply AEML requirement |
| 6 | 6.1.25 | Enclosure shall provide ingress protection of IP67W. | IP class for enclosure are not applicable as per IEC standards. In case of pressurized chambers IP class are not applicable. However IEC 62271-203 calls for IP class for drives, enclosures and drive cubicles and for these components we are in line with IEC standards. | Noted |
| 7 | 6.2.1 | The bus bars shall be single-phase segregated. | The busbar proposed for subject tender is a passive three phase encapsulated busbar wherein busbar and disconnecter are in separate gas compartment. So the failure possibility in the busbar is very low. Considering this advantage we confirm to you that there shall be compartment/segregation between busbar to disconnecter however busbar of one bay to adjacent will not be segregated. We would like to assure you further that all service continuity aspects are met with this configuration. | Please inform why this point is raised. Clause details 6.2.1 indicated is incomplete |
| 8 | 6.6.4 | After an opening operation of a pressure relief valve, it shall reclose before the pressure has fallen to 75 % of the design pressure. | Please note if the rupture disc is operated then we need to replace the same with new. Reclosure facility cannot be provided as this design is not applicable. | Noted |
| 9 | 7.1.19 | Online monitoring of SF6 bushing shall be possible | Please note in case of SF6 to air bushing of GIS online monitoring is not applicable. | Noted |
| 10 | 9.1.1 | The type test reports shall be for the tests conducted within the last five (5) years | We have successfully conducted the type test report on 220kV GIS from Indian Works. We confirm to you that since the date of type test there is no change in the design of the product. Further we would request you to extend validity of type test report from 5 years to 10 years. Please note there is no change in product design. Change in the product design only calls for type test. So we have not conducted the same. | Noted. Deviation shall be indicated while submitting offer |
| 11 | 9.4.2 | Tests to determine the quantity of moisture ,air,CF4 Toxicity test | Please note SF6 gas are tested with all the parameters however these tests cannot be conducted at GIS manufacturer's premises. However SF6 gas vendor perform these test and we can produce the RTC of the same. | OK |
| 12 | | SPARES | Please note there are lot of items in the spare list which are repetitive. The note of the same has been mentioned. Request you to please re-look into the same and let us know if we need to remove few items from our scope. | There are no repetitive items in spare. . Please consider as per bid documents |
| 13 | 6.1.36 | At each gas compartment, provision shall be made for connecting online moisture measurement system. | Supply of Online moisture measurement is not in bidder's scope. Kindly Confirm. | OK |
| 33KV GIS QUERIES / CLARIFICATIONS | | | | |
| 1 | 2.1.1 | Switch board shall be extendable at both ends. Bidder to consider extension piece and other necessary arrangement for future expansion | The switchboard shall be suitable for extension at either end. However the actual extension material required shall depend on no of bays to be added and no of bays present in existing bus. Thus the extension material required shall be part of future extension PO and not part of current supply. | Noted. Point is there shall be provision to extend future bays in board to be supplied. |
| 2 | 3.2.1 | Maximum Ambient Temperature : 50°C | The design ambient for offered GIS is 40 degree C. At 50 degree ambient temperature, GIS is suitable to work but shall have following deration: Busbar (2500 A @ 40°C) = 2480 A @ 50°C , 50Hz Incomer & Bus Coupler (2500 A @ 40°C) = 2345 A @ 50°C , 50Hz Feeder (1250 A @ 40°C) = 1240 A @ 50°C , 50Hz Busbar(2500 A @ 40°C) = 2480 A @ 50°C , 50Hz. Above selection in line with past supply to client for "33 KV GIS Switchgear for Mumbai Transmission at Goregaon Substation" | Noted. Whatever derating indicated is without any forced cooling of 33kV GIS board, Please confirm |
| 3 | 3.3.7 | IP4X for the supporting frames, low voltage and other compartments. | Remaining enclosure apart from LV compartment(IP4X) and SF6 gas tank(IP65) will confirm to IP3X. Above in line with past supply to client for "33 KV GIS Switchgear for Mumbai Transmission at Goregaon Substation" | What are the parts with IP3X Ingress protection |
| 4 | 3.3.9 | GIS Switchgears shall be partitioned both between the busbar & circuit breaker and from panel to panel. | The busbar compartment is gas tight partitioned per bus-section per phase i.e for eg: in one bus-section of 8 bays, there shall be 3 gas partitions(R,Y,B) each of width of 8 bays. Individual bay busbar gas partition is not applicable | Noted |
| 5 | 3.3.14 | Active and passive protection system against internal faults in each partitioned panel shall be provided for the safety of operators. In case of internal fault, the detection system shall open all circuit breakers within 100ms. | The protection in GIS is due to overpressure which shall cause rupture diaphragm to open and also change SF6 manometer contact to high which is used in tripping circuit of VCB. No other active passive protection applicable in GIS | Noted |

| S.No | Tender Specification / Amendment/ clause | Description | Query from Siemens dated 20.10.2021 | Reply from AEML dated 21.10.2021 |
|------|--|--|--|--|
| 6 | 3.3.15 | The orientation of pressure relief vents and gas exhaust ducts as necessary shall be designed as per the site layout and exhaust available through windows. | Each 8DA10 has pressure relief devices (bursting disc) as a safety feature to handle the switchgear behavior in a controlled manner in the events of any occurrence of flash over (although very rare) Each CB compartment has separate bursting disc, while busbar compartment(inclusive of Three position switch) is continues and has bursting disc at each end of switchboard (extreme panels). Due to 1-phase encapsulation design only phase to ground faults can occur which have a much lower energy values compared to 3-phase encapsulated switchgears (3 times higher in worst case as three arcs can burn simultaneously). Depending on the network grounding concept the fault currents in 8DA10 can be even lower (resistor grounded networks can limit fault currents just upto 1000 A) It's only in 3-phase encapsulated design a pressure relief duct is recommended as otherwise the IAC classification A FLR could not be achieved for such high arc fault energy. Our design has other inherent benefits which makes it best suited for your requirements. Hence pressure relief duct is not required | Noted |
| 7 | 3.3.18 | SF6 pressure indicator, pressure switches and pressure gauges shall be provided for each individual gas compartments and shall have appropriate number of potential free contacts and 4-20mA output for alarms and SCADA integration | We can provide only Auxiliary contacts for manometer in line with past supply to Goregaon. Please confirm acceptance for same | Please take deviation on this point while submitting offer |
| 8 | 3.3.20 | The cable connection compartment shall contain the cable sockets accessible for fitting of the power cable plugs and the test cable sockets, which shall also accommodate the plug in voltage transformers if applicable | For feeders with Line PT/Line LA, the test cable socket is accessible by removal of Line LA/LPT (removal mandatory during testing). Necessary brackets shall be provided for mounting Line PT to the basement side wall. | Noted |
| 9 | 3.3.16 | The design of mechanisms shall allow maintenance of the switching device and if this requires manual closing or opening (sometimes known as slow closing and opening) the facility shall be provided such that it is not possible in the service or earthing condition unless each operation requires a manipulation different from a normal operation | "unless each operation requires a manipulation different from a normal operation" requirement not clear. | IT is about earthing shall not be allowed in service position |
| 10 | 3.3.24 | Energy meter & ABT Meter shall be provided on all feeders as per SLD | Specs of Energy meter and ABT meter is not provided. We understand we have to quote as per past supply to AEML Goregaon confirming to 5 min data integration period | Yes. In addition to this, Energy Meter shall be ABT compliant with DLMS protocol. DLMS Protocol shall be available on 4 types of ports - Optical port on front, RS485, RS232 and Ethernet port. |
| 11 | 3.5.2 | Over-voltage suppressor | Surge arrester not mentioned in BOQ or in SLD. Also offered CB does not have over voltage during switching operation. Hence SA not applicable | Noted |
| 12 | 3.11.9 | Pad locking arrangement to be provided for VT isolating switch | We don't have isolator for line VT. Line VT provided with isolating cable of 4 meters which acts as isolator during maintenance/testing. Bus VT shall be provided with isolator as per SLD | OK |
| 13 | 4.5.2 | Input from various pressure gauges & sensors shall have appropriate number of potential free contact and analog 4-20mA output for alarm, interlocks & SCADA integration | We can provide only Auxiliary contacts for manometer in line with past supply to Goregaon | Please take deviation on this point while submitting offer |
| 14 | 6.1.6 | BUYER reserves the right to inspect switchgear at the Manufacturer's works at any time to prove compliance with specification | Intermediate Stage inspection is not feasible. Inspection call shall be raised complete HV, LV GIS integration at our Goa works. Also all cost for client personnel towards inspection at our works like boarding, lodging, travelling etc shall not be in our scope of supply | Intermediate Stage inspection is not feasible. Inspection call shall be raised complete HV, LV GIS integration at our Goa works. - Noted Also all cost for client personnel towards inspection at our works like boarding, lodging, travelling etc shall not be in our scope of supply - To be discussed during commercial negotiation with CPG |
| 15 | 1.7 | 1.7 Atmospheric Condition Harsh Contaminated by Corrosive gases & salt (GX as per ISA 71.04 & Class 4 (special) as per IEC 60654-4) | For GIS Relays shall be conformal coated in line with current order for AEML Adani, Versova and Ghodbunder | Please inform for which climatic condition (GX, G3 etc) it is suitable |
| 16 | 3.24.1.3 | No. of Contacts (Minimum) :4 (2-Interlocking, 2-Tripping) | As per clause 3.24.1.2, we shall offer 3 stage manometer low, very low and high. Very high is not applicable in our design. Suitable contact multiplier shall be provided as applicable | OK |
| 17 | 3.24.1.4 | No. of Contacts for Alarm (Minimum) 4 (1-Low, 1-Severe Low, 1-High, 1-Severe High) | As per clause 3.24.1.2, we shall offer 3 stage manometer low, very low and high. Very high is not applicable in our design. Suitable contact multiplier shall be provided as applicable | OK |
| 18 | B-2 | Circuit breaker complete with drive mechanism & accessories - 2500A | We understand we have to quote only VI bottles and drive mechanism for respective rating of CB. | Please inform what other this is included in said line item |
| 19 | SLD | Note 10: PT primary shall be provided with disconnecting and earthing facility | Bus-VT: Confirmed; Line VT- Shall be provided with isolating cable. Earthing not applicable. Above in line with past supply to client for "33 KV GIS Switchgear for Mumbai Transmission at Goregaon Substation" | Ok. |

PRE-BID QUERIES A/c AEML Tender No. AEML/MTB/2021-22/11

| Sr. No. | Pre-Bid queries | AEML Response on 26.10.2021 |
|----------------|---|---|
| 1 | Please refer Annexure 24A – Qualifying requirement clause no 3 - SI no 11, please include type test certificate from ERDA. | Not Accepted |
| 2 | Please confirm similar or higher rating TTR shall be acceptable. | Generally TTR of higher rated equipment of similar design is acceptable. However, you may please inform which equipment is being referred here. We will obtain response from concerned team |
| 3 | Please share any approved vendor list need to be followed. | Approved vendor list is a part of respective Technical specifications. Please refer the same |
| 4 | Please share SLD, Layout, section & CRB equipment layout of existing SS (Chembur). | SLD and layout of 220kV GIS floor is part of Turnkey tender document : Technical specification:D-SP-220kV-GIS-GIL-BKC/UNIVERSITY-428-R3: Annexure 3 (PDF page no 152). If any specific requirement is there, please let us know CRB location (available space) in control room is shown and discussed during site visit. |
| 5 | We request clarification on methodology adopted for Nalla & River Crossing viz. HDD, Cable Bridge, Monopole, or existing bridge support wherever applicable. | As discussed during site visit, Bidder to follow methodology as per directives from Statutory Authorities. As per technical specs, Bidder to develop the drawing & methodology for Nalla & River Crossing viz. HDD, Cable Bridge, Monopole, or existing bridge support wherever applicable. |
| 6 | Please confirm railway crossings to be executed through HDD method only or any other method acceptable to railway shall be accepted by AEML. | Bidder to coordinate with Railway authorities and as per directives from Railway, execution methodology shall be adopted. |
| 7 | Please note Corporation/MMRDA doesn't allow work in monsoon which may please be consider in completion of project. | Considering the monsoon season, Bidder to execute and complete the project as per timeline specified by AEML. |
| 8 | As per PPT, 33kV Cable Laying also to be considered in 22OKV Cable trench. Please confirm width of trench to be maintained as there may be interference in both the cables. | Refer Annexure E for typical trench cross section drawing. |
| 9 | Please confirm any utility approval is required pertaining to Cable Laying. | Coordination with utilities in case of safegurading of cables/waterpipeline/gas line/drainage/swd/communications cables etc. shall be in the scope of Bidder. |
| 10 | Please confirm whether PTCC/EIG approval is required. | Yes required |

| Sr. No | Bidder Query | AEML Reply |
|--------|--|--|
| 1. | Who will be the civil and electrical design approval authority? | Please elaborate which drawing is referring to |
| 2. | Water and electricity for construction purpose will be provided by you or in bidder scope? | As per document No: TD-SD-TURNKEY TENDR - BKC-720-R2, Clause No: 39: The Electricity & Water shall be arranged by Bidder, Bidder to consider the same while submitting the proposal. |
| 3. | Is there any further approval required from any authority for substation work? | Please refer clause No: 27 of document No: TD-SD-TURNKEY TENDR -BKC-720-R2, |
| 5. | Please provide the number of bays which would be configured in SCADA (@BKC substation). | All IEDs & bays in the substation (220kV, 33kV & 415V) to be configured in SCADA. Details to be seen in respective specification which is part of bid documents |
| 6. | Please provide your confirmation for the requirement of the Busbar panel at the Chembur substation. | 1. At Chembur, 2Nos new 220kV GIS bays to be configured in existing Siemens make decentralised bus bar protection. Details of existing decentralised bus bar protection is indicated below. New bays to be integrated in existing busbar protection. In addition to this, new bus bar protection of same make to be provided for entire station 1.MLFB of bay unit - 7SS5251-5FA01-OAA1/FF 2.Firmware Version of bay unit - VO3.32 3.Parameter set of bay unit -- (NA) 4.MLFB of Central unit - 7SS5220-5AB92-1BAO-LOR 5.Firmware Version of central unit - VO4.70.09 6.Parameter set of central unit - VO4.72.01 Scope is clearly indicate in clause no: 1.2 and 5.ii of 220kV CRP specification: - TD-SP-220KV-CRP - BKC/UNIVERSITY-467-R3: Annexure 6A |
| 7. | Please share the substation layout including the dimension of 220kV GIS building length, width and location of Power transformer and other equipments. | It is part of Turnkey tender document: Attached for ready reference |
| 8. | Please share the soil investigation report of substation | Shall be provided |
| 9. | Please provide the approved vendor list. | It is a part of individual technical specification. |
| 10 | Please provide the specification of all electrical items | It is part of turnkey document which floated on 29/09/2021. All documents are uploaded at site. List of Annexure is attached for reference |

| S.No. | Documents Name | Clause No./ Head | Descriptions | Clarification Required | AEML Response on 21.10.2021 |
|-------|--|------------------|---|---|--|
| 1 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | 3.1.2 | Scope shall also cover the Supply, Installation, testing & commissioning of 2 Nos of 220kV GIS line bays alongwith extension module of existing NHVS make 220kV GIS Bus | Kindly Provide layout drawings for 220 kV Chmbur Substaation | Layout of GIS floor is attached in Turnkey Tender Document: Technical Specification: TD-SP-220kV-GIS-GIL-BKC/UNIVERSITY-428-R3: Annexure 3 (PDF page no 152). If any specific requirement is there, please let us know |
| | | | | Kindly provide GA drawings of extension module of existing 220 kV NHVS GIS at Chembur Sub-station. | This proposal is Turnkey type. Bidder shall avail service from OEM of existing GIS (NHVS) for extension of 2Nos 220kV GIS. |
| | | | | Kindly provide detaile of existiing bus bar protection for 220 kV GIS at Chembur Sub-stataion. Please clarifiy scope of bus bar protection & integration of 2 No's bays in existing bus bar protection. | Details of existitng decentralised bus bar protection is indicated below. New bays to be integrated in existitng busbar protection. In addition to this, new bus bar protection of same make to be provided for entire station 1.MLFB of bay unit - 7SS5251-5FA01-OAA1/FF 2.Firmware Version of bay unit - VO3.32 3.Parameter set of bay unit -- (NA) 4.MLFB of Central unit - 7SS5220-5AB92-1BAO-LOR 5.Firmware Version of central unit - VO4.70.09 6.Parameter set of central unit - VO4.72.01 |
| 2 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | 5.3.4 | Transformer feeders shall be connected with SF6 gas insulated bus Duct (GIBD) | Please conform location of 220 kV LA for Transformer Feeder i.e. Whether Outdoor type or along with GIS | It is clearely mentioned in Turnkey document: 220kV LA is part of 220kV GIS |
| 3 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | 5.4.1 | Supply of three phase 125MVA Power Transformer with synthetic ester oil complete with all accessories, NIFPS (Nitrogen Injection Fire Protection System), | We don't envisage requirement of HVWS system for Transformer Fire protection , Please confirm. | Deviaton Not accepted: HVWS system shall be provided as per Technical specification. |
| 4 | | | General | Kindly Provide plot layout and Soil Investigation report for porposed plot. | Please refer Annexure 24H for substation layout drawing. Soil Invesrigation report is atatched for reference |
| 5 | | | General | 220 kV GIS Extension at Chembur Substation shall be carried under the supervision of 220 kV GIS Manufacturer (NHVS). All works related to extension such as Gas recovery, cleaning, coordination for installation adopter in GIS termination , Gas filling etc. will be done under supervision of AEML / GIS OEM shall be taken care by AEML/GIS OEM. We have not considered any of these works in our scope. | Deviation Not accepted: Request to consider the scope as per tender document |
| 6 | | | General | We don't envisage testing of entire GIS bays after extension of 2 No's bays in existing GIS. Onle extended portion shall be considered for testing. Please confirm. | All Pre commissioning test to be done only for extented portion. |

| S.No. | Documents Name | Clause No./ Head | Descriptions | Clarification Required | AEML Response on 21.10.2021 |
|-------|--|------------------|--|--|--|
| 7 | | | General | We have not considered testing of existing 220 kV LCC & CRP in our scope. Only Communication of 220 kV IEDs to existing SCADA is considered in the scope. Supply of hardwar , Software, Licence etc is not considered in scope. | We have not considered testing of existing 220 kV LCC & CRP in our scop - : Your understanding Is correct only Communication of 220 kV IEDs to existing SCADA is considered in the scope. Supply of hardwar , Software, Licence etc is not considered in scope.: Integration of new relays with local SCADA, gateway and indication to remote control center is in bidder's scope. Hardware to be considered as per bid documents. New license is not required. Please refer specification to understand scope of integration (supply & service) of new bays to existing SCADA |
| 8 | | | General | Kindly provide .dwg (Cad) copy of layout plan of Chembur Substation to evaluate the quantities of LOT items. | Bidder is requested to convey the exact requirement. Accordingly AEML shall provide the relevant dwg copy |
| 9 | | | General | Augmentation of DC & AC auxiliary system in existing 220 kV Chembur GIS substation is not considered in the scope. We assumen that sufficient number of AC & DC feeders are available in exisiting ACDB/DCDB. | YES : Spares AC &DC feeders available. |
| 10 | | | General | Please confirm whether floor cut outs are available in existing 220 kV GIS hall at Chembur sub-station. | Yes It is available, However necessesory modifications are in the scope of bidder |
| 11 | | | General | We have not considered in Insulation coordination study for selection of LA . Outdoor type LA is considered at 220 kV side of Transformer. | 220kV LA to be considred in 220kV GIS. Please comply AEML requirement |
| 12 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | 5.8.3 | Line differential cum distance protection relays to be supplied for both line bays at Chembur substation shall be process buse type to establish differential scheme with remote end Process bus based relays at BKC | Please confirm whethe exisiting SCADA at Chembur GIS is Process bus complaint. Please provide make of existing SCADA and scope involved for integration of 2 No's Line bay in exisiting SCADA. Supply of additional Hardware , Software, Licence etc. are not considered in our scope. | SCADA works on station bus not on process bus. It is based on IEC 61850 protocol. ABB make SCADA is at Chembur. 800xA for LS application ,MicroSCADA for Gateway and Network Manager for Control Center. Please refer specification for scope and BOM |
| 13 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | 5.8.6 | Standalone numerical relay shall be considered for LBB protection of all bays. | LBB can be inbuilt of Bus bar protection , Please accept. | Please provide standalone LBB relay as per AEML requirement |
| 14 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | 5.1 | Existing FOX-615 at Chembur sub-station shall be used with additional tele-protection cards to meet the tele-protection communication requirement between Chembur and BKC substation | Please provide drawings for existing FOX-615 equipment at Chembur Sub-station. | Drawings will be shared post order placement. If any specifc query is there, we will calrify |
| 15 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | 5.11 | CYBER SECURITY COMPLIANCE | Please include seprate timelines in project schedule for CPRI testing of communication equipment and relays since it is not in our perview and control. | This requirement to be complied. No additaional timeline will be provided for this |

| S.No. | Documents Name | Clause No./ Head | Descriptions | Clarification Required | AEML Response on 21.10.2021 |
|-------|--------------------|------------------|-----------------------------|--|--|
| 19 | Site Visit Queries | | Site office and Labour Hunt | Kindly allot temporary space for site office, material storage and labour hunt adjacent to the site location. | AEML shall not be able to allot any space other than earmarked site. However, after handover of site to the successful bidder, the bidder can utilize the space for temporary office, material storage (no space inside the premises can be utilized for labor camp) as per the layout availability and approval from AEML inside the earmarked boundary. AEML shall not be responsible for any space usage by the bidder outside the earmarked boundary |
| 20 | Site Visit Queries | | Cable route | We have been advised during site visit that bidder should explore their own way for cable routine and accordingly approvals from authority like MCGM, MMRDA to be obtained. As a bidder we propose AEML to provide firm cable route with any arrangement needs to be made at river crossing, railway crossing, Highway crossing as per regulation of authority like MCGM, MMRDA. | It was discussed during site visit that route is fixed between BKC-Chembur. However, cable route alignment (Right or left) shall be freezed as per guidelines/directives from respective statutory Authorities. As per technical specifications, Obtaining demand note from Statutory authorities and necessary coordination is in the scope of Bidder. Bidder to coordinate with respective authorities and finalized the route alignment. |
| 21 | Site Visit Queries | | Cable route | We have observed many encroachment on cable routine. We propose AEML to kindly take care to clear any encroachment in cable routine. | As per cable route shown during site visit, we have not observed major encroachment along 220 kV cable route. However, as per technical specifications, clearing encroachment if any is in the scope of Bidder. |
| 22 | General | | Tender documents | We have observed many tender documents as mentioned in tender document list are missing. Kindly provide the all document for complete study of tender documents. | All the documents are uploaded at site, please specify which document is missing |

PREBID QUERIES TECHNICAL CLARIFICATION FOR GIS

| S.No | Reference Document | Reference Clause/DocNo. | Technical Issue | Customer's Requirement | Bidder's Remarks | Customer's Reply on 25.10.2021 |
|------|------------------------|--|--------------------------|--|--|--|
| 1 | General | - | Type of location | Customer's Requirement: 1) As per Overall Scope Document :- Indoor GIS Bays. 2) As per GTP :- Outdoor GIS Bays. | Bidder's Remarks: We would like to inform you that, there is a discrepancy in location of GIS mentioned in the Overall scope document and GTP. So we would like to know wheather the GIS location is Indoor or Outdoor. Kindly provide / clarify the same. | 220kV GIS at both station is Indoor type |
| 2 | General | - | Layout | Customer's Requirement: N/A | Bidder's Remarks: We would like to inform you that, we did not receive overall detailed layout area for GIS installation so we have considered area as per our standard practice. Kindly provide us the autocad layout and it termination points for GIB length estimation Kindly accept the same. | Please refer Annexure 24C for Substation layout drawing |
| 3 | General | - | Scope of work | Customer's Requirement: N/A | Bidder's Remarks: We would like to inform you that, as per given SLD. We understand that the GIS supply scope shall be as follow: BKC S/S 1.2 no. of line bays (DS+DS+ES+CT+CB+CT+ES+DS+HES+VT+CSE) 2. 2 no. of Trafo bays (DS+DS+ES+CT+CB+CT+ES+DS+HES+LA+GIB) 3. B/C- (DS+ES+CT+CB+CT+ES+DS) 4. Bus VT (Busbar HES+DS+ES+VT) 5. Space for 2 NO of future bays Chembur S/S 1. Adapter module 2. 2 no. of 220kV line bays (DS+DS+ES+CT+CB+CT+ES+DS+HES+VT+CSE) 3. Extension module for future extension. Kindly confirm our understanding. | BKC - Please refer SLD which is part of 220kV GIS specification TD-SP-220kV-GIS-GIL-BKC/UNIVERSITY-428-R3 for details. To get details of bay element, please refer SLD Chembur - Please refer SLD which is part of 220kV GIS specification TD-SP-220kV-GIS-GIL-BKC/UNIVERSITY-428-R3 for details. To get details of bay element, please refer SLD |
| 4 | Overall Scope Document | 11. EOT / MONO RAIL CRANE SYSTEM FOR SUBSTATION | EOT | Customer's Requirement: EOT Crane of capacity suitable for GIS erection and maintenance works (not less than 5T) shall be provided for future maintenance and ETC work in GIS building. | Bidder's Remarks: We would like to inform you that, the supply, installation, testing & commissioning of EOT crane and all calculations shall be under EPC scope of supply. Kindly confirm the same. | Proposal is turnkey type. Entire Scope of proposal is with Turnkey bidder. Turst, Hyusong is one of the bidders for the proposal |
| 5 | ANNEXURE-1A | 8. TESTING AND INSPECTION. 8.1 TESTING & INSPECTION - 220KV GIS | Type Test Report | Customer's Requirement: a) The equipment offered must be of type tested quality. It shall conform to the type tests in accordance with the latest relevant IEC Standards. The list of type tests conducted by the bidders shall be listed out and the type test reports submitted by the bidder along with the quotation. The type test reports shall be for the tests conducted within the last five (5) years. The purchaser may like to conduct any of the type tests repeated. The price for conducting the type tests in such cases shall be indicated in the offer. Following minimum type tests shall have been carried out by the bidder as IEC-62271-203 b) AEML may at his option, get any or all the type test or any other test of a reasonable nature carried out in presence of AEML inspector for which payment shall be borne by the Bidder. | Bidder's Remarks: We would like to inform you that, Our GIS is Type tested as per IEC 62271-1 as per list of tests attached along with Tender. We haven't envisaged to re-conduct Type Test. We have submitted the Type Test reports done in past along with tender. In case customer needs additional Tests or Re-testings the cost for same shall be in customer account or shall be conveyed before offer finalization. This will also have time implication. Also we have not considered any additional cost for type test/special test. Kindly confirm the same. | Redoing type test is not considered in present scope provided Type test report of offered product is valid and there is no change in design done post successful type test of the offered product. If any change in design is envisaged prior to supply of the product, Type test shall be conducted as per relevant IEC |
| 6 | ANNEXURE-1A | 1.1.4 Mounting and wiring option of process bus equipment to be supplied by CRP Vendor | Process Bus | Customer's Requirement: 2. GIS vendor shall provide cut out for mounting process bus equipment in LCC panel. Terminal block, MCB to provide aux supply and other panel accessory if any to accommodate process bus equipment to be considered by GIS vendor. 3. Mounting and wiring of these set of equipment shall be done at AEML site/GIS Factory. Dimension of the equipment shall be shared by CRP vendor. | Bidder's Remarks: We would like to inform you that, process bus is used for interfacing of IED from CRP alongwith the given equipments hence these are in CRP scope of supply it is convenient practice, also the mounting and wiring of these sets in CRP and shall be done at AEML side only. LCC are only used for controlling purpose. Kindly accept the same. | Proposal is turnkey type. Entire Scope of proposal is with Turnkey bidder. Turst, Hyusong is one of the bidders for the proposal |
| 7 | ANNEXURE-1A | 5.8 Circuit Breaker: 5.8.11 : r | Mobile Motor | Customer's Requirement: During failure of motor drive, charging of operating mechanism shall be possible by connecting a mobile motor. The mobile motor shall be in a vermin proof box. This mobile motor along with the box shall be supplied along with main equipment and cost shall be included under special tools. | Bidder's Remarks: We would like to inform you that, as per our design practice In case of failure of motor drive. The manual charging arrangement with handacranes is capable for charging of the operating mechanism. There is no need of mobile motor. That's why we will not provide the same. Kindly accept the same. | Noted |
| 8 | ANNEXURE-1A | 1.1 Scope of Supply | Voltage Detection device | Customer's Requirement: a) Two (2) Nos. of 245kV Gas insulated switchgear (GIS) Line bays, LCC, Voltage detection device, accessories, support structure, etc as per SLD attached. b) Two (2) Nos of 245kV Transformer bays LCC, Voltage detection device, accessories, support structure, etc as per SLD attached | Bidder's Remarks: We would like to clarify you that, we shall provide voltage detectors only on end compartments(CSE/GIB) Kindly confirm the same. | Ok. It is for detection of voltage on cable / GIBD. Accordingly same shall be considered |

| S.No | Reference Document | Reference Clause/DocNo. | Technical Issue | Customer's Requirement | Bidder's Remarks | Customer's Reply on 25.10.2021 |
|------|---------------------------------------|---|--------------------------------|--|--|---|
| 9 | ANNEXURE-1A | 1.1 Scope of Supply-Gas Insulated Line (GIL) | Gas Insulated Line (GIL) | Customer's Requirement: Design, engineering, manufacturing, inspection, testing, packing, loading, dispatch, transportation with transit insurance, unloading and delivery at site of 245kV <u>Gas Insulated Line / Bus duct</u> With SF6 gas and accessories as detailed below as per this specification, BOM and single line diagram attached in Annexure-1 | Bidder's Remarks: We would like to inform you that, there is discrepancy in Gas Insulated Line and Gas Insulated Bus Duct mentioned in Technical specification. However we will provide Gas insulated Bus duct (GIB) for connecting power transformer. we have considered GIB only. Please let us know whether you required GIB or GIL and kindly clarify purpose behind it. Kindly accept the same. | GIB is OK considering requirement |
| 10 | ANNEXURE-1A | 5.10 Current Transformer: 5.10.9: Constructional Details | Aux. CT | Customer's Requirement: Auxiliary CTs/reactor are not acceptable in the current transformer. | Bidder's Remarks: We would like to inform you that, for 800-400/1 Metering core to maintain the instrument security factor less than 5 we have to consider internal Aux. CT Kindly accept the same. | Internal aux CT is not acceptable. ISF is for devices to be connected in secondary of CT. We have existing designs with ISF 5 without aux CT |
| 11 | Overall Scope Document ANNEXURE-1A | - | Seismic data | Customer's Requirement: 1) As per Overall Scope Document Seismic data:- Zone IV. 2) AS per Technical Specification and GTP Seismic data:- Zone III | Bidder's Remarks: We would like to inform you that there is discrepancy in Seismic data mentioned in adjacent overall scope and Annexure-1A. Kindly Clarify the same. | Please consider zone IV |
| 12 | ANNEXURE-1A | 5.15 Name Plate and Marking | Nameplate | Customer's Requirement: All equipment mounted on front and rear side as well as equipment mounted inside the panels shall be provided with individual name plates with equipment designation engraved. Also, on the top of each panel on front as well as rear side, large and bold nameplates shall be provided for circuit/feeder designation. | Bidder's Remarks: We would like to inform you that we provide nameplate on front side only. Kindly accept the same. | Noted. We believe, indicated is for individual element |
| 13 | ANNEXURE-1A | 1.1.2 : Scope of Supply - Gas Insulated Line (GIL) : b 5.13 Local Control Cabinet. | Separate LCC for GD monitoring | Customer's Requirement: 1 no. of Local control cubicle panel to accommodate SF6 gas monitoring signals. There shall be separate LCC panel for gas monitoring of GIL for terminating analog and digital signals of SF6 gas Density meter. | Bidder's Remarks: We would like to inform you that, Gas monitoring for GIB (GIL) will be provided on same bay cubicle which shall monitor gas parameters. Separate control cubicle for Gas monitoring of GIL won't envisaged on GIS. However LCCs are stand alone type. Kindly accept the same. | If signals of GIB (analog & potential free contacts) can be accommodated in LCC of transformer bay, it is OK |
| 14 | ANNEXURE-1A | 5.1 DESIGN AND CONSTRUCTION : 5.1.18 | Maintenance | Customer's Requirement: The internal components shall be maintenance free for at least 10 years. Routine replacements of insulating gas shall not be acceptable in intervals of less than ten years. | Bidder's Remarks: We would like to inform you that, Maintenance of internal components is irrespective of time duration, it depends on number of operation it performs. We recommend 2000 nos. of operation at rated current and 10 nos. of operation at short circuit current before first maintenance Kindly accept the same. | For CB, please comply AEML requirement |
| 15 | ANNEXURE-1A | 5.1 DESIGN AND CONSTRUCTION : 5.1.20 | Conformal Coating | Customer's Requirement: GIS internal and external coating of the enclosures shall be coated with suitable conformal coating material to protect the enclosures due to effects of harsh environmental conditions as stated in the service condition clause 3 of this specification. All enclosures shall be painted externally as per | Bidder's Remarks: We would like to inform you that, painting procedures shall be as per GIS OEM standard practice. Furthermore we have executed projects with RAL 7032-pebble grey fire external paint for for internal Munsell No. 5GY 7.5/1 and it is accepted by renowned utilities. Kindly accept the same. | Point is about paint suitability for harsh environment indicated in bid document not about colour of the paint |
| 16 | ANNEXURE-1A | 5.2 ENCLOSURES : 5.2.2 | Pressure Vessel | Customer's Requirement: The gas filled enclosure shall conform to the latest edition of the ASME code for pressure vessel, section VIII, division 1 or equivalent. | Bidder's Remarks: We would like to inform you that, As material codes are country based codes. For pressure vessel code, We follow KS-D6008 with Equivalent EN code (ENAC-42100). Also we will conduct all pressure test for enclosures as per Cl. 6.103-IEC 62271-203. Kindly confirm the same. | Noted |
| 17 | ANNEXURE-1A | 5.6 EXPANTION JOINTS & FLEXIBLE CONNECTIONS: 5.6.9: Supporting and other structures: - | Supporting Structure | Customer's Requirement: All supporting structures necessary for the support of the GIS equipment including permanent access ladders, stairways, walkways, rails, anchor bolts, beams etc. shall be supplied by the vendor. | Bidder's Remarks: We would like to clarify you that, the foundation channels, anchor bolts & fasteners, mounting bolts, nuts, washers, beams etc. are in customer/EPC scope. We provide only base frame, support structure and walkways, ladders required for GIS. no any ladder or support structure shall be provided for GIB. Kindly accept the same. | Proposal is turnkey type. Entire Scope of proposal is with Turnkey bidder. Turst, Hyusong is one of the bidders for the proposal |
| 18 | ANNEXURE-1A | 5.6 EXPANTION JOINTS & FLEXIBLE CONNECTIONS: 5.8.11 Operating Mechanism: - | Operation Counter | Customer's Requirement: Operation counter: Each circuit -breaker shall be provided with an operation counter per mechanism to record the number of tripping operations performed. The counter may be located at the local control cabinet. | Bidder's Remarks: We would like to clarify you that, As per design concept, we provide operation counter mounted on operating Mechanism only where it is easily visible. Kindly confirm the same. | Noted. Preferable location is at LCC |
| 19 | ANNEXURE-1A | 5.7.1 Extension Module | Extension Module | Customer's Requirement: Extension adapter shall be considered on other side of the bay for adding future extension bay with at least one busbar in service | Bidder's Remarks: We would like to clarify that we understand extension module shall be considered at only one side of GIS for future extension. Kindly accept the same | Yes. It is for extension of GIS to be supplied by bidder |
| 20 | ANNEXURE-1A | 5.8.8 Dduty Requirement | Interrupting Current | Customer's Requirement: Interrupting 245kV cable charging current as per IEC without re-strikes and without use of opening resistors. | Bidder's Remarks: We would like to clarify that our cable charging current is 250A & line charging breaking current is 200A Kindly accept the same. | Values indicated by AEML are as per relevant IEC. If any deviation to be informed or any query to be raised based on this point, please mention that. |
| 21 | ANNEXURE-1A | 5.10 CURRENT TRANSFORMERS: 5.10.9 Constructional Details:- | Current Transformer | Customer's Requirement: All the current transformers shall have effective electromagnetic shields to protect against high frequency transients f) Electromagnetic shields to be provided against high frequency transients typically 1-30 MHz | Bidder's Remarks: We would like to inform you that, We provide Gas Insulated CT so this adjacent is not required in GIS CT Kindly accept the same. | Noted |

| S.No | Reference Document | Reference Clause/DocNo. | Technical Issue | Customer's Requirement | Bidder's Remarks | Customer's Reply on 25.10.2021 |
|------|--------------------|----------------------------|-----------------|---|--|---|
| 22 | ANNEXURE-1A | 5.8.11 Operating Mechanism | IP 65 | Customer's Requirement: The mechanism housing shall have minimum IP 65 degree of protection for outdoor application. | Bidder's Remarks: We would like to clarify that our GIS enclosure is IP 65 however mechanism box shall be IP 54 | Noted. Requirement of 220kV GIS indoor type at both substations |

| S.No | Reference Document | Reference Clause/DocNo. | Technical Issue | Customer's Requirement | Bidder's Remarks | Customer's Reply on 25.10.2021 |
|------|--------------------|---|------------------------|---|--|---|
| 23 | ANNEXURE-1A | 5.9.6 HES | Testing Voltage | Customer's Requirement: Fast acting earth switch shall have provision for testing of EHV feeder cable at 50kV 5.9.7 | Bidder's Remarks: We would like to clarify that 245kV HES is designed for 10kV DC for cable testing which is sufficient for fault location. Kindly accept the same | Please comply AEML requirement. It is required for testing of cable through LE2 |
| 24 | ANNEXURE-1A | 5.10.2 CT | CT location | Customer's Requirement: All current transformer cores shall be located outside the enclosure separated from the primary core. Each | Bidder's Remarks: We would like to clarify that CT cores shall be inside the Gas chamber only. This is our Type tested design and in service with many State & central utilities. Kindly accept the same | Noted |
| 25 | ANNEXURE-1A | 5.11 VOLTAGE TRANSFORMERS : 5.11.6 | HRC Fuse | Customer's Requirement: All secondary taps shall be wired to suitable terminals accommodated in the local control cabinet for the feeder bay. Fuses shall be also located in the local control cabinet. c) Voltage transformers secondary shall be protected by HRC cartridge type fuses for all the windings. In addition, fuses shall be provided for the protection and metering windings for fuse monitoring scheme. | Bidder's Remarks: We would like to clarify you that, for Voltage transformer (VT) secondaries protection we provide MCB instead of HRC fuse. Also these MCbs shall be in VT TB and not in LCP Kindly accept the same. | MCB instead of fuse for VT secondary protection is Ok. MCB contacts to be wired to CRP for identification of fuse failure |
| 26 | ANNEXURE-1A | 5.13 LOCAL CONTROL CABINET (LCC) : 5.13.4 | LCC | Customer's Requirement: LCC Panel shall be of stainless-steel material suitable for use for outdoor application | Bidder's Remarks: We would like to clarify you that, As per our design practice We provide Cold Rolled Close Annealed (CRCA) material make LCC panels which is having IP 54 which is suitable for outdoor application. However for indoor use we provide IP42. Kindly accept the same. | Please provide IP54 |
| 27 | ANNEXURE-1A | 5.17 EARTHING: 5.17.2 Earthing of enclosure: | Earthing. | Customer's Requirement: a) The enclosure shall be connected to earth. All metal parts other than main and auxiliary circuits shall be earthed. B) Earthing mesh around GIS installation shall be installed and connected with the earthing raisers provided on station earthing grid. 6.7.14 Bidder to suggest and provide best | Bidder's Remarks: We would like to inform you that, our scope for only earthing points on GIS base frame. Further scope from GIS to risers shall be in EPC scope. Also earthing of Trafo, reactor, CVT, SA and other equipment than GIS shall be in EPC scope. Kindly accept the same. | Proposal is turnkey type. Scope is with Turnkey bidder. Turst, Hyusong is one of the bidders for the proposal |
| 28 | ANNEXURE-1A | 5.17.4 Earth of Low voltage panel and circuits | Earth Bus | Customer's Requirement: The material and the sizes of the earth bus bar shall be at least 50 x 6 sq. mm copper | Bidder's Remarks: We would like to clarify you that for the earth bus we used copper material and size of the Earth Bus shall be 25 x 6 sq.mm. Kindly accept the same. | Please comply AEML requirement. |
| 29 | ANNEXURE-1A | Gas Density Monitoring | Gas Density Monitoring | Customer's Requirement: The gas-density monitors shall have provision of online calibration. | Bidder's Remarks: We would like to clarify that the requirement of online calibration is not clear. Kindly elaborate. Please elaborate | How the calibration of Gas density monitors will be done. Please explain |

| S.No | Reference Document | Reference Clause/DocNo. | Technical Issue | Customer's Requirement | Bidder's Remarks | Customer's Reply on 25.10.2021 |
|------|--------------------|--|----------------------|--|---|--|
| 30 | ANNEXURE-1A | 6.7 Earthing: 6.7.4 | GIB Earthing | Customer's Requirement: The bidder shall define clearly what constitutes the main grounding bus of the GIL. The bidder shall supply the entire material for grounding bus of GIL viz conductor, clamps, joints, operating and safety platforms etc. The bidder is also required to supply all the earthing conductors and associated hardware material for connecting all GIL, enclosures, control cabinets, supporting structure, etc. to the ground bus of GIL. | Bidder's Remarks: We would like to inform you that, we shall provide only earthing points on GSI baseframe Rest scope from base frame to early risers shall be in EPC scope Kindly accept this | Proposal is turnkey type. Scope is with Turnkey bidder. Turst, Hyusong is one of the bidders for the proposal |
| 31 | ANNEXURE-1A | 6.1 Technical Specification-Gas Insulated Line. | Gas Tight Barrier | Customer's Requirement: The location of gas tight barrier insulators shall be clearly and permanently marked with yellow or orange color and for gas through barriers with yellow with white strips, or orange with white strips on the finished external surface of the GIL enclosure. | Bidder's Remarks: We would like to inform you that, as per our design practice we provide red colour for re-orientation of gas through spacer. Kindly accept the same. | Noted. |
| 32 | ANNEXURE-1A | 6.8 Local Cubicle Panel: 6.8.2 | LCC | Customer's Requirement: The Local cubicle shall have IP 65 degree of protection. | Bidder's Remarks: We would like to inform that we provide ingress protection for indoor LCC is IP 42 and for outdoor LCC is IP 55. Kindly confirm the same. | Please provide IP55 |
| 33 | ANNEXURE-1A | 8. Testing and Inspection 8.2 Testing and Inspection- 245kV GIL | Type Test | Customer's Requirement: Following minimum type tests shall have been carried out by the bidder as IEC-62271-203 B) Electromagnetic compatibility tests(EMC) | Bidder's Remarks: We would like to inform you that, As per IEC EMC test is only applicable when there are electronic components, In GIS no such electronic component is present. Hence this test is Not applicable. Kindly accept the same. | As per IEC 62271-203 & IEC 62271-1, this test is applicable |
| 34 | ANNEXURE-1A | - | Closing Pulse | Customer's Requirement: b) The breaker shall close correctly when an electrical closing pulse of 50 ms duration is applied to the closing coil. | Bidder's Remarks: We would like to clarify that as per general practice breaker shall close within closing pulse of 100ms duration. We comply the same. Kindly accept the same | Not acceptable. |
| 35 | ANNEXURE-1A | 5.1 Design and Construction | Gas Density Detector | Customer's Requirement: SF6 gas in each individual compartment shall be monitored by suitable temperature compensated pressure gauges. | Bidder's Remarks: We would like to inform you that, we shall provide temperature detector in special tool list kindly clarify whether it shall be considered in Special tool list. Kindly confirm the same. | Clause is referring to gas density monitors to be provided in GIS compartment. Tools to be supplied is also identified in specification of GIS. In addition to this, any mandatory tool to be procured for O&M of offered GIS, bidder shall quote and share list of the same |
| 36 | | 5.3.3 gas COMPARTMENT | Gas Compartment | Customer's Requirement: Busbar & Disconnectors shall be in separate compartment | Bidder's Remarks: We would like to clarify that Busbar & Bus DS shall be in Same gas compartment. Ur design is Type tested and in service with many state & central utilities. Kindly accept the same | Noted. We will review design at the time of evaluation |

| S.No | Reference Document | Reference Clause/DocNo. | Technical Issue | Customer's Requirement | Bidder's Remarks | Customer's Reply on 25.10.2021 |
|------|--------------------|-------------------------|---|---|---|---|
| 37 | QR | 11 | TTR | Customer's Requirement: Type test certificate & Prequalification certificates for 220 kV cable, Joints & Terminations from one of the recognized International laboratories as mentioned below: KEMA, Holland EDF, France Hydro-Quebec, Canada CESI, Italy CPRI, Bangalore IPH Germany FGH, Italy | Bidder's Remarks: We would like to inform you that, our GIS is type tested at KERI, S.KOREA and accepted by all the renowned utilities also accepted by ADANI group in Jamkhabalia project. Kindly accept the same. | The referred point is about cable and termination and not about GIS |
| 38 | TS | 6.2 & 8.3.2 | Pre commissioning checks & Site Testing | Customer's Requirement: Minimum pre-commissioning tests to be carried out on various components on GIS are listed below. In addition to these tests, tests recommended by OEM, if any, to be carried out during pre-commissioning | Bidder's Remarks: We would like to inform you that, testing shall be as per OEM STP. Kindly accept the same. | Please comply AEML requirement |
| 39 | TS | | | Busbars and connections shall be manufactured from hard drawn copper. | Bidder's Remarks: We would like to inform you that, our busbar of GIS is made up of aluminum, please let us know adjacent clause is related to which busbar. Kindly accept the same. | Please indicate reference clause to clarify query |
| 40 | TS | 3.4 7.2 | Gas leakage per annum | Gas leakage rate of less than 0.1% per annum is required for gas insulated compartment. Maximum guaranteed loss 0.5% per yr | Bidder's Remarks: We would like to inform you that, as per IEC gas loss allowed is 0.5%p.a. we comply the same. Kindly accept the same. | Clause 3.4 - not present in bid document. Please check Clause 7.2 - It is ≤0.5% per annum |
| 41 | TS | 14 | Spares Special tools | Customer's Requirement: SPARES AS PER LISTED on pg no. 51/90 Special tools not given in BOQ | Bidder's Remarks: We would like to inform you that, we have considered spares as per 51/90 and special tools are not given hence please provide the same if any requirement. Kindly provide the same | Tools to be supplied is also identified in Clause 16 of specification of GIS. In addition to this, any mandatory tool to be procured for O&M of offered GIS, bidder shall quote and share list of the same |
| 42 | TS | 15 | Spares Special tools | Customer's Requirement: All the equipment and accessories required for completion of the scheme. 4-20mA signal of gas density monitor shall be available on IEC61850 protocol for reporting to AEML SCADA. | Bidder's Remarks: We would like to inform you that, we will provide hard wired signals upto the LCC and Kindly provide the same. | Signals will be reported to SCADA on IEC 61850. Bidder shall consider required hardware to achieve the same. This is in addition to potential free contacts to be provided as per specification |
| 43 | TS | 14 16 | Spares Special tools | Customer's Requirement: SPARES AS PER LISTED on pg no. 51/90 Special tools not given in BOQ Tools and Tackles required for erection, installation, testing & commissioning of the GIS as per clause 16 of this specification | Bidder's Remarks: We would like to inform you that, we have considered spares as per 51/90 and special tools requirement as per pg no. 56/90 incase change in requirement will have commercial impact. Tools & tackles required for installation, testing & commissioning of GS shall be on returnable basis Kindly confirm the same. | Tools to be supplied is identified in Clause 16 of specification of GIS. In addition to this, any mandatory tool to be procured for O&M of offered GIS, bidder shall quote and share list of the same. This point is not referring to tools & tackles to be used by bidder for ITC of GIS |
| 44 | TS | 19 GTP | 3.2 Outdoor Design | Customer's Requirement: Three phase Outdoor design | Bidder's Remarks: We would like to understand whether both BLC & Chembur GIS are Indoor or Outdoor type Kindly clarify the same | 220kV GIS at both station is Indoor type |
| 45 | TS | 19 GTP | 4.27.1 & 4.27.2 | Customer's Requirement: CB operation 5000 rated current & 20 on fault current | Bidder's Remarks: We would like to clarify that our CB is rated as below 10000 operation at No load 2000 operation at Rated current 10 operations at Short circuit | Please comply AEML requirement |
| 46 | TS | 17 | Spares Special tools | Customer's Requirement: Dew point meter- WIKA/ ENDRESS+HAUSER Precision pressure gauge- WIKA | Bidder's Remarks: We would like to inform you that we shall provide the dew point meter and precision pressure gauge DILO as it is our regular vendor and we ensure the operation and service of DILO equipments which are equivalent to given WIKA/ ENDRESS special equipments. Kindly accept the same. | Please comply approved make of AEML. |

| S.No | Reference Document | Reference Clause/DocNo. | Technical Issue | Customer's Requirement | Bidder's Remarks | Customer's Reply on 25.10.2021 |
|------|--------------------|-------------------------|-----------------|---|---|--|
| 47 | TS | | | <p>Customer's Requirement: Drawings required for extension</p> | <p>Bidder's Remarks: We would like to inform you that, we compulsory required 1. AutoCAD drawing containing Busbar dimension-(height, details of flange and conductor to be extended, etc). 2. Existing GIS Plan & Section Drawing 3. Overall GA Drawings; containing details of roads, trenches, drainage system, fences, etc. 4. Existing Building dimensions & Grid, column locations 5. Existing GIS Bus End cover drawing containing flange details, flange hole details, details of conductor to be extended. 6. Existing GIS GAS SLD</p> <p>Kindly provide the same as the above details are mandatory for designing the extension module and clarity of scheme.</p> | <p>1. AEML does not have AutoCAD drawing containing Busbar dimension-(height, details of flange and conductor to be extended, etc) and Existing GIS Bus End cover drawing containing flange details, flange hole details, details of conductor to be extended. Bidder may take measurement of existing GIS or avail service from NHVS (OEM of existing GIS) to execute the job. 2. Layout & SLD GIS is there in Bid documents. Gas SLD is attached. 3. Requirement of drawing 3 & 4 are not understood. Please explain</p> |
| 48 | | | | | We understand that GIS OEM can offer GIS to multiple EPCs (wherein EPC company shall be the bidder). Kindly confirm if our understanding is correct. | Please inform whether Hyusong is a bidder to this proposal. EPC can offer any approved make of GIS |
| 49 | | | | | We understand that if EPC company (who is not GIS OEM) can submit GIS offer with only one MAKE GIS along with the tender. Kindly confirm if our understanding is correct | Confirm |
| 50 | | | | | Since Cable works being a major portion, Please confirm if the cable manufacturer shall form JV/Consortium along with EPC for bid submission. | Confirm. Bidders should meet AEML QR requirement |
| 52 | | | | | Please provide a scope matrix (between owner and bidder) mentioning the list of statutory approvals | Please refer Clause 27 & 28 of main Turnkey document Document No: TD-SD-TURNKEY TENDR -BKC-720-R2 for details |
| 53 | | | | | We understand that land acquisition has been completed and same is ready for construction. Kindly confirm | Yes |
| 54 | | | | | We understand that for cable works ROW issues shall be taken care by AEML. Please confirm | It is in bidder's scope |
| 55 | | | | | We understand that Supervision of NHVS GIS and Consumables required while extending the NHVS GIS shall be in AEML scope. Kindly confirm | It is in bidder's scope |
| 56 | | | | | Please confirm the model number for existing CRP and SCADA at Chembur Substation | CRP - Siemens SCADA - ABB. 800xA for LS application MicroSCADA for Gateway and Network Manager for Control Center. Please refer respective bid documents for more details |
| 57 | | | | | Please share the GIS hall layout at Chembur Substation | Layout of 220kV GIS floor at Chembur is attached in bid document as part of specification. Attached for ready reference |

| ITEM NO. | Reference PTS /Clause / item, Page No. | BIDDER'S CLARIFICATION | CUSTOMER RESPONSE on 21.10.2021 |
|--|--|--|---|
| Electrical Queries – 220/33 kV BKC Substation | | | |
| 1 | | Reactor Foundation | Query is not understood. Please explain |
| 2 | | Please confirm that clarification sent earlier regarding the scope of work (about 1 year ago) will remain same. | There are modifications in turnkey documents and specifications, so request not to compare earlier document with new one. Please go through the documents which is floated on 29/09/2021 and accordingly submit offer. |
| 3 | | Please confirm that Revision-1 of BKC layout released by Adani on 11.08.2020 is to be considered for estimation of lot items. | There are modifications in turnkey documents and specifications, so request not to compare earlier document with new one. Please go through the documents which is floated on 29/09/2021 and accordingly submit offer. |
| 4 | | Revised layout shows total 03 nos. of 125MVA transformers (02 in scope + 01 future). Whereas previous layout were indicating 04 nos. of power transformers. SLD is also indicating requirement of 04 power transformers (02 in scope + 02 future). Please confirm exact requirement so that the layout can be considered accordingly. | There are modifications in turnkey documents and specifications, so request not to compare earlier document with new one. Please go through the documents which is floated on 29/09/2021 and accordingly submit offer. |
| 5 | | Please clarify what is PT-1 To PT-4 in the layout drawing. Also please clarify what is DT-1 & 2 and LTP stands for. | PT 1 and 4: 33/22/11KV 31.5 MVA Transformer DT-1 and 2: 11/0.415kV,1MVA Transformer LTP stands for LT(low tension) panel |
| 6 | | According to single line diagram of roof top solar system (A3-TD-604-003), ACDB in customer scope is mentioned. Please clarify the output of solar system is to be provided to normal ACDB which is provided in specification no. TD-SP-415V-ACDB-BKCUNIVERSITY-481-R1. If it is so, then single line diagram of main ACDB at incomer side needs to be changed. Please check and confirm. | There are modifications in turnkey documents and specifications, so request not to compare earlier document with new one. Please go through the documents which is floated on 29/09/2021 and accordingly submit offer. Solar System is excluded from this tender, please refer to NIT documents floated on |
| 7 | | As per revised scope document no. TD-SD-TURNKEY TENDER-BKC-414-R2, Sr. no. 13, page-02 and clause no. 5.8.3, it is mentioned that APFC panel is to be connected to 11kV/0.415kV transformer incomer feeder. It is also mentioned in specification that rating of capacitor is to be decided by bidder. Can we do sizing of capacitor by considering the rating of auxiliary transformer (990KVA) which is given in tender document and power factor improvement from 0.8 to unity? Please confirm. | For tender purpose assumption is OK. However, during detailed Engineering, exact values will be considered |
| 8 | | As per battery specification (TD-SP-220V-NICD BATTERY-BKCUNIVERSITY-471-RO) purpose of 220V DC battery is for Back up supply for EHV substation application. Mainly auxiliary supply for protection, SCADA, SDH, ACDB and lighting etc. Also as per revised layout of 4th floor it has been observed there is separate battery room for 33 & 11kV panels. Please clarify whether separate battery is required for 33kV & 11kV panels? Do we need to consider the scope of those battery and chargers in present tender scope? Please | Scope is for supply & ITC of 220V battery for Transmission system. Supply of 110V Battery and charger for AEML D (33/11kV battery room for AEML-D) is not in present scope. Please refer specification of battery for more details |
| 9 | | As per specification of 33kV GIS switchgear (TD-SP-33KVGIS-BKCUNIVERSITY-477-R1) clause no. 4.1.10, multifunction transducers are to be provided in 33kV switchgear panels. However as per panel layout of 4th floor separate panels of 33kV transducers (02 nos.) are shown. But the bill of material does not | Transducers shall be provided in 33kV GIS LV compartment as per specification. Transducers in 33kV GIS shall be used for providing MW Values to Load Shedding Application in controller |

| | | | |
|----|--|--|--|
| 9 | | are shown. But the Bill of material does not indicate about these transducer panels. Please clarify what is the exact scope. We understand BCPUs of all switchgear panels will be communicated with SCADA on IEC-61850 then what is the necessity of these transducers. Please elaborate. | There is no requirement of transducer panel |
| 10 | | According to 4th floor panel layout it has been observed that for 33kV GIS switchgear, the BCPUs will be installed in separate cubicle and those will be placed in SCADA room. This is in line with the requirement provided in Aarey SS for existing switchgear panel. However, the quantification of those control panels is not indicated in BOQ provided at the end of specification. Please confirm. | BCPU will be mounted on LV compartment of 33kV GIS. Separate BCPU Panel is not considered in layout |
| 11 | | Compare to panel arrangement provided in previous layout and current layout it has been observed that there are 02 separate rooms provided for SCADA. Do we need to supply separate SCADA for 33 & 11kV system and SCADA for CRP. Please confirm. | There are modifications in turnkey documents and specifications, so request not to compare earlier document with new one. Please go through the documents which is floated on 29/09/2021 and accordingly submit offer. Please refer clause 43 of turnkey document: TD-SD-TURNKEY TENDR -BKC-720-R2: Current scope is clearly mentioned In layout there is space provision for separate SCADA for 33 & 11kV system of Adani DISCOM. Supply of the same is not in scope of present tender. Scope of supply is as per technical document which is part of tender. |
| 12 | | As per revised scope document no. TD-SD-TURNKEY TENDER-BKC-414-R2, Sr. no. 08, page-02, scope of SCADA system for load shedding is excluded. However, frequency relay panel is included in the scope of control & relay panels as per specification no. TD-SP-220KV-CRP -BKCUNIVERSITY-467-R2. We understand that load shedding scheme is required. But it should not be integrated in SCADA system. Please clarify. | Load shedding scheme shall work on a separate controller. However, indications of LS with SCADA needs to be done on OPC for further sending LS indications to BCC & MCC Underfrequency relay panel is for islanding scheme |
| 13 | Annexure 5A TECHNICAL SPECIFICATIONS FOR H.T.CABLES (33kV : 1-Core / 3-Core) Page 11/31 Clause 5.3 | Acceptance test a) Wafer Boil Test” for checking integrity of semiconducting layers. is required . Please note that this test has been removed from IS:7098 Part-2 hence this test shall not be applicable for 33 kV cable. Kindly confirm | As per technical specifications, wafer boil test is essential to check the integrity between insulation and semiconducting layer. |
| 14 | Annexure 5A TECHNICAL SPECIFICATIONS FOR H.T.CABLES (33kV : 1-Core / 3-Core) Page 11/31 Clause 5.3 | Acceptance test b) Void-and-contamination Test” for the Insulation. is required . Please note that this test has also been removed from IS:7098 Part-2 hence this test shall not be applicable for 33 kV cable . Kindly Confirm | As per technical specifications, Void-and-contamination Test” for the Insulation test is essential to check whether there is a void in the insulation. |

Electrical Queries - 220 kV CHEMBUR SUB-STATION

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|---|--|--|---|
| 1 | | AC & DC spare outlets will be made available for new expansion, hence expansion of existing LV AC & DC system not required. Please confirm. | Confirmed & closed |
| 2 | | In 220 kV CRP room, space is already earmarked for locating new 220 kV CRP panels, same will be utilized. Please confirm. | Confirmed. Location identified for 220kV CRP & bus bar protection panels (5 Panels) in existing control room was shown during site visit |
| 3 | | Existing 220 kV GIS (NHVS make) detail GA & construction drawing with flange details will be required for checking of integration with separate make of GIS. Please provide the drawing. | This proposal is Turnkey type. Bidder shall avail service from OEM of existing GIS for extension of 2Nos 220kV GIS. Flange details are not available. |

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|---|---|--|---|
| 4 | | Please provide the cable tray layout drawing of the complete S/s, same is required to finalize the LV Power & control cable route layout/quantity. If it is not possible to provide the layouts in tender stage, kindly provide the route length so that cables can be considered accordingly. | Control room (CR Panels & Busbar located on this room) and LV switchgear are on the same floor (5 th floor). -50 route length can be considered GIS room is on first floor. GIS room to LV switchgear /control room which is on fifth floor 100m route length can be considered Elevation of existing GIS is attached for reference. |
| 5 | | Please provide the drawing of 220 kV Cable cellar room. | Drawings will be shared after placement of order. If any specific query is there, we will address the same |
| 6 | | Please provide the existing drawing of SDH panel. | Drawings will be shared after placement of order. If any specific query is there, we will address the same |
| | | Mechanical Queries | |
| 1 | 220kV GIS Substation Annexure Part 1 of 4- Nitrogen injection fire protection system , page no: 3 of 21 and 220kV GIS Substation Annexure Part 1 of 4, clause no:1.2.3(h), page no: 7 of 110. | The Nitrogen injection fire protection system (NIFPS) and high velocity water spray (HVWS) system for the transformers fire protection system have been mentioned in the technical specification, please confirm whether both the firefighting system shall be considered for transformers or either any one of the above mentioned system shall be considered for the transformers, please confirm. | Both HVWS & NIFPS to be provided |
| 2 | Monorail | We understand that monorail is not required in the firefighting pump house, please confirm | Monorail / EOT crane is required in firefighting Pump room. |
| 3 | 220kV GIS Substation Annexure Part 3 of 4, clause no: 1.3.4, page no:9 of 48. | We understand that centrifugal/axial wall mounted supply & exhaust fans with supply & return ducts shall be provided for maintaining the positive pressure in the cable cellar, 220kV GIS hall and LV switchgear room & pump room, hence we are not considering the air handling units (AHU) room, please confirm. | Bidder's understanding is correct. |

| S. No. | Clause Reference | Ref Clause | Queries by L&T Construction | Reply on 25/10/2021 |
|---------------------------|--|--|--|---|
| Commercial Queries | | | | |
| 1 | Annexure-24C-Price Schedule-Supply & Services and Turnkey Tender Document- 46. General BOQ | Detailed qty of the Bays and Cable length are mentioned in the General BOQ. | As per Annexure 24C Price schedule bidder is required to quote as a lot, wherein route length and detailed BOQ is not available, however as per General BOQ each quantity are mentioned. We presume that we have to quote as per General BOQ and in case on any variation in terms of quantity/scope and same shall be payable as additional works. | Bidder to quote as per the quantity mentioned in General BOQ. This General BOQ is for 12 Km route length so Bidder to consider all the items as per 12 Km route length. If route length increases then only payment for line items required for additional route length shall be paid on actuals |
| 2 | GTC- Basic Price | The Basic Price payable to the ----- If the quantity variation results in an increase in the estimated value of the Basic Price, as set out in the Price Schedule, the Parties shall mutually agree upon the revised quantities to be availed under the BOQ and effect necessary amendments to the SO Documents in accordance with Clause 10. | Kindly confirm the ceiling limit for the quantity variation. | Commercial Team (CPG) to address this query |
| 3 | ANNEXURE-24A QUALIFYING REQUIREMENTS 2.2.1 | As per the order issued by Government of India (GoI) MOP (Ministry's Order No.25-17/6/2018- PG dated 2-7-2020), to protect critical Power Supply System & Network in the country, All equipment, components, and parts imported for use in the power Supply System and Network shall be tested in the country to check for any kind of embedded malware/trojans/cyber threat and for adherence to Indian Standards. All such testings shall be done in certified laboratories that will be designated by the Ministry of Power (MoP). Central Power Research Institute The Bidder should provide latest performance certificates from the Owner (issued in last 6 months) for the work completed & specified under clause no 2.2.1. | As per information available there is no information available on the guidelines, we request to provide the details of the equipment for which such certificate is mandatory | Refer Order details & CEA Guidelines for cyber security in power sector 2021 |
| #REF! | Turnkey Tender Document 28. STATUTORY FOLLOW UP: OUTDOOR CABLE SCHEME(CHEMBUR-BKC) | The successful Contractor shall submit proposals for way leaves and right of way. The Contractor is entirely responsible for getting demand note & ROW permission from MCGM, MMRDA/PWD/MHADA /Railways/Forest any other government bodies so that work shall start from 15th October & carried out as per MCGM/statutory authorities' norms. Follow up/meetings with local police, RTO, private authorities, any other agencies like MTNL, etc. and all other government and local bodies. Scope also includes processing/ collecting refundable deposit from above said authorities | We request employer to consider all way leaves and right of way in their scope. We understand that required Demand note/Chalan for statutory permissions charges shall be submitted to M/s AEML .M/s AEML will make the payment for the all the Govt Official including MCGM, MMRDA/PWD/MHADA /Railways/Forest. Also incase of any Bank Guarantee requirement by any of the agencies shall be submitted by Employer Kindly Confirm | Commercial Team (CPG) to address this query |
| #REF! | Turnkey Tender Document 28. STATUTORY FOLLOW UP: OUTDOOR CABLE SCHEME(CHEMBUR-BKC) | The field officials of AEML-T will assist to prepare required letters to apply for permissions. The Contractor shall coordinate with MCGM authorities regarding Reinstatement charges/permissions and submits the demand note/ chalan to M/s AEML .M/s AEML will make the payment. | We understand that required Demand note/Chalan for Road restoration/Reinstatement required as per respective MCGM circle rules shall be paid by AEML directly and MCGM shall complete the Road restoration/Reinstatement works. Also incase of any Bank Guarantee requirement by any of the agencies shall be submitted by Employer Kindly Confirm | Commercial Team (CPG) to address this query |
| #REF! | NIT 3.2 E-Bidding and Reverse Auction | Purchaser reserves the right to use the reverse auction as a part of the entire tendering process. All the bidders who are techno-commercial qualified on the basis of tender requirements shall participate in reverse auction. | Considering the complexity of the project, we request bidding process shall be open bid concept without conducting further reverse auction. Kindly accept. | Commercial Team (CPG) to address this query |
| Electrical Queries | | | | |
| 1 | Turnkey Tender document, Soc.no.TD-SD-TURNKEY TENDER-BKC-720-R2 | Clause no.2.2, SI.no.3 & SI.no.12 | We presume that the cable current carrying capacity of 800A as mentioned in the referred table for 1200 Sq. mm shall be the ampacity in air. Further Bidder shall guarantee their ampacity as per the laying conditions mentioned in technical specification for 220kV cables & accessories, clause-1.4, SI. No. 10. Please confirm. | 800 A capacity is for 1200 sq mm cable in 250 mm HDPE duct at a depth of 2 meter from ground surface. Bidder shall guarantee 300 MW transmission capacity per circuit considering all derating factors after installation |
| 2 | Turnkey Tender document, Soc.no.TD-SD-TURNKEY TENDER-BKC-720-R2 | Clause no.9.1.2 | Please confirm whether Earthing calculation performed using ETAP or CYMGRID software shall also be acceptable? | As per Turnkey tender document, Earthing calculations shall be done by using CDEGS software. |
| 3 | Turnkey Tender document, Soc.no.TD-SD-TURNKEY TENDER-BKC-720-R2 | Clause no.14.1.5 | For LT power cable of sizes 16sq.mm and above, whether aluminium conductor is also acceptable? | OK Acceptable |
| 4 | Turnkey Tender document, Soc.no.TD-SD-TURNKEY TENDER-BKC-720-R2 | Clause no.16 | Please furnish the following w.r.t to remote operations of substation(Surveillance system) a) Name and Location of remote substation b) Distance between proposed substation to remote substation c) Mode of communication between the stations d) Whether Communication infrastructure between the stations are already established by AEML? e) Make and model number of SCADA at remote end substation f) Whether integration with existing SCADA at remote substation is in bidder's scope? | a)Chembur EHV sub-station Location - Chembur b)12km c)Under ground single mode fiber cable proposed to be layed along with EHV Cables d)Multiplexer at Chembur is available and Multiplexere at BKC needs to be supplied along with interface cards required at existing chembur e)Make & Model :- Hitachi Energy 800xA 5.1 and Hitachi Energy -SCADA 9.4 f)Yes |
| 5 | Turnkey Tender document, Soc.no.TD-SD-TURNKEY TENDER-BKC-720-R2 | Rooftop solar system | We understand that the roof top solar system is excluded from this tender. However, we required the maximum solar system capacity that will be installed by AEML in future, for civil design. | Roof top solar system shall be considered in Civil design.Rooftop Solar Sizing for the station to be considered as per MNRE guide lines. Actual installation will be based on space availability. |
| 6 | Annexure-E | Annexure-E1:33kV cable route & Length details: | Please provide the following details w.r.t 33kV cable: a) Terminal points at both ends for 33kV cable b) Whether the cable is to be terminated directly on to the Switchgear or at any DP structure? c) Whether the cable need to be terminated at any RMU locations along the cable corridor (marked as A to T in the cable route drawing shared by AEML) | a) As per given route, the cables need to be capped at both ends for future use. b) Cable not to be terminated, it should be capped & kept near breaker of that substation (MDB will make termination) c) Cable need to be capped & kept on the route so that in future it can be extended to nearby substation as per network requirement. |
| 7 | Annexure-E | Annexure-E1:33kV cable route & Length details: | Please provide the following details w.r.t 11kV cable: a) Terminal points at both ends for 11kV cable b) Whether the cable is to be terminated directly on to the Switchgear or at any DP structure? c) Whether the cable need to be terminated at any RMU locations along the cable corridor (marked as A to T in the cable route drawing shared by AEML) | a) As per given route, the cables need to be capped at both ends. (MDB will lay the balance cable upto substation in coordination with this cable laying). b) Cable not to be terminated, it should be capped & kept near breaker of that substation (MDB will make termination) c) Cable need to be capped & kept on the route. (MDB will extend to nearby substation as per network requirement). |
| 8 | Single line diagram of 220kV BKC substation | DWG.TD-220KV-SLD-BKC-R1 | We presume that bidder shall follow the Single line diagram of 220kV BKC substation DWG.TD-220KV-SLD-BKC-R1 for 220kV and rating of all the equipments are as per referred SLD . Single line diagram furnished in Annexure-24A, substation drawing will not be considered for this tender. Please confirm whether bidder understanding is in order | SLD: TD-220KV-SLD-BKC-R1 is the SLD of 220kV GIS. SLD furnished in Annexure- 24A is overall SLD of Substation wherein connectivity of 33kV GIS is also indicated to get better clarity of overall system For 220kV GIS package : PI refer SLD TD-220KV-SLD-BKC-R1 which is part of specification |

| S. No. | Clause Reference | Ref Clause | Queries by L&T Construction | Reply on 25/10/2021 |
|--------|---|--|--|---|
| 9 | Single line diagram of 220kV BKC substation | DWG.TD-220KV-SLD-BKC-R1 | We understand that the protections for line, transformer and bus coupler bays shall be as shown in the Single line diagram for 220kV system. Please confirm. | Details of protection for each type of feeder are indicated in specification of 220kV CRP |
| 10 | 220kV GIS layout at chembur | | In the 220kV GIS layout, three GIS modules are shown as proposed scope. We understand that only two line bay extensions are in our scope of works. Please confirm | In Chembur: 2 line bays + adaptor for extension of existing 220kV NHVS make GIS + Future extension module for 220kV GIS to be supplied by bidder |
| 11 | SLD of 33kV GIS board 1 & 2 at BKC EHV substation | DWG.TD-SP-33KV GIS-SLD-604-R2 | We presume that bidder shall follow the Single line diagram of 33KV BKC substation DWG.TD-SP-33KV GIS-SLD-604-R2 for bay configuration & rating. Single line diagram furnished in Annexure-24A, substation drawing will not be considered for this tender. Please confirm whether bidder understanding is in order | SLD.TD-SP-33KV GIS-SLD-604-R2 is the SLD of 33kV GIS. SLD furnished in Annexure- 24A is overall SLD of Substation wherein connectivity of 220V GIS is also indicated to get better clarity of overall system For 33kV GIS package : PI refer SLD: SP-33KV GIS-SLD-604-R2 which is part of 33kV GIS specification |
| 12 | SLD of 33kV GIS board 1 & 2 at BKC EHV substation | DWG.TD-SP-33KV GIS-SLD-604-R2 | We understand that the protections for 33kV bays shall be as shown in the referred Single line diagram. Please confirm. | Details of protection for each type of feeder are indicated in specification of 33kV GIS |
| 13 | Annexure-6A (R3), Supply of 220kV Control & Relay Panels as per Technical Specification | Clause no. 1.1, Control and relay panel for line feeder – 2Nos (Future Feeder) | Please clarify whether remote end line differential cum distance protection relay is in the scope of bidder for 2nos. future feeder? If yes, then we will supply loose relay which needs to be installed in existing protection panel by AEML. Further, integration with the existing SAS is excluded from the scope of bidder. Please confirm. | These 2Nos CRP is considered for future requirement.It is not in present scope of supply. During execution of the project, Owner will amend the order based on regulatory approval to include scope of CRP for future line bays. Bidder to quote unit rate for these items while submitting offer. Please refer Geenal BOQ 24C for details In present scope remote end relays are not considered. |
| 14 | Annexure-6A (R3), Supply of 220kV Control & Relay Panels as per Technical Specification | 8. MANDATORY SPARES, sl.no.C | We presume the list of spares mentioned under SI. No. C are common spares for both BKC & Chembur stations. Please confirm. | Yes, Understanding is correct |
| 15 | Annexure-6A (R3), Supply of 220kV Control & Relay Panels as per Technical Specification | 5. TECHNICAL SPECIFICATION, hh | Energy meters shall be provided for 220kV and 33kV line bays only. We do not envisage any supply of energy meter for 220 & 33kV Transformer bay, 220& 33kV Bus-coupler bay, 33kV capacitor bay and 33kV reactor bay. Please confirm | a. 1No Energy meter to be provided for all feeders except bus coupler at 220kV b. 3Nos Energy meter (2ABT+ 1 Energy meter) to be supplied for all feeders except capacitor and bus coupler on 33kV GIS c. Energy Meter shall be ABT complaint with DLMS protocol. DLMS Protocol shall be available on 4 types of ports - Optical port on front, RS485, RS232 and Ethernet port. |
| 16 | Annexure-6A (R3), Supply of 220kV Control & Relay Panels as per Technical Specification | 5. TECHNICAL SPECIFICATION, oo | We presume that the various transformer protections can be clubbed in to two groups as part of Numerical Main protection relays i.e. Group-1 & Group-2. a) Overload b) HV REF c) LV REF d) LV SEF e) Over fluxing Please confirm. | 1. Not all protections are indicated here (O/C +E/F missing).Please refer specification. Main Protections can be clubbed in two relays 2. LBB - This shall be standlaone relay |
| 17 | Annexure-7A (R1), Supply & ITC of SCADA System at BKC. Augmentation of existing SCADA system at Chembur for inclusion of 2 No GIS bays as per Technical Specification | Clause no.4.4 | Please provide the following details w.r.t existing substation automation system at Chembur: a) What is the available system for control & automation at the existing station i.e. SAS or RTU? b) Make of SAS/RTU c) Model number of SAS/RTU | a)800xA ,Micro-SCADA and Network Manager b)Hitachi-Energy c)800xA 5.1, Micro-SCADA 9.4 and Network Manager 5.5 |
| 18 | Annexure-7A (R1), Supply & ITC of SCADA System at BKC. Augmentation of existing SCADA system at Chembur for inclusion of 2 No GIS bays as per Technical Specification | Clause no.4.4 | Please furnish the existing Substation automation system architecture drawing of 220kV chembur station | Please find the attached architecture |
| 19 | ANNEXURE-7C, SDH COMMUNICATION EQUIPMENT | Clause no.2.2.1, a) | FOTE shall be provided for 220kV BKC- Chembur double circuit line direction only. Please confirm | 2 nos Fibre optic cable for communication & Protection purpose shall be provided for the entire 220 kV cable route |
| 20 | ANNEXURE-7C, SDH COMMUNICATION EQUIPMENT | Clause no.2.2.1.b) | Please provide the following details w.r.t existing Communication equipment: a) Transmission capacity (STM-1/SM-4/STM-16) b) Number of directions c) Number of spare teleprotection interface cards d) Number of spare data interface cards e) Number of spare speech interface cards | a)STM-4 b)4 c)Nil d)Nil e)Nil |
| 21 | Existing Distributed Temperature Sensor at 220kV CHEMBUR | | Please provide the make and model number of existing Distributed Temperature sensing system at chembur substation | It is Silixa make, Software: Bandweaver, Country: UK |
| 22 | Turnkey Tender document, Soc.no.TD-SD-TURNKEY TENDER-BKC-720-R2 | Clause no.6.1.1 | a) Please clarify the source of 11kV auxiliary supply for 11/0.415kV auxiliary transformer? b) If the source is outside the plot area, please mention the distance of the tapping point. c) Also, we understand that the 11kV auxiliary supply shall be derived up to the BKC station premises through cables or OH lines by AEML. Please confirm. | Cables for permanent 415V supply to substation will be laid by AEML Distribution team. |
| 23 | Turnkey Tender document, Soc.no.TD-SD-TURNKEY TENDER-BKC-720-R2 | Clause. No. 48 | From the referred clause, we understand that the bidder scope involves only execution of 33kV and 11kV cable laying from BKC substation to Chembur station. We do not envisage any supply of 33kV and 11kV cable under this scope of works. Please confirm | Confirmed |
| 24 | Annexure-1A(R3), Supply of 220kV GIS as per Technical Specification | clause no.1.1.1.a, | In the referred clause, voltage detection device is mentioned for line and transformer bays. Please clarify the functional requirement of voltage detection device? | It is to be used in closing interlock of switch. Also for visual indication. Please comply AEML requirement |
| 25 | Annexure-1A(R3), Supply of 220kV GIS as per Technical Specification | clause no.1.1.1.a, | a) Whether high speed earth is required for 220kV line bays for both BKC and Chembur substation? b) Whether high speed earth is required for 220kV transformer bays for BKC substation? c) Line side surge arrester is not shown in the tender SLD. Please clarify the requirement of Surge arrester for line bays at BKC substation? | a. & b- Please consider high speed earth switch. C. These are cable connected feeders. Hence LA is not considered |
| 26 | Annexure-1A(R3), Supply of 220kV GIS as per Technical Specification | PD monitoring device for 220kV GIS | Please clarify the requirement of PD monitoring device i.e. Online or Portal PD monitoring system for the proposed 220kV GIS at BKC. At chembur we do not envisage supply of any PD Monitoring system. Please confirm. | Bidder to provide inbuilt UHF sensors to facilitate monitoring of Partial Discharge in220kV GIS . PD Monitoring device is not considered in scope |
| 27 | Annexure-1A(R3), Supply of 220kV GIS as per Technical Specification | Clause. No.8 testing and inspection | a) We understand that the type test will not be repeated for 220kV GIS, if the bidder can substantiate with valid type test report. Please confirm. b) Further the validity of test reports shall be in line with the latest CEA guidelines "Guidelines for the Validity Period of Type Test(s) conducted on Major Electrical Equipment in Power Transmission System". Please confirm | a & b - OK |
| 28 | Annexure-1A(R3), Supply of 220kV GIS as per Technical Specification | Clause. No.19.1GTP - GAS INSULATED SWITCHGEAR (GIS), Sr.no.3.2 | In the referred clause, the enclosure is mentioned as outdoor type. Please confirm whether the requirement is indoor or outdoor GIS? | GIS is indoor at both at BKC & Chembur |

| S. No. | Clause Reference | Ref Clause | Queries by L&T Construction | Reply on 25/10/2021 |
|--------|--|---|---|---|
| 29 | Annexure-2A (R2), Supply of 125MVA Power Transformer as per Technical Specification. | Clause no.7.3 | Please clarify the following w.r.t to 220/33kV, 125MVA transformer: a) Whether any maximum ceiling limit or range is available for transformer losses. If yes, please provide the same b) Whether any loss capitalization is applicable for this tender package. If available, please provide the method of calculating the loss calculation for the transformer. | a) Please follow the Technical Specifications b) Please follow the Technical Specifications. Calculation is done by commercial team. |
| 30 | Annexure-2A (R2), Supply of 125MVA Power Transformer as per Technical Specification. | Clause no.30.3 | We understand that the bidder shall not perform dynamic short circuit test for 220/33kV, 125MVA transformer under this tender package. The Dynamic short circuit withstand capability shall be demonstrated through calculations during design review. Please confirm | Please follow the Technical Specification. |
| 31 | Technical specification for 11/0.415kV station transformer | | Please furnish the technical specification for 11/0.415kV station transformer along with the transformer rating. | 11/0.415kV Transformer will be supplied by Distribution company. Sizing calculation to be done by bidder |
| 32 | Creepage distance | | Please confirm the creepage distance to be adopted for substation outdoor equipment for this tender package. | Please clarify about which outdoor equipment it is mentioned. |
| 33 | Annexure-9C, Supply of 220V Battery Set as per Technical Specification | Clause no.1.1, 220V, 450Ah Nickel cadmium battery | We presume that the battery capacity of 450AH as mentioned in the referred clause is minimum requirement & Bidder shall substantiate the actual AH rating with sizing calculations. Please confirm. | Understanding is ok: Sizing mentioned is tentative and is based on existing substations, actual sizing will approved in detailed engineering. |
| 34 | DCDB AT BKC EHV SUB-STATION | DWG.TD-SLD-ODEF-BKC-RO | We understand that the referred DCDB SLD is only for tender reference purpose. Bidder to choose the rating of MCCB and MCB as per the requirement. Please confirm whether bidder understanding is in order. | Understanding is ok: Details mentioned are tentative and is based on existing substations, actual sizing will approved in detailed engineering. |
| 35 | Annexure-12A, Supply & Services of Illuminations system as per Scope Document | | a) Please provide the uniformity factor for both indoor and outdoor illumination. b) Please provide the maintenance factor for both indoor and outdoor illumination | If these design parameters have any implications on offer submission, please let us know else will be decided in detailed engineering post order placement |
| 36 | General | | The following annexures are not available along with the tender documents: a) Annexure O- MDB 33 kV Power cable laying b) Annexure P- MDB 33 kV Coffin box technical specs c) Annexure S- MDB RCC Tile specs d) Annexure T- MDB 33 kV cable length Details e) Annexure U- MDB BOQ along with 220 kV cables Please furnish the above mentioned annexures for this tender package | All the documents are uploaded on portal. However the same is attached for your ready reference |
| 37 | ANNEXURE -A, TECHNICAL SPECIFICATION FOR 220 KV CABLES & 220 KV ACCESSORIES | Clause no.1.3.1, 9) & 10) | From the referred clause, the rated short time current is mentioned as 40kA for 1sec. However, as per Turnkey Tender document, Soc.no.TD-SD-TURNKEY TENDER-BKC-720-R2, cl.no.2.2, sl.no.10, the rated short time current for conductor is mentioned as 50kA for 1sec. As both clauses are contradicting, please confirm for the following: a) Rated short time current & duration for conductor b) Rated short time current & duration for metallic sheath | 40kA for 1 sec for both conductor and sheath |
| 38 | ANNEXURE -A, TECHNICAL SPECIFICATION FOR 220 KV CABLES & 220 KV ACCESSORIES | Clause no.1.4, 8), metallic sheath | In the referred clause, the metallic sheath is mentioned as "Extruded Corrugated Aluminium/ Welded Corrugated Aluminium/ copper tape & copper wire + Extruded Lead alloy Type" E". We request M/s AEML to confirm the material of metallic sheath to be considered for 220kV cable in this package. | As discussed during prebid meeting, Bidder to submit offer for all 3 type of metallic sheath. |
| 39 | ANNEXURE -A, TECHNICAL SPECIFICATION FOR 220 KV CABLES & 220 KV ACCESSORIES | Clause no.1.6, Inspection & testing | We understand that the type test and PQ test will not be repeated for 220kV EHV cable, if the bidder can substantiate with valid type test report. Please confirm. | If cable & accessories are PQ and type tested for the specified cable size and technical parameters in tender document then said test are not required to be repeated. |
| 40 | ANNEXURE-13A, TECHNICAL SPECIFICATION FOR SUPPLY & SERVICES FOR EARTHING SYSTEM | Clause no.2.c | As IS 2309 is superseded with IEC 62305, please confirm whether bidder to follow protection of building & allied structures against lightning as per IS 2309 or IEC 62305? | We believe IS standard will not be superseded by IEC standard, as they are different set of standards. Please follow latest/updated version of IS 2309, if any specific point to be taken care while designing, we will address those queries post order placement |
| 41 | Annexure-3A (R2), Supply of 33kV GIS as per Technical Specification | Clause no.4.3, sl.no.4, Transformer (33/11kV) | Please clarify the following w.r.t 33/11kV transformer protection: a) Whether 33/11kV transformer is in present scope of works? If yes please furnish the MVA rating and technical specification for 33/11kV Transformer b) Whether location of 33/11kV transformer is inside the plot boundary or outside of plot? c) We have considered only overcurrent and earth fault protection for transformer feeder similar to feeder protection. Please confirm | a) Supply of 33/22/11kV Transformer is not in present scope. Generally rating is 35MVA. b) Yes. 4Nos, 33/22/11kV Transformer will be installed inside Substation. Construction of foundation of these transformer is in the scope of bidder. Details are indicated in Civil bid documents c) Protection of 33/11kV transformer is indicated in 33kV GIS specification. There are unit protection as well, REF, DIFF & standby E/F in addition to O/C & E/F protection. Please refer specification. Refer Clause 4.3 of specification. It is indicated clearly |
| 42 | Annexure-3A (R2), Supply of 33kV GIS as per Technical Specification | Clause no.4.3, sl.no.6, Shunt reactor | We do not envisage any supply of 33kV reactor under this present scope of works. However, please provide the rating of reactor to which the 33kV reactor feeder will be connected. Also please earmark the location of shunt reactor within the substation plot boundary. | 1. Supply of reactor is not in present scope. Rating of 33kV reactor is 10-15MVAR 2. Bidder has to prepare layout to accommodate 33kV reactor in given plot |
| 43 | ANNEXURE-20A, TECHNICAL SPECIFICATION FOR CCTV & ACCESS CONTROL AT BKC 220KV EHV SUB STATION | Clause no.1.1 | Please confirm whether CCTV cameras at existing 220kV chembur substation for extension of 2 bays is under present scope of works. If yes, please provide the make and model no. of existing CCTV system | Make and model shall be provided in detailed Engineering |
| 44 | ANNEXURE-20A, TECHNICAL SPECIFICATION FOR CCTV & ACCESS CONTROL AT BKC 220KV EHV SUB STATION | Clause no.1.1 | Please provide the CCTV system make and model number at existing DSS server & Command & Control Centre (CCC) at Ghodbunder Security Control Room. | Make and model shall be provided in detailed Engineering |
| 45 | ANNEXURE 21A - TECHNICAL SPECIFICATION FOR PUBLIC ADDRESS SYSTEM AT 220KV BKC SUBSTATION | Clause no.1.1 | Please confirm whether PA system at existing 220kV chembur substation need to be augmented for extension of 2 bays under present scope of works. If yes, please provide the make and model no. of existing PA system | PA System is required at BKC. It is not required at Chembur |
| 46 | Annexure-7A (R1), TECHNICAL SPECIFICATION FOR SCADA SYSTEM AT BKC SUB-STATION | Clause no.2.2.3, c- Remote Network Control Centre SCADA (BCC/MCC) | Please provide the following w.r.t remote network control centre: a) Location of BCC b) Make and model number of SCADA at BCC c) Location of MCC d) Make and model number of SCADA at MCC e) Mode of communication with Remote Network Control Centre SCADA (BCC/MCC) | a)Devidas Lane Borivali b)HitachiEnergy - Network Manager c)Aarey - Goregaon (East) d) Hitachi Energy - Network Manager e)Multiplexer |
| 47 | Annexure-7A (R1), TECHNICAL SPECIFICATION FOR SCADA SYSTEM AT BKC SUB-STATION | Clause no.2.2.3, d-NMS System | Please provide the following w.r.t NMS system: a) Location of NMS system b) Make and model number of NMS at remote network control centre | a) Aarey EHV sub-station b) NMS System - Make Siemens Model RuggedNMS |
| 48 | Annexure-7A (R1), TECHNICAL SPECIFICATION FOR SCADA SYSTEM AT BKC SUB-STATION | Clause no.6.2.1.a.3- Proposed Remote Operation System (TCC) at Ghodbunder | Please provide the following w.r.t Proposed Remote Operation System (TCC): a) Make and model number of SCADA at TCC c) Mode of communication with Proposed Remote Operation System (TCC) SCADA | a) Not yet finalised c) Not yet finalised |
| 49 | Annexure-7A (R1), TECHNICAL SPECIFICATION FOR SCADA SYSTEM AT BKC SUB-STATION | Clause no.4.4 | Please provide the following w.r.t ABB SCADA for LS: a) We understand that the LS represents the Load shedding SCADA. Please confirm b) Model number of ABB SCADA for LS c) Location of LS SCADA is same as MCC or different? | a) Yes b) 800xA c) Physically same building but in Aarey EHV sub-station not in MCC |

| S. No. | Clause Reference | Ref Clause | Queries by L&T Construction | Reply on 25/10/2021 |
|----------------------|---|---------------------|--|---|
| 50 | Annexure-3A (R2), Supply of 33kV GIS as per Technical Specification | Clause no.4.1 | We presume that the 33kV IEDs will not be IEC61850-9-2LE compliant. However, the same shall be provided with redundant FO ports & integrated to the Process bus SAS architecture through suitable Red box solutions. Please confirm whether Bidder's understanding is in order. | Relays at 33kV GIS is not process bus compliant. Communication protocol to SCADA for these relays is IEC 61850. Dual FO port on PRP to be provided for station bus connectivity. Process bus & station bus will be separate. There wont be connectivity between them |
| 51 | ANNEXURE-7C, SDH COMMUNICATION EQUIPMENT | Clause no.2.2.1.d.1 | Please provide the following w.r.t existing communication equipment at AEML substation: a) Location of AEML substation mentioned under the referred clause b) Transmission capacity (STM-1/SM-4/STM-16) c) Number of spare teleprotection interface cards d) Number of spare data interface cards e) Number of spare speech interface cards | a)STM-4 b)4 c)Nil d)Nil e)Nil |
| 52 | General works at chembur substation | | We understand that the following works are already available at existing chembur substation for two bay extension: a) EOT crane b) Lighting system c) GIS Main mat earthing The above mentioned works are not in bidder's scope of works. Please confirm | a): EOT crane: It is available in existing Chembur GIS station b) Lighting system: Related to space for 2 bays and adapter, lighting to be provided C) Main earth mat is there. However connection to earth mat and equipment is in the scope of bidder. |
| 53 | General Input at chembur substation | | We request AEML to furnish the following for existing substation: a) Switchyard equipment layout (plan & section) b) Existing Earthmat layout c) Existing cable trench layout (Indoor & Outdoor) d) Existing Lighting protection (DSLIP) layout e) Existing control building layout | 1. Existing is GIS Substation. There is no switchyard. Drawings will be furnished after order placement. Any specific query is there, we will address the same |
| 54 | General Input at chembur substation | | We understand that existing ACDB and DCDB (220V & 48V) at chembur substation are having sufficient spare feeders for the bay extensions under present scope of work. Please confirm. | Spares feeders are available in existing ACDB and DCDB. |
| 55 | Cable laying in trenches | | We propose to lay cables on support angles in outdoor trenches. For GIS building and control building, cables shall be laid in trays. Please confirm. | It shall be as per methodology and drawing mentioned in Tender document. |
| 56 | Outdoor lighting | | Please confirm whether light fixtures shall be mounted on buildings for outdoor illumination? | Please consider as per bid document |
| Civil Queries | | | | |
| For New SS | | | | |
| For Extn SS | | | | |
| 1 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | Cl.no: 43.1.1 | Please provide the following details & layouts for the existing Chembur SS, 1. Over all GA layout 2. Contour layout indicating Spot levels & FGL of existing 3. Soil report 4. Proposed FGL for the proposed work area 5. Overall cable trench layout 6. Overall drainage layout 7. Overall earthing layout/gravel spreading layout. In order to estimate the quantum of work. | At Chembur, There is only extension of 2 nos of 220kV GIS bays and associated control relay panel. Considering the scope, please raise the queries accordingly. Many of the documents /drawings asked is not relevant |
| 2 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | Cl.no: 43.1.1 | We trust that, the space is available for the proposed bay extension in the existing chembur SS. Hence the construction of new building, extension of existing building/modification work in the existing building is not in bidders scope. Please confirm. | Space is available for the proposed bay extension in the existing GIS at chembur SS. Hence the construction of new building, extension of existing building/modification work in the existing building is not envisaged. However, Civil work related to installation of various equipment to be considered as per respective bid document |
| For Cabling | | | | |
| 1 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | -- | Please provide the detailed cable route survey for the proposed 220kV UG cabling from Existing chembur SS to proposed BKC SS. In order to estimate the quantum of work. | Cable route is already provided in annexure E. KMZ file is attached for ready reference. However further survey of cable route and detailing is in the scope of bidder. |
| 2 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | -- | We trust that, the approval from govt authority, NHAI, PWD,MCGM, harbour & central railway authority, MMRDA and ROW, etc., is not in bidders scope. The same shall be in M/s AEML scope. Kindly confirm. | It is in bidder scope |

| Sr. No. | Annexure No / Document / Package Name (Equipment details) | Page No. | Clause No. | Clause details as per Bid Sepcification | Bidder's Query dated | AEML reply on comments on 22.10.2021 |
|-------------------------|---|------------------------|----------------|---|--|--|
| 1 | 2 | 3 | 4 | 5 | 6 | |
| Commercial Query | | | | | | |
| 1 | Project completion period (Tender Documents) | 58 | 30 | The entire scope of contract shall be successfully commissioned within 24 months from placement of PO | 24 month is including moonsoon or excluding moonsoon please confirm. and road cutting permission from GOVT authority.- Please confirm. | Including monsoon. This is turnkey Project. Scope of obtaining permission is with bidder. Details are given in Main turnkey document TD-SD-TURNKEY TENDR -BKC-720-R2: |
| Technical Query | | | | | | |
| 1 | Annexure-E(Tentative drawings) | 17&18 | Annexure-E8&E9 | 220/33kV GIS Receiving station SLD of BKC and Chembur | The given SLD is not readable and technically clarified. Arranged revised SLD for both substation. | All bid documents are uploaded at site. For substation related package, documents are uploaed in 4 parts. List of Annexures are attached for easy understanding. Please download document and check. |
| 2 | Annexure-24E-CIVIL FOAP | | | Annexure-24E-CIVIL FOAP | Attachment missing -Please Confirm | |
| 3 | Annexure-24F -PCTF | | | Annexure-24F -PCTF | Attachment missing -Please Confirm | |
| 4 | Annexure-25-Special Terms & Condition of contract | | | Annexure-25-Special Terms & Condition of contract | Attachment missing -Please Confirm | |
| 5 | Annexure-5A | 1 of 31 in Annexure 5A | | Supply of 33/11kV Cables regarding | scope of supply shall be in bidders scope or Adanis scope please confirm. | Supply of 33 kV & 11 kV cables is in the scope Adani |
| 6 | Annexure-7B | 1 of 8 in Annexure 7B | | 220kV UG cable line SDH panel telecommunication system | Confirm Chembur End SDH panel supply scope. | Scope is given in specification which is part of bid document. SDH Entire BoQ is given in specs |
| 7 | Annexure-O | | | Scope MDB 33kV Cable laying annexure | Attachment missing -Please Confirm | All bid documents are uploaded at site. For substation related package, documents are uploaed in 4 parts. List of Annexures are attached for easy understanding. Please download document and check |
| 8 | Annexure-P | | | MDB-33kV Coffin technical specification | Attachment missing -Please Confirm | |
| 9 | Annexure-T | | | MDB- 33kV Cable length details | Attachment missing -Please Confirm | |
| General Query | | | | | | |
| 1 | Substation plot size | | | 2900 Sqmtr | Please confirm substation plot length and width. | Please refer Annexure -24A for Substation layout drawing. Details are given in the drawing |
| 2 | Substation plot soil resistivity test report | | | | Please arrange Soil testing report | Soil investigation report is atathced. Soil resisitivity report will be shared soon |
| 3 | Existing parking basement Civil drawing | | | | Please arrange | Please refer Annexure -24A for Substation layout drawing. Details are given in the drawing |
| 4 | Road cutting charges and royalty charges | | | | Please confirm charges scope is in bidder side or AEMLside. | Please refer Main turnkey document TD-SD-TURNKEY TENDR -BKC-720-R2:Clause 27 & 28 for details of STATUTORY APPROVALS (SUBSTATION PART) & Cable. If any specfic query is there, please elaborate |
| 5 | Existing substation of 220/33kV Chembur receiving substation line feeder panel, bus bar protection panel drawing, SDH system and DTH system | | | | Please arrange | Scheme drawing of exisitng system will be shared after order placement. We will address if there is any specific query reated to any package. |

| Sr. No. | Annexure No / Document / Package Name (Equipment details) | Page No. | Clause No. | Clause details as per Bid Sepcification | Bidder's Query dated | Response from AEML |
|---------|---|----------|------------|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | 220KV GIS CHEMBUR | | | <p>Please kindly clarify the following:</p> <p>1. Whether the two bays at Chembur must of the same make as existing. Or</p> <p>2. Bidder/Manufactures can offer two bays at Chembur same make as the GIS at BKC with suitable adapter. In this case we have not received any detailed manufacturing drawing at the interface point for evaluating necessary feasibility/ Technical interfaces with existing. Please confirm if necessary end adapter/buffer chamber for extension of the main bus bar by other make is available and if so please kindly provide necessary interface point / Technical details. For realizing the physical interface and final connection of the two bays we will also require outages of the bus bar section.</p> <p>3. Further in both cases of the 1 and 2 above points will also have limitation of warranty obligation of the successful bidder for the facilities at Chembur End. In case 1 above is applicable and in case we receive prohibitive single party pricing from existing GIS maker for two bays at Chembur, and will be limiting us, as these portions will be dictating the Price Level of the complete Substation Package price and could lead to un-competitiveness in both the risks in Prices and Deliveries associated with the nature. In this regard, we request that is there any possibility to exclude this scope and this scope is directly contracted by the existing GIS maker. We wish to bring to AEML kind attention that the clarification/resolutions of the above points are essential for not only competitive and technically compliant bid but also to ensure the technical solution required by AEML can be practically implemented satisfactorily during the project execution.</p> | | <p>1. It is not mandatory to provide NHVS make GIS. You can offer any approved make GIS with adapter suitable for existing NHVS make GIS.</p> <p>2. Detailed manufacturing drawing at the interface point for evaluating necessary feasibility/ Technical interfaces with existing - AEML does not have interface drawing. Bidder can take necessary measurement to design adaptor or avail service from NHVS (OEM of existing GIS) for the same. AEML will extend support in case any help required to obtain offer from NHVS (Existing make GIS). All the work related to Bay extension is in the scope of bidder.</p> <p>3. This is turnkey project , entire scope of supply and service is in bidder's scope.</p> |
| 2 | Right of Way (ROW) | | | | We request AEML to exclude ROW from bidders scope. Kindly confirm. | Not acceptable |
| 3 | Approval & Permissions | | | | We request AEML to keep approvals, permissions & their fees in their scope and any documentary support required will be provided by Contractor. Kindly confirm. | Not acceptable |

| Sr. No. | Volume / Section | Page No. | Clause No. | Bid Specification | Bidder Query | Clarification by Authority |
|---------|--|-----------------------------|--|---|---|---|
| 1 | Annexure-24C- Price BOQ | - | - | Bidders shall quote for the entire scope of supply with a break-up of prices for individual items. | We request you to please provide the detailed BOQ break up along with QTY for the said scope of work i.e., GIS SS & EHV cable work instead of LS item mentioned in the BOQ. This will help bidder to estimate the proper costing for each item. | As discussed during prebid meeting, it is a turn key tender. Complete Design, Supply, Installation, testing & commissioning of entire cable route (12 Km) is in the scope of Bidder. Bidder to quote as per scope mentioned in turnkey tender document |
| 2 | Annexure-T | - | Section length table | Detail length of 33kV & 11kV cable table. | It is observed from the table that there are different lengths of 11kV & 33kV cables to be laid but the 220kV cable drum length is approximately 500 mtr. We understand that 11kV & 33kV cable drum lengths would be same as per the 220kV cable drum lengths for ease of laying of complete section. Kindly confirm. | 11kV cable drum length is 300M. 33kV cable drum length is 250M. |
| 3 | Annexure E-Drawing Annexure-O-MDB-33KV Power cable laying | 7, 9, 3 of 18 6, 7 of 45 | Section length table -A-B section & trench drawing. Clause no-3.2- Clearance | A-B- 40 mtrs length . 33kv - 4 Runs , & 11kv - 7 Runs . In HDPE pipes. The clearances between center to center are as follows - Power Cable to Power cable 200mm for 33kV 150mm for 11kV and 100mm for 1.1 kV cable | We understand from the cable trench size as per drawing for section A-B, total runs of power cable is 11 nos. in HDPE pipes for 11kV & 33kV both but size of trench is not sufficient considering the spacing criteria given in Clause No-3.2 for laying of these cables in this section. Kindly clarify the laying arrangement for better understanding. | 6 runs of cable in portion from A to B to B1 are already laid by AEML distribution. Now the balance cable 2 nos. of 33kV & 3 nos. of 11kV to be laid. |
| 4 | Annexure-A Specification of cable | Page no-7 of 26 | Table point no-8 Metallic sheath | (Extruded Corrugated Aluminium/ Welded Corrugated Aluminium/ copper tape & copper wire + Extruded Lead alloy Type" E") with anticorrosive of high viscosity bituminous coating. | In the Specification of cable metallic sheath- 3 type of 220kV cable construction has been mentioned i.e., extruded corrugated Al sheath, corrugated welded Al sheath and Lead sheath with Copper wires screen. As every construction have different cost implications, please confirm which type of construction is to be offered so that all the bidders are on same platform. | As already discussed during prebid meeting, Bidder to provide 3 separate offer for all 3 type of cable sheaths |
| 5 | Annexure-U Power cable BOQ | - | Services Item sr.no-1a&1b | 33kV 3cx400sqmm cable & 11kV 3cx300sqmm/400sqmm cable. | Please confirm that as per the BOQ, 33kV & 11kV cable, joints and terminations & cable | 33kV & 11kV cable, joints and |
| 6 | | | | | Please also confirm the store location from which 11kV & 33kV cables, joints and terminations would be issued by AEML. | AEML MDB stores at Tilaknagar near Amar Mahal / Kurla (Bail Bazar). |
| 7 | Technical | | | | Please confirm that the 220kV Class Joints are required with Copper casing + GRP casing. | Metal casing shall be Copper and outer casing shall be (FRP/HDPE/GRP) |
| 8 | Annexure-C -cable cleat | Page no-3 of 6 | clause no-4.4 | The Cable Cleat shall have type tested for mechanical strength to withstand force raised during 50KA short circuit fault current for 1 sec on 220 kV 1200 sq. mm Cu, XLPE cables having outer diameter of @ 140 mm | Please confirm the system short circuit rating, whether it is 50 kA for 1 second or 40kA for 1 second. | For 220 kV cable system, 40 KA for 1 sec |
| 9 | AMC | | | Annexure-F- AMC | For submitting the bid, please confirm how many faults to be considered by bidder during 5 years Annual Maintenance Contract. Please also confirm number of jointing work per fault and route length for civil work per fault to be considered by the bidder. | Bidder shall consider 5 number of cable faults (Internal & External) in a year. Generally if one cable fault occurs then 2 joints are required if extra cable loop is not available at site. Bidder shall consider @60 running meter route length civil work per fault for underground cable fault which may vary as per site condition. It will paid on actual measurement basis. |
| 10 | AMC | | | Annexure-F- AMC - Annexure-1 & 2 | The Unit for Annual Maintenance Contract has been mentioned as RMT. Please confirm whether it is Running Meter of Route Meter. | Running meter |
| 11 | General | | | | As the offer is to be submitted on FIRM Price basis, please confirm the date of finalization of Contract. | Commercial Team (CPG) to address this query |
| 12 | General | | | | Please confirm that payment towards obtaining Right-of-Way (RoW) permissions shall be made directly by AEML to the concerned authorities. | Official demand note charges shall be paid by AEML |
| 13 | General | | | | Please confirm that AEML shall provide the 220kV AC source on free-of-cost basis for conducting the 24 Hrs. Soak Test after installation of circuit. | Yes |
| 14 | General | | | | Please confirm that the Cable System should be designed in a way that sheath voltage under normal operating conditions shall not exceed 65 Volts to ground in any Section of the Circuit. | Ok |
| 15 | Annexure-U Power cable BOQ | - | - | 33kv / 11kv - Civil activity & other material required at pulling chamber & joint bay i.e. warning tape, sand , tiles etc. | As per the BOQ & drawing shared with tender, it is observed that civil activity for the pulling chamber (i.e., required sand & other material) is not covered in the 33kv/11kv BOQ. Kindly add the line item for the same in 33kv/11kv BOQ. Also, drawing for pulling chamber is not clearly visible & not shown the position of the 33kv/11kv cable (Annexure-E-drawing page no-13,14 of 18). Kindly provide the updated drawing for the same. | Civil activity & other material required at pulling chamber is inclusive in cable pulling (per meter) & joint bay is inclusive in cable jointing item Jointing bay (jointing pit) will be refilled after jointing with coffin, same is to be considered as pulling chamber, no separate pulling chamber is required for 11/33 kV cables. |
| 16 | Annexure-E Drawing | - | - | 33kv & 11kv RCC tiles drawing not available . | Kindly provide the RCC tiles drawing for the 33kV & 11kV cables. In the trench drawing, size of the tiles is not mentioned. Please clarify. | Please refer Annexure S of technical specification |
| 17 | Railway Crossing activity -220kv & 33kv/11kv | - | - | Railway crossing through HDD/Microtunneling for 220KV & 33kv/11kv cable . | We have approached to various expert contractor who are doing the HDD/Micro tunneling job in Mumbai & it is understood from them that permission from Railway will take more than 1 year & major cost is involved in this process. These contractors required basic details i.e., soil test report of both side of the Railway track at harbor line & central line, hence, kindly provide the same. | As per CI no 20.2 of main turn key document, measurement of soil resistivity is in Bidder's scope. |
| 18 | TD-SD-TURNKEY TENDR -BKC-720-R2 | Page no-37 of 72 | Clause No-19.1.19 | For railway crossing Micro Tunneling shall be considered as backup in case of failure of HDD work. | Request you to kindly confirm which method is to be considered for Railway crossing as no detailed BOQ has been provided with tender. Both HDD and micro tunneling methods are having different cost implication, so, every bidder should be on same line which is necessary for proper evaluation of bid. Please clarify. | As already discussed during site visit, Obtaining permission from Railway is in Bidder's scope. Bidder to discuss with concerned statutory authorities in view of suitable methodology to be adopted for Railway crossing as per their guidelines |
| 19 | TD-SD-TURNKEY TENDR -BKC-720-R2 | Page no-37 of 72 | Clause No-19.1.28 | 2 nos of OFC (48 Fibers-Single mode) cables shall be laid along the 220 kV cable route for communication & protection of system at S/S through 140 mm HDPE pipe (PN-6 PE 100 Grade) extending up to RCC chamber used for jointing via flexible pipe. These cables shall be terminated on FMS panels (in racks) at proposed AEML BKC 220kV station Installation of cables through HDPE pipes shall be such that during OFC cable damage, it can be easily replaced by new one through same duct. | It is presumed that bidder's scope is to only terminate 3 Nos OFC cable to already available/installed FMS panel/ in rack at Chembur station & BKC station. Also confirm the runs of the OFC cables. Hence, request you to kindly clarify / confirm the same. | FMS panel/FMS rack at both substations to be provided by the Bidder. Also Supply, Installation, Terminating the same in both the Panels along with associated accessories shall be in the scope of Bidder. Also there will be 2 runs of OFC cable (48 core each) & 2 runs of DTS cable from AEML Chembur-proposed BKC substation |
| 20 | TD-SD-TURNKEY TENDR -BKC-720-R2 | Page no-38 of 72 | Clause No-19.1.30 | New DTS system comprising of Dynamic current rating (DCR) software shall be installed at proposed AEML BKC substation. | Please provide the detailed specification of DTS system & details of earlier DTS system installed in the Chembur SS. Also please provide the Approved makes of DTS system. | Kindly refer Annexure D for specification of DTS system. Earlier DTS system at Chembur is Silixa make with Bandweaver software. Approved make: Silixa, Bnadweaver, LIOS, Apsensing etc However, Bidder can submit the offer from other vendors also who are capable of complying technical specifications |
| 21 | TD-SD-TURNKEY TENDR -BKC-720-R2 | Page no-38 of 72 | Clause No-19.1.31 | Supply, Installation, testing and commissioning of intrusion detection system. | Please provide the detailed specification of Intrusion detection system & detailed scope under this item. Please also provide the approved makes for this item. | Kindly refer Annexure D |
| 22 | TD-SD-TURNKEY TENDR -BKC-720-R2 | Page no-8 of 72 | Clause No-3.1.2 | Scope shall also cover the Supply, Installation, testing & commissioning of 2 Nos of 220kV GIS line bays alongwith extension module of existing NHVS make 220kV GIS Bus, 220kV Control & Protection system, associated control & LT cables, etc at existing 220kV GIS Chembur Substation as per scope outlined in Clause-3.1 | It is understand from the other GIS vendor that NHVS is not supporting for the services required at chembur SS as existing GIS is NHVS make. Either they are not responding or quoting exorbitant prices for services. Hence, we request you to please take this service activity in AEML scope. This will help in smooth execution of the work. | This is a turnkey Project. Scope of extension of NHVS make GIS is with bidder. In case there is any difficulty in obtaining offer from NHVS, AEML will extend support |
| 23 | General | - | - | Approved vendor list | Kindly provide the approved vendor list for Cable cleats, Electronic Ball Marker, locator instrument, OFC & DTS cables, DTS system, Intrusion detections system etc. | There is no such approved list for minor items. Bidder shall provide the drawing/documents from vendor who are complying technical specification requirements. |
| 24 | Annexure-F Scope of IT services | Page no-1 of 3 | Sr.No-1 | Presently 2 nos of DTS (OFC- Multimode 6 core) are to be laid along with of Y-phases of 220 kV cable (Each circuits) from from AEML's Chembur EHV station to LILO tower in BSNL propert at Chembur. | Bidder understand that presently 2 nos. DTS cable are to be laid from Chembur EHV station to BKC EHV station, not on LILO tower in BSNL property chembur. Kindly confirm the same. Please also confirm the quantity of new DTS System to be supplied and installed. | It is already mentioned in technical specifications. Bidder to Supply & Install 2 nos of DTS cable from AEML chembur-BKC substaion |

| Sr. No. | Volume / Section | Page No. | Clause No. | Bid Specification | Bidder Query | Clarification by Authority |
|---------|--|------------------|------------------------|---|---|---|
| 26 | TD-SD-TURNKEY TENDR -BKC-720-R2 | Page no-59 of 72 | Clause no-32.1.6 Scrap | Measurement and payment will be made on actual cable length laid basis (length of the cable shall be considered from actual measurement between two joints, centre to center.the extra cable laid during laying, jointing, termination shall be on account of the contractor). Amount of extra cable remained after laying and jointing will be recovered as per contract value from running bill. Scrap generated during jointing and remaining cable on cable drum if any after laying shall be in the scope of Contractor. All the scrap generated during laying, jointing, termination shall be property of contractor including cable drum, packing etc.. disposal is the responsibility of Contractor. After completion of cable laying, the contractor shall immediately remove the scrap/drum etc from site to ensure no hindrance to traffic and to avoid penalties. Contractor shall deliver balance material from site other than SCRAP to AEML stores. (Loading, transportation/unloading at AEML stores is in Contractor's scope.) | We request AEML to make measurement & payment as per cable supplied only and scrap generated during jointing & remaining cable on cable drum if any after laying shall be in AEML scope any any scrpa disposal is AEML's responsibility. Hence, kindly ammend the said clause as per the above. | Not accepted |
| 27 | General | | | Joint site visit on dt.18/10/2021 | During the site visit it was observed that there are 2 Nos. major Railway track crossing in the said route. Kindly confirm that obtaining permissions from Railways is AEML's responsibility as it will take long time in obtaining permission from Railways. | obtaining permissions from Railways is in Bidder's scope |
| 28 | General | | | | Please provide detailed Bill of Quantity for Supply and Services so that all the bidders are on same platform for evaluation of bid. | As discussed during prebid meeting, it is a turn key tender. Complete Design, Supply,Installation, testing & commissioning of entire cable route (12 Km) is in the scope of Bidder. Bidder to quote as per scope mentioned in turnkey tender document |
| 29 | General | | | | Please confirm that AEML would obtain Right-of-Way (RoW) permissions from the authorities and make payment for the same directly to them. | obtain Right-of-Way (RoW) permissions from the authorities is in Bidder's scope. However, official demand note charges shall be paid by AEML. |
| 30 | Technical | | | | Please confirm that the Cable System should be designed in a way that sheath voltage under normal operating conditions shall not exceed 65 Volts to ground in any Section of the Circuit. | Ok |
| 31 | Technical | | | | Please confirm that AEML will provide the 220kV AC voltage source for conducting the 24 hrs. Soak Test after installation of the Circuit. | Yes |
| 32 | Technical | | | | Please confirm that the 220kV Class Joints are required with Copper casing + GRP casing. | Metal casing shall be Copper and outer casing shall be (FRP/HDPE/GRP) |
| 33 | Technical | | | | Please provide the Technical Specification of Composite Optic Fiber Cable (6 Fiber Multi Mode & 6 Fiber Single Mode) to be used with DTS. | Kindly refer Annexure D |
| 34 | Annexure-F | | | | Please confirm that AEML will make the payment directly to authorities for obtaining the Right-of-Way permission during the Annual Maintenance. | Official demand note charges shall be paid by AEML |
| 35 | Annexure-F | | | | Please confirm that for rectifying the damage during the Annual Maintenance Contract, the required 220kV cable, Joints, Terminations, Optic Fiber cables, Sheath Bonding & Co-axial cables, Link Boxes, HDPE Pipes etc. would be provided by AEML to the Contractor as a free issue material. | It will be free issue material during external fault and after warranty period. During fault in case of internal failure during Warranty period then said material to be replenished by the Bidder. |
| 36 | Annexure-24D-Qaulification requirement | Page no-2 of 6 | Clause no-2.1.2 | The OEM shall have servicing facility in India with necessary spares and testing equipment for providing prompt after sales service. Details of the set-up available shall be brought out in the offer, failing which the offer will be rejected. Bidder shall deploy qualified skilled person to site within 48 hrs when requested; undertaking shall be submitted along with the bid. | OEM have service facility in india OR Manufacturing facility in india only, Please clarify this clause in detail. Also, as discussed in the pre bid meeting, AEML will confirm the applicability of DPIIT clause for this tender, please confirm . | It is clear that AMC is in Bidder's scope. In case of fault(Internal/External), if any services is required for project completion like Joint material, Installation of Joint or any other technical services during any emergency thaeen respective Engineer or material shall reach within time so that system availability will be maintained within short span of time What is DPIIT??? |
| 37 | Tender NIT | Page no-7 of 25 | Table - EMD clause | Rs.200 Lacs /- (Rupees Two Crore only) (refundable without interest) (EMD, only in the form of Online NEFT Transfer / Bank Guarantee, to be valid up to 180 days from the date of techno-commercial bid opening). All the suppliers will have to pay EMD before bid end date, without which, their price bid shall not be opened. No interest will be paid on such deposits. | As per GOI circular no. F.9/4/2020-PPD dated12.11.2020, Bid Security/ Earnest Money Deposit submission is exempted for all tenders issued. In view of the same, we request you to kindly exempt the Earnest Money Deposit for this tender. | Commercial Team (CPG) to address this query |
| 38 | Annexure-24D-Qaulification requirement | Page no-4 of 6 | Clause no-2.3.1 | Bidder should have executed at least one substation project (supply, storage, erection, testing and commissioning) of 220kV voltage class or higher on Turnkey or partial Turnkey basis in the last 5 years & Bidder shall have a minimum of 5 years experiences in supervision & Installation of 220 kV or higher voltage class cable & accessories, for at least 15 KM (Cable length) and accessories (Minimum 20 Nos of each type i.e. 220kV GIS end termination/ Transformer end cable termination, Joints & outdoor terminations) which must be operating satisfactorily for the past 5 years; as on the date of Bid submission; | 220kV cable projects are still in the early stages in our country which involves significantly less quantity of Terminations in comparison of Joints. Hence, we would request yo to kindly amend this clause as, "Bidder should have executed at least one substation project (supply, storage, erection, testing and commissioning) of 220kV voltage class or higher on Turnkey or partial Turnkey basis in the last 5 years OR Bidder shall have a minimum of 3 years experiences in supervision & Installation of 220 kV or higher voltage class cable & accessories, for at least 15 KM (Cable length) and accessories (Minimum 20 Nos. of each type i.e., 220kV GIS end termination/ Transformer end cable termination, Joints & outdoor terminations) which must be operating satisfactorily for the past 3 years; as on the date of Bid submission" | Not accepted |
| 39 | Technical | | | | Please provide complete installation condition for checking the desired current rating of 800 Amp in the proposed installation condition. | Bidder to install the cables as per the cross section mentioned in Annexure E. Based on the cross section, Bidder to carry out ampacity calculation |
| 40 | General | | | | Please confirm whether bid can be submitted by Joint Venture / Consortium. | Yes. Bidders shall meet AEML QR document . JV Agreement shall be submitted along with bid for AEML approval |
| 41 | Technical | | | | Please note that the testing laboratory FGH is in Germany in place of Italy mentioned in the Tender Documents. | Ok noted. |
| 42 | Technical | | | | Please confirm which type of Terminations are to be offered i.e., GIS Termination or Outdoor Termination. | GIS termination |
| 43 | General | - | - | Joint site visit on dt.18/10/2021 | Request you to kindly provide the Google earth KML file for the proposed cable route & layout plan for the BKC SS & plot . | KMZ google file already shared. Kindly check with AEML commercial team. KMZ google file - We will share shortly |
| 44 | General | - | - | Joint site visit on dt.18/10/2021 | During joint visit AEML official informed that crossing methodology can be decided by bidder , but we request you to please clear the firm methodology for River crossing , Railway crossing , Nala crossing , Road crossing etc. either HDD/Microtunneling/Push jack method etc. , each method have different cost & time involve , hence we request AEML to final the methodology so all bidder can be on same path & same will helpful for AEML for better comparison of offer. | As per technical specifications and as discussed during prebid meeting and site visit, obtaining ROW permission fro statutory Authorities is in Bidder's scope. Bidder to follow up with concerned statutory authorities for finalization of methodology for Road crossing, Railway crossing, Nalla crossing etc in their jurisdiction and obtain demand note accordingly. |
| 45 | Annexure-25 STC | Page no-1 of 10 | Sr.No-4 | The Contractor shall perform the Works and achieve Completion within [Twenty Four Months] from [the Effective Date] | Considering the huge scope work & involmnet of railway crossing activity , & its approval from concern authority , given schedule is not practically feasible. Hence we request you to please review the same & increase the completion schedule accordingly . | Not accepted |
| 46 | General | - | - | Joint site visit on dt.18/10/2021 | We request you to please confirm that Principal approval received from railway authority as well as MMRDA for cable crossing near Kurla & Harbor line. Please confirm. | As already discussed during prebid meeting, site visit and as per clause mentioned in Technical specs, Obtaining permission from any statutory Authority is in Bidder's scope. |

| Sr. No. | Volume / Section | Page No. | Clause No. | Bid Specification | Bidder Query | Clarification by Authority |
|---------|--|----------|------------|---|---|---|
| 47 | Annexure-24D-Qaulification requirement | - | - | Joint venture / consortium | During discussion in the pre bid meeting AEML informed that Joint venture / consortium is applicable for this tender , but we have not seen any clause related to JV & also no format given for the JV agreement , JV POA etc. in the said tender . Please clarify & provide the same . | JV is acceptable for this tender. Bidders shall meet AEML QR document . JV Agreement shall be submitted along with bid for AEML approval We will revert on this point and will |
| 48 | General | - | - | Regarding separation of GIS & cable scope. | These two activities are very diverse & require expertise to execute the job work, it will be difficult for any single agency/contractor to complete the project in TOTO. As you are aware that GIS SS work is to be executed at single allotted space, while 220kv EHV UG cable work will execute throughout the roadside, including crossing of railway, river / nala etc. with various approvals, permissions which are involved in this work. This being 2 separate and distinct work activities specialized expertise is required. Further these activities if not bifurcated the cost also will not be competitive. As the main contractor will load his margin to our cable margin and quote rather than our price being competitive if quoted directly to you. Also this 2 separate jobs being distinct and specialized GIS manufacturer will have his Credential for the QR required rather than for Cable laying job and vise-versa. This will restrict the competition if combined for such big project job. Hence considering the above we request you to kindly split/separate the EHV cable work scope from the above tender, which will not only reduce the cost but also help in smooth execution and project completion. | As discussed in prebid meeting, JV is acceptable for this tender. Bidders shall meet AEML QR document. |
| 50 | General | - | - | Joint site visit on dt.18/10/2021 | Please confirm the Civil & Electrical drawing approval authority . | Point is not understood. Please elaborate |
| 51 | General | - | - | Joint site visit on dt.18/10/2021 | Please clarify that water , Electricity required for construction work in SS area , which will be provide by AEML free of cost to bidder . Please confirm. | As per document No: TD-SD-TURNKEY TENDR -BKC-720-R2, Clause No: 39: The Electricity & Water shall be arranged by Bidder. Bidder to consider the same while submitting the proposal. |
| 52 | General | - | - | Joint site visit on dt.18/10/2021 | Please clarify about Price variation , QTY variation & any extra item require to do this job . We assume it shall be paid by AEML extra as actual . Also please provide the details BOQ along with the require QTY , which will help bidder to arrive on proper estimate & same will help AEML for proper comparison . | Point is taken up with CPG. We will revert on this point |
| 53 | General | - | - | Joint site visit on dt.18/10/2021 | Please provide the number of bays which would be configured in SCADA (@BKC substation). | All IEDs & bays in the substation (220kV, 33kV & 415V) to be configured in SCADA. Details to be seen in respective specification which is part of bid documents |
| 54 | General | - | - | Joint site visit on dt.18/10/2021 | Kindly clarify & confirm the requirement of the Busbar panel at the Chembur GIS substation. | 1. At Chembur, 2Nos new 220kV GIS bays to be configured in existng Siemens make decentralised bus bar protection. Details of existng decentralised bus bar protection is indicated below. New bays to be integrated in existng busbar protection. In addition to this, new bus bar protection of same make to be provided for entire station 1.MLFB of bay unit - 7SS5251-5FA01-OAA1/FF 2.Firmware Version of bay unit - VO3.32 3.Parameter set of bay unit -- (NA) 4.MLFB of Central unit - 7SS5220-5AB92-1BAO-LOR 5.Firmware Version of central unit - VO4.70.09 6.Parameter set of central unit - VO4.72.01 Scope is clearly indicate in clause no: 1.2 and 5.ii of 220kV cRP specification:- TD-SP-220KV-CRP -BKC/UNIVERSITY-467-R3: Annexure 6A |
| 55 | General | - | - | Joint site visit on dt.18/10/2021 | We request you to kindly share the ss layout including the dimension of 220kV GIS building length, width and location of Power transformer and other equipments proposed as per the scope of work under this tender. Also please share the soil investigation report for the BKC proposed SS for our ready ref. | Drawings are part of turnkey tender document. Please refer Annexure 24A for substation layout drawing. Soil Invetigation report is attached |
| 56 | General | - | - | Approved vendor list | We request you to please provide the approved vendor list for below items , 1) Transformer Power , station 2) GIS 3) Switchgear , panels 4) SCADA , & other SS related items . | It is part of individual Specifications. Please refer specification which is part of bid documents |
| 57 | Tender NIT | 7 of 25 | table | Online Bid Submission process and period/date of bid submission 1.11.2021,17:00 Hrs | Considering the above technical queries & huge scope of work under this tender i.e. GIS SS & EHV cable work as well as diwali festival in 1st week of Nov-21 , we request you to kindly provide us the sufficient time after the replied to our queries , so please extend the bid submission due date at least 4 weeks after receipt of queries reply or current due date whichever is later. | We will revert on this point. |

Prebid Clarification on Civil Queries

| S.No. | Documents Name | Clause No./ Head | Descriptions | Clarification Required | AEML Comments |
|-------|--------------------|------------------|--------------------------------|---|--|
| 1 | | | General | Kindly Provide plot layout and Soil Investigation report for porposed plot. | Refer plot layout attached. Soil Investigation of existing Adani Inspire Building is attached here with for reference purpose only. However soil investigation of proposed plot shall be in the scope of turnkey vendor. |
| 2 | Site Visit Queries | | Earth filling and Boundry wall | We observed during site visit, basement 2 & basement 3 of existing structure to be filled. Kindly confirmed whether existing structure needs to be abandoned. | Shall be under AEML scope |
| 3 | Site Visit Queries | | Retaining wall | Kindly confirm whether retaining wall to construct or any other arrangement needs to be constructed at basement 2 and basement 3. | Shall be under AEML scope |
| 4 | Site Visit Queries | | Cable cellar | Kindly confirm if basement 1 to be used as a cable cellar portion. If the existing basement 1 is not suitable as cable bending radius, new designed cable cellar needs to be constructed and price implication shall be provided accordingly. | Portion of existing basement-1 does not foul with the proposed cable cellar of sub-station building. |
| 5 | General | | Existing Structure Drawings | Kindly provide the existng structure drawings along with building bearing capacity considered. | Shall be under AEML scope |

| Sr.No | Reference PTS /Clause / item, Page No. | BIDDER'S CLARIFICATION | CUSTOMER RESPONSE |
|-------|---|--|--|
| 1 | | Please provide the FGL of the plot & adjacent road level. | Same shall be communicated shortly |
| 2 | | Please provide the soil resistivity report for the proposed plot | Shall be provided within next 10 days. |
| 3 | | Please confirm the total area which needs to be considered for back filling at Level P2 & P3 below FGL. | Shall be in the scope of AEML |
| 4 | | Also, we understand a retaining wall is required to be constructed at Level P2 & P3 below FGL separating the S/s plot from the rest. Please clarify the exact scope of work. | |
| 5 | | At Level P1, which will be used as 220 kV Cable cellar there are existing cable trays & service cables, we understand dismantling & re-routing of the same will be done by ADANI. Please confirm. | Shall be taken care by AEML |
| 6 | | At Level P1, which will be used as 220 kV Cable cellar the existing columns inside plot boundary can be utilized by bidder. Sterling Engineering is the concerned consultant who had done the structural design. Please provide the design document of structural design of Level P1 for bidder's reference. | Existing columns are not fouling with proposed Sub-station building. |
| 7 | | At Level P2, there are existing cable trays & service cables, we understand dismantling & re-routing of the same will be done by ADANI. Please confirm. | Shall be taken care by AEML |
| 8 | | At Level P3, there are dewatering pipes & other installations related to de-watering, we understand dismantling of the same will be done by ADANI. Please confirm. | Shall be taken care by AEML |
| 9 | | During site visit it was communicated that the boundary wall in front of the main gate of ADANI INSPIRE office of around 20-25 meters length needs to be dismantled & shifted to match with actual plot boundary. Please provide the details of work involved. | Shall be in the scope of AEML |
| 10 | | We understand that there are no underground utilities below the proposed plot. However, if any utilities are found during construction same will be relocated by ADANI. Please confirm. | Shall be in the scope of AEML |
| 11 | Cutting/ filling for land development of present scope of works | As per clause no -15.0 of Turnkey Tender Documents, site levelling is in the bidders scope but there is no line item for the same in the Price schedule. Kindly confirm if site levelling is in the Bidders scope. If not kindly furnish the Topographical data for the site. | Site levelling is part of bidder scope & covered under the Turnkey tender price. |
| 12 | Soil Investigation Report (SBC) | Kindly confirm if soil investigation is in the bidders scope. If not kindly furnish the soil investigation report for the site. | Soil investigation is under the scope of Bidder. However we are attaching soil investigation report of existing Adani Inspire Building for reference purpose only. |
| 13 | Green Building Requirement | Kindly furnish the guidelines for meeting the Green Building requirement if any. | Design of energy efficient building is the part of bidder's scope. |
| 14 | Drain | For estimation Brickwork drain shall be considered. Kindly confirm. | Bidder is requested to clarify the query |
| 15 | Substation Road | Kindly confirm the type of substation road required to be provided i.e Concrete or Bituminous. | Concrete roads shall be provided |
| 16 | Approach Road | Kindly confirm if approach road is in the bidders scope | The plot is directly touching the road & hence separate approach road is not required. |
| 17 | Drawings | Kindly furnish the Tender specific drawings, If any. | Already furnished with tender document |
| 18 | GIS Building | As per Technical specification, we understood that GIS is a pre-engineered Building. Kindly confirm the same. | It's Steel Building |

| S. No. | Clause Reference | Ref Clause | Queries | Reply by Client |
|--------------------|---|--|--|---|
| 1 | Turnkey Tender Document 27. STATUTORY APPROVALS (SUBSTATION PART) | 27.1.1 For initiating any construction activity within MCGM / SRA Jurisdiction, Intimation of approval / Commencement Certificate (IOA/CC) is necessary and Same shall be in Turnkey Vendor Scope. AEML will provide Necessary support and documents for obtaining IOA/CC. | We request to consider all required approval for GIS Substation Land shall be in employer scope and encumbrance free land shall be awarded to bidder for commencement of the project. | Noted. Excavation related permission, Debries management plan & solid waste management permission shall be in scope of turnkey vendor. All other permission shall be under AEML scope. |
| 3 | General | Site Location | Please confirm that there is no existing utilities are available in the GIS Substation Layout. In case of any, same shall be removed by employer prior to handing over the Land for the substation | Shall be in the scope of AEML |
| 4 | Overall plot plan of 220kV BKC substation | DWG.TD-604-BKC-LAYOUT-2-R0 | Please furnish the following details w.r.t to plot: a) Plot coordinates b) Soil investigation report c) Earth resistivity test report d) CAD drawing of plot plan shall be furnished by AEML | a) Shall be provided during detail engineering. b) Refer attached report from M/s. Zed geotechnist & consultant. c) Report shall be provided within next 10 days . d) Refer attached |
| 5 | Overall plot plan of 220kV BKC substation | DWG.TD-604-BKC-LAYOUT-2-R0 | Please clarify whether any other utilities within the plot area will be provided by AEML? | Query is not clear. vendor to clarify |
| 6 | Overall plot plan of 220kV BKC substation | DWG.TD-604-BKC-LAYOUT-2-R0 | We couldn't find any internal road inside the plot boundary. Please clarify the requirement of internal roads requirement | Internal Road cum Cable Trench shall be provided all around the proposed building. Same has been shown in the Overall plot plan submitted with tender |
| 7 | Floor plan layout & section of 220kV BKC substation | DWG.TD-604-BKC-LAYOUT-3-R0 DWG.TD-604-BKC-LAYOUT-4-R0 DWG.TD-604-BKC-LAYOUT-5-R0 | Please confirm whether bidders need to strictly follow the building and rooms dimensions as mentioned in the referred layout (or) any optimisations (if possible) are acceptable? | Optimization shall be acceptable subject to adhering to technical/statutory/ O&M requirements. However all the associated technical, commercial and time period risks involved in getting revised IOA/CC shall be on turnkey vendor account and no extension of time period shall be granted on account of these changes |
| 8 | Annexure-7A (R1), Supply & ITC of SCADA System at BKC. Augmentation of existing SCADA system at Chembur for inclusion of 2 No GIS bays as per Technical Specification | Clause no.4.4 | Please furnish the existing Substation automation system architecture drawing of 220kV chembur station | The scope & Architecture is available in the Scada Technical Specifications of the Tender Document. Further details shall be provided during detail Engineering |
| 9 | ANNEXURE -A, TECHNICAL SPECIFICATION FOR 220 KV CABLES & 220 KV ACCESSORIES | Clause no.1.3, c) | In the referred clause, the thermal resistivity of the soil is mentioned as not exceeding 120 deg.C cm/watt. However, as per Turnkey Tender document, Soc.no.TD-SD-TURNKEY TENDER-BKC-720-R2, cl.no.19.2.5, soil thermal resistivity value is mentioned as 150 deg C cm/watt. As both clauses are contradicting, please confirm the actual requirement to be followed. | AEML shall confirm the same |
| For New SS | | | | |
| 1 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | 15. CIVIL WORKS AND FACILITIES FOR SUBSTATION | Kindly provide the following details for the proposed BKC Substations in order to estimate the quantum of work. 1. Contour survey showing existing FGL & spot levels. 2. Soil investigation report 3. FGL of the proposed SS 5. High Flood Level 6. Drain outfall point | 1. Plot is fairly levelled & contours survey is not done. 2. Refer Attached. 3. As a general practice, FFL shall be 600mm above the outside road level. However same shall be finalized during detail engineering. 5. HFL shall be communicated shortly. 6. Drain outfall point is on Main BKC road(approximate 150m) |
| 2 | DOCUMENT NO. :- TD-SD-CIVIL WORKS-495-R3 | | We wish to inform that, the detailed civil specification for construction/Standard drawing for the below works are not attached in the tender document. 1. Finishing schedule of Building 2. Land development 3. Compound wall 4. Transformer foundation, Fire wall 5. Road, Drain & Cable trench 6. Watchman cabin Please provide the same, in order to estimate the quantum of work. | 1. It is already mentioned in civil specification. Please specify if anything new will be required. 2. Average 1.5 m depth shall be considered for filling. 3. Compound wall shall be designed by considering RCC column/beam frame with infilled brick/ block. 4. The size of transformer foundation approximately 12mX16m with void below transformer for oil storage (150% capacity). Transformer fire wall shall be atleast 1m above the highest point of transformer. 5.To be decided by Turnky vendor. 6. Watschman cabin shall be 3 SQM area which free of FSI. |
| 3 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | 4. BUILDING FLOOR-WISE DETAILS (PROPOSED) Sl.no: 5 | As per referred clause, it is mentioned that "Terrace floor - Outdoor Capacitor Banks (33kV & 11kV), Lift Machine Room, Mono rail, RCC Fire Fighting Tank along with boster pump". However in Dwg: TD-604-BKC-LAYOUT-3-R0 (Ground Floor plan), the Fire fighting water tank is shown in ground floor itself. Please clarify whether the Fire water tank is in ground floor or terrace floor. | The RCC water tank of 3 lac ltr shall be provided on GF & RCC water tank of capacity 30, 000 Ltrs with booster pump shall be provided on Terrace floor. |
| 4 | Site visit | -- | Based on site visit, we understand that part of SS area is already excavated at one corner of Proposed SS area. Please clarify whether the excavated area is to be filled upto bottom level of basement slab by M/s AEML. | The filling of excavated area will be under the scope of AEML. |
| 5 | Site visit | -- | Based on the Substation Site visit, partial area towards west side of the proposed plot of BKC 220KV SS which is already excavated almost at a depth of 20 mtr from existing GL and it has to be filled up by soil. Since this partial area is infringing with the proposed GIS plot, We understand that same work shall be done by Adani and encumbrance free land shall be provided before commencement of the project. Kindly Confirm. | The filling of excavated area will be under the scope of AEML. |
| 6 | Site visit | -- | Kindly provide us GPR survey of the proposed location. | GPR survey is not done |
| 7 | Site visit | -- | Based on site visit we understand that, the existing utilities such as (Storm water lines, existing structures, temporary structures) are available in the proposed SS area. We trust that, the dismantling/diverted/re-routed shall be M/s AEML scope. Please confirm. | The existing storm water drainage(RCC hume pipeline) (Appx. 100m length)which is non-functional at present shall be removed by turnkey vendor. |
| 8 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | | Type of equipment structure is not mentioned in the specification. We trust that, all equipment support structure shall be lattice type. Please confirm. | The Substation is indoor GIS type. However, bidder to propose the type, if any |
| For Extn SS | | | | |
| 1 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | Cl.no: 43.1.1 | Please provide the following details & layouts for the existing Chembur SS, 1. Over all GA layout 2. Contour layout indicating Spot levels & FGL of existing 3. Soil report 4. Proposed FGL for the proposed work area 5. Overall cable trench layout 6. Overall drainage layout 7. Overall earthing layout/gravel spreading layout. In order to estimate the quantum of work. | 1. Refer attached 2. May not be required 3. Not required 4. Refer attached 5. Refer attached 6. Refer attached 7. Not required |
| 2 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | Cl.no: 43.1.1 | We trust that, the space is available for the proposed bay extension in the existing chembur SS. Hence the construction of new building, extension of existing building/modification work in the existing building is not in bidders scope. Please confirm. | The cut-out in the existing slab is available for installation new GIS bays. New baseframe to be installed |
| For Cabling | | | | |
| 1 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | -- | Please provide the detailed cable route survey for the proposed 220kV UG cabling from Existing chembur SS to proposed BKC SS. In order to estimate the quantum of work. | Cable route is already provided in Annexure E and Cable route (kmz file) is already shared. Based on this, bidder is required to carry the cable route estimation. |
| 2 | DOCUMENT NO. TD-SD-TURNKEY TENDER-BKC-720-R2 | -- | We trust that, the approval from govt authority, NHAI, PWD,MCGM, harbour & central railway authority, MMRDA and ROW, etc., is not in bidders scope. The same shall be in M/s AEML scope. Kindly confirm. | The approval from govt authority, NHAI, PWD,MCGM, harbour & central railway authority, MMRDA and ROW, etc., is in bidders scope. |
| 3 | TURNKEY TENDER DOCUMENT FOR CABLE PROJECT CIVIL WORK ANNEXURE-J | Cl.no: 7 & 8 | Please provide the detailed cross section, typical arrangement & Specification for River crossing, Nallah crossing, Road crossing & railway crossing for the proposed route. In order to estimate the quantum of work. | Basic cross section drawing is already attached in tender document. As discussed during pre-bid meeting and further to site survey, bidder to workout methodology in coordination with relevant statutory authorities |
| 4 | TURNKEY TENDER DOCUMENT FOR CABLE PROJECT CIVIL WORK ANNEXURE-J | Cl.no: 1 | We trust that, the road restoration/reinstatement of existing road, Diversion/rerouting of existing utilities & dismantling of existing structure for the proposed route is not in bidders scope. The same shall be done by M/s AEML. Please confirm. | Official reinstatement charges shall be borne by AEML. Other charges shall be borne by the bidder |

| Sr. No. | Annexure No / Document / Package Name (Equipment details) | Page No. | Clause No. | Clause details as per Bid Specification | Bidder's Query dated | Response from AEML |
|------------------------|---|----------|------------|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Technical Query | | | | | | |
| 1 | Annexure-24E-CIVIL FQAP | | | Annexure-24E-CIVIL FQAP | Attachment missing -Please Confirm | Same shall be shared during detailed Engineering |
| General Query | | | | | | |
| 2 | Substation plot soil resistivity test report | | | | Please arrange Soil testing report | Report shall be provided within next 10 days |
| 3 | Existing parking basement Civil drawing | | | | Please arrange | Since backfilling of existing area is under the scope of AEML. Hence sharing of existing parking basement civil |
| 4 | Road cutting charges and royalty charges | | | | Please confirm charges scope is in bidder side or AEMLside. | Official reinstatement charges shall be borne by AEML. Other charges shall be borne by the bidder |

ANNEXURE 1 - TECHNICAL QUERIES / CLARIFICATIONS / CONSIDERATIONS

| S.No | Tender Specification / Amendment/ clause | Description | Query | Reply from AEML |
|------------------------|---|--|--|---|
| General Queries | | | | |
| 1 | Furniture | | Since the scope of office floors is removed, we have not considered any furniture in the entire substation scope. In case the same is required for control room floor, Please provide a complete list with quantities of furniture to be considered for Entire scope. | To be estimated by Turnkey Vendor. |
| 2 | Scope of Works / BOQ | | Encumbrance free Land shall be made available to the bidder at the LOA date. Tree cutting / reloaction related approvals and jobs shall be taken up by AEML as per replies received from AEML | Agreed |
| 3 | Scope of Works / BOQ | | If Encumbrance free land is not made available to the bidder for 3 months from date of LOA, Bidder shall be able to claim time & price implications after mutual discussion with AEML. Kindly confirm the same | Commercial Team (CPG) to address this query |
| Civil Queries | | | | |
| 1 | Proposed SWYRD | Land | We understand that the proposed switchyard land has been acquired by M/s.AEML and same shall be handed over to us at the time of Notification of award . Please confirm. | This is GIS based sub-station & no outdoor switchyard is envisaged. Land shall be handed over at the time of contract award. |
| 2 | Demolishing Existing Structure | | We have not considered demolishing of any existing structures in our costing. | No demoltion of existing structures are envisaged. Please refer attached drawings. |
| 3 | General | Liasioning Architect | Appointment of liasioning architect for approvals from Government bodies shall be in scope of AEML. | OK. Noted |
| 4 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Statutory approval - IOA/CC | We have not considered obtaining any statutory approval from MBMC for IOD/CC or any other Govt/Pvt bodies before commencement of work in our scope. | Excavation related permission, Debries management plan & soil waste management permission shall be in scope of turnkey vendor. All other permission shall be under AEML scope. |
| 5 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Scope of work - Obtaining construction related Statutory Approvals | We have not considered for obtaining any statutory requirements for carrying out excavation and for debris management in our scope. | Excavation related permission, Debries management plan & soil waste management permission shall be in scope of turnkey vendor. All other permission shall be under AEML scope. |
| 6 | DOCUMENT NO. TD-SD-TURNKEY TENDER- BKC-414-R2 | IGBC approval | We assume that all statutory approval from IGBC will be obtained and provided by M/s.AEML. Kindly confirm | Design of the building/facilities shall be done in co-ordination with AEML appointed IGBC consultant. |
| 7 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Scope of work - Cutting/Disposal of Trees | We request M/s.AEML to obtain all the approvals from various departments inorder to carryout cutting and disposal of trees. We have not considered any existing tree removal, shifting and reinstating to the other location in our costing. | Approval for tree cutting is not envisaged. |
| 8 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Statutory approval - IOA/CC | We assume M/s.AEML will obtain statutory permission from all the Govt/Pvt bodies pertaining to building completion approval. | OK. Noted |
| 9 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Scope of work - Land Development | We request you to furnish the Countour survey report and proposed FGL of the switchyard for assessing the land development quantities | The plot is fairly levelled. However as per general practive FFL shall be 600mm above existing road level. |
| 10 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Scope of work - Preparation of Designs/Drawings | Architectural and structural drawings wil be prepared internally within Siemens. Kindly confirm | Preliminary architectural drawings prepared by M/s Siemens internally need to be shared with AEML appointed liaison Architect who is authorized to submit to statutory authority. For structural drawings the same need to be submitted empanelled structural consultant. |
| 11 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Scope of work - Construction of Compound wall:- Compound wall shall be constructed as per the approved drawing. Height shall be matched as per the security requirement. | We have considered boundary wall of RCC frame with brick wall of overall height of 3.66M from the FGL. No barbed wire and concertina coil are considered. | 900mm concertina coil(2X450mm) shall be provided on top of 3.65m high boundary wall. |
| 12 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Scope of work - Construction of 220 kV Cable Cellar - 220 kV cable cellar shall be constructed below the ground level for management of 220 kV power cables | We would like to propose the 220kV cable cellar above the ground. Kindly confirm | Bidder is requested to clarify the query |
| 13 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Scope of work - Drawings | We request M/s.AEML to provide us the substation layout of proposed switchyard showing the switchyard coordinates, building, transformer foundation,Oil pit, boundary wall, road, gate, chainlink fence, box culvert, cable trench, storm water drainage drawings etc... In AUTOCAD format.. This shall help for better understanding. | Refer Attached |
| 14 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Reinforcement steel | We would like to propose MS binding wire for binding the reinforcement steel. Kindly confirm | GI binding shall be used as mentioned in Civil Specifications. |
| 15 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Supercoat | Kindly clarify where this item is applicable along with details. | These items are considered for flooring of 33kV/11 kV Cable cellar & for 220kV/33kV/22kV/11 kV GIS floors. |
| 16 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Spraycoat | We assume that this item is applicable for the painting of wall surfaces. Kindly confirm | |
| 17 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Dismantling of structural steel | Request M/s.AEML to provide us the detail of the same along with quantity. | This is the green field project. The requirement of this item is not envisaged. Please refer document, TD-SP-CIVIL WORKS- -495-R1 |
| 18 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Demolishing of brick masonry | Request M/s.AEML to provide us the detail of the same along with quantity. Request M/s.AEML to obtain MCGM approval and MCGM approved disposal location area. | This is the green field project. The requirement of this item is not envisaged. Please refer document, TD-SP-CIVIL WORKS- -495-R1 |
| 19 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Demolishing of PCC | Request M/s.AEML to provide us the detail of the same along with quantity. Request M/s.AEML to obtain MCGM approval and MCGM approved disposal location area. | This is the green field project. The requirement of this item is not envisaged. |
| 20 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Waterproofing | Request M/s.AEML to provide us the detail specification for the same. | Box type waterproofing shall be done for Entire basement and membrane type waterproofing shall be done for all terraces. |
| 21 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Shoring Pile | Kindly confirm whether shoring piling is envisaged in the basement area of the propose building? | Please refer attached drawing |
| 22 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Piling work | We would like to propose DMC method of piling for the proposed SWYRD incase piling is required. Kindly confirm We assume that pile mug will be disposed within the proposed SWYRD. Kindly confirm. | This is GIS based sub-station & no outdoor switchyard is envisaged. |
| 23 | Specification - Civil work - DOCUMENT NO. :- TD-SP-CIVIL WORKS- -495-R1 | Paver blocks | Request M/s.AEML to provide the detail specification including thickness and strength of paver blocks. | The minimum grade of coccrete for paver block shall be M40 & minimum thickness of paver block shall be 80mm. |

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|----|--|---|---|--|
| 24 | Civil design | Method | We propose to adopt the following methodology. Please confirm the same : 1. Load calculation of building , Design of foundation, slab, staircase etc : Excel spreadsheet 2. Analysis of building, Design of columns and beams : STAADPRO 3. Design of outdoor yard structural and civil works : Excel spreadsheet | Confirmed |
| 25 | Civil design parameters | Factor of safety and design parameters | We propose to adopt the following standards for wind and seismic loads : IS 875 - For loads in buildings other than earthquake IS 802 - For load calculations and design of switchyard structures IS 1893 - Seismic load calculation Factor of safety for overturning and sliding in normal condition: 1.5 Factor of safety for overturning and sliding in short circuit condition : 1.2 Loss of contact for foundations: 20% | For wind, k4 factor also will be considered. For Seismic, Zone -IV shall be considered. |
| 26 | Soil Investigation Report | Uplift anchors | Soil report recommends provision of uplift anchors below foundations. Since the uplift loads can be taken care by soil overburden and foundation self weight for a four storey building, we assume that uplift anchors are not necessary. Kindly confirm | Confirmed |
| 27 | Soil Investigation Report | Depth of foundation | Since the rocky starta is available between 4M to 8M below EGL, we propose different foundation depths for the building based on the occurrence of rocky starta at each locations. Kindly confirm | Bidder is requested to clarify the query |
| 28 | Soil Investigation Report | Hard Rock Excavation | We assume that necessary approval from all the Govt / Pvt and any other bodies to carry out blasting if required will be obtained by M/s AEML. Kindly Confirm. We assume that controlled blasting will be allowed in case blasting for excavation is required. | based on the experience of existing Inspire building, blasting is not envisaged. However if required same shall be in the scope of Turnkey Vendor. |
| 29 | Soil investigation report and Specification - Civil work - DOCUMENT NO. :-TD-SP-CIVIL WORKS- -495-R1 | Minimum cement content for M30 grade concrete | We have found ambiguity in minimum cement content required for M30 grade concrete between civil specification where in minimum cement content is mention as 320kg/Cum and in soil investigation report minimum cement content mention as 360kg/Cum. Kindly clarify. | Please refer document, TD-SP-CIVIL WORKS- -495-R3 wherein mentioned minimum cement content as 360 kg/CUM |
| 30 | Overall plot plan | Cable trench | Kindly clarify whether proposed cable trench is required for the complete width of the road? We assume that same shall be decided with respect to the technical requirements by the bidder. | The width of the cable trench shall be governed by technical requirements. |
| 31 | Overall plot plan | 125MVA transformer foundations | Kindly clarify whether 3Nos of 125MVA transformer foundations to be considered in civil scope or 2Nos? | 3 NOS of Transformer foundation shall be considered in the scope. |
| 32 | Specification - Civil work - DOCUMENT NO. :-TD-SP-CIVIL WORKS- -495-R1 | Construction of internal roads | Request M/s.AEML to provide us the detail drawing and specification for the construction of roads | Internal concrete roads shall be constructed. |
| 33 | Site condition | Cement and steel | Kindly clarify whether we have to consider any special type of cement and reinforcement steel. | No. |
| 34 | Site | Night work permission and working timing | We request M/s.AEML to permit night working, working in shifts permission and any local issues in this regard will be addressed by M/s.AEML for smooth functioning of project. Kindly confirm | Night permission is generally restricted & only allowed based on local permission from police. M/s Siemens may approach to local authority, the letter if required |
| 35 | Site | Disposal Point | Request M/s.AEML to provide us the disposal of all the surplus materials within the proposed land. Kindly confirm | Surplus materials/debries shall be disposed off at locations as specified by MCGM |
| 36 | Site | Land Development | We have not considered any land development and earth retaining structures in the proposed new substation. We assume land will be handed over with respect to the required FGL. | Land development & construction of proposed retaining wall for cable cellar shall be in the scope of vendor. |
| 37 | Site | Remote substation | We assume no any civil works to be carriedout in the remote substations. Kindly confirm | Bidder is requested to refer remote works mentioned in the Tender Document |
| 38 | Site | Storm water drainage | Request M/s.AEML to provide the outfall point near to the proposed SWYRD. Kindly confirm | Outfall point is available at approximate 150m on nearby BKC road. |
| 39 | Site | Approach road | We assume that proper approach road will be provided to the proposed SWYRD before handingover of the land to the successful bidder. Kindly confirm. | Proposed plot is touches to outside road. Hence no separate approach road will be required. |
| 40 | General | PV Clause | Inflation on construction material – PV clause is mandatory in civil works with the recent steep increase on steel , cement and aggregates. Request M/s.AEML to bring civil works under PV clause. Kindly confirm | Commercial Team (CPG) to address this query |
| 41 | General | Water and Power | We request M/s.AEML to specify the distance of the location w.r.t. some reference point where point for water and power will be provided to us in free of cost. | Water & power shall be arranged by vendor at their own cost. However some reference point for power supply shall be provided by AEML. |
| 42 | General | Hinderance Register | Hinderance register shall be maintained by us at site which shall include the delays due to force majures,rain fall,natural calamities, local issues etc. and extension/compensation shall be provided to us for the same. | Not acceptable |
| 43 | Technical specification - Civil Work | Testing Laboratory | We are not able to find the approved testing laboratory in the specification.We request you for the details on the approved construction material testing laboratory. | Any laboratory which is NABL accredited shall be used. |
| 44 | General | | We have considered maximum of ±100mm cutting and filling to achieve the finished ground level in the proposed new substation. No borrowed earth considered in our costing. | Average 1.5m depth of filling shall be considered under the scope. |
| 45 | General | | We have considered foundations in layer below filled up soil with the rubble soiling of thickness 300mm below the foundations with an SBC of 15T/Sqm. No piling or any special foundation is considered in our estimation. | This shall be taken care during detail engineering as per recommendations of Geotechnical & structural consultant. |
| 46 | General | | We have considered RCC framed GIS cum control building as per the plot plan and building floor wise plan and sections shared along with tender documents. | Above GIS floor, the entire building shall be steel structures except slab, Staircase & lift shaft. |
| 47 | General | | Site surfacing is with metal spreading 100mm thickness and no paving below gravel spreading considered | Site surfacing other than roads shall be with paver blocks. |
| 48 | General | | We have not considered any architectural finishes like glazing, cladding for the proposed building | Shall be covered under Turnkey vendor scope. |
| 49 | General | | We have considered quantity of fire rated doors as indicated in the proposed building plan and balance all the doors are of aluminum framed doors. | All the doors shall be fire rated. |

| | | | | |
|----|---------|--|--|--|
| 50 | General | | We have considered ACC super coat and spray coat in GIS floor. 52mm thick ironite flooring in the store room, maintenance room, fire fighting pump house, operation room, security room, lift room, 33kV 11kV, LT and control cable room. 8mm thick vitrified flooring in all other rooms including staircase. CC1:2:4 for the cellar floor. | Supercoat & Spray coat shall be provided in 220/33/22/11kV GIS floors, 33/11 kV Cable Cellar. 52mm Ironite floors shall be provided in store room, maintenance room, fire fighting pump house. vitrified flooring in all other rooms & all passages. Lakha Red Granite shall be provided for staircase including Tread & Risers. |
| 51 | General | | We have not considered any bore well system for the proposed SWYRD. | The scope doesn't covered any borewell requirement |
| 52 | General | | PCC 1:2:4 of 75mm thick is considered for all the blinding works. | Thickness shall be considered as 100mm |
| 53 | General | | We have not considered any separate tank to serve water supply to booster pumps located in the terrace. | As per statutory norms, 30,000 Litres RCC water shall be constructed on terrace floor. |
| 54 | General | | We have considered brick masonry of 230mm and partition wall of 115mm thick for the proposed building in our costing. | Please refer document, TD-SP-CIVIL WORKS- -495-R3 |
| 55 | General | | We have considered 2Nos of 125MVA transformer foundation only. . No rail cum road is considered. Foundations for PT-1,2,3 & 4 is not in Bidder's scope. Kindly Confirm. | All the proposed works are in the scope of Turnkey Vendor |
| 56 | General | | Battery limit is within the compound wall. Beyond that is not in the scope of Siemens. | M/s Siemens to provide further details |
| 57 | General | | We have considered brick wall drain in one side of the road. Not considered any edge angles for the same. | To be finalized during detailed engineering |
| 58 | General | | Based on M/s.AEML specification page No 4 of 28 (Doc No TD-SP-Civil Works -495-R1) our estimated offer for civil work scope is based on your over tender layout, plan and sections Hence this clause pertaining to technical commercial and time period risk is not applicable. | More clarity required from M/s Siemens |
| 59 | General | | As per page No 4 of 28 (Doc No TD-SP-Civil Works -495-R1) for carrying out site works no statutory/compliances/approval are considered in our scope. | Excavation related permission, Debries management plan & soild waste management permission shall be in scope of turnkey vendor. All other permission shall be under AEML scope. |
| 60 | General | | We will prepare and submit as-built drawings at the end of the project in one time. | Noted |
| 61 | General | | We have not considered any shoring, dewatering in our costing. | Not acceptable |
| 62 | General | | We have considered IS1200 for the mode of measurement for all the civil works. We considered reinforcement steel of Fe500D (TMT bars) without any coating. | This is a turnkey contract & hence requirement of measurements as per IS 1200 does not arise. Fe500D (TMT bars) without any coating is acceptable. Make shall be as per Civil Specifications. |
| 63 | General | | We have considered waterproof paint (Pidilite) for the cellar floor walls. | To be finalized during detailed engineering |
| 64 | General | | We have considered false flooring and false ceiling in the SCADA room and ACDB/DCDB room in the fourth floor. | Agreed |
| 65 | General | | We have considered RCC road cum trench of 6M wide (300mm thick WBM and 300mm thick M30 grade concrete) with earthen shoulder in our costing. | M/s Siemens to provide layout for understanding |
| 66 | General | | We have not considered any landscaping/horticulture etc... in our scope of work. | Noted |
| 67 | General | | In page No 28 of 28 (Doc No TD-SP-Civil Works -495-R1) refer the last clause which is not applicable. | Please refer document, TD-SP-CIVIL WORKS- -495-R3 |
| 68 | General | | The entire scope of civil works had been considered based on the Indian standard and codes. | M/s Siemes to provide clarity on various standards considered as per the tender scope. |
| 69 | General | | Not considered any existing cables re routing which laid at site. | Agreed |
| 70 | General | | We have considered site mix with Ajax Fury for concreting works | Site mixing will not be allowed. Only RMC shall be allowed. |

PRE-BID QUERIES A/c AEML Tender No. AEML/MTB/2021-22/11

| Sr. No. | Pre-Bid queries | Clarification |
|----------------|--|--|
| 1 | Kindly confirm that Road restoration work is not in the scope of Contractor. | Road restoration work inside AEML Substation shall be in the bidder's scope. Official RI charges outside AEML premises shall be in bidder's scope. |
| 2 | Kindly confirm that the removal of debris left out after the excavation of cable work is not in the scope of Contractor. If in scope of Contractor, please confirm the dumping location. | The removal of debris left out after the excavation of cable work is in the scope of Contractor. |
| 3 | Kindly share the SBC. Else may we allowed to quote with considering SBC of 10 NM. | Soil Investigation of existing Adani Inspire Building is attached here with for reference purpose only. However soil investigation of proposed plot shall be in the scope of turnkey vendor. |
| 4 | Kindly accept Unit Price for Civil rates due to the complexity of civil works at site and same will be paid as per actual measurement. | This is the turnkey tender & no individual line items are not envisaged. |
| 5 | Due to fluctuation in Commodity Prices we request kind consideration of IEEMA PVC on all major Equipments viz. 220kV/33kV Switchgear, Transformer, All EHV, HV, LT Power & Control Cables and Civil works. | Commercial Team (CPG) to address this query |
| 6 | Please provide TBM (Temporary bench marking coordinate of corners of switchyard) under which BKC substation is planned. | This is GIS based sub-station & no outdoor switchyard is envisaged. |
| 7 | Soil resistivity report if available, please share. Else may we allowed to quote with considering soil resistivity of 100 ohm. Meter. | Shall be provided within 10 days. |
| 8 | kindly provide the drawings of the existing structures (basement). | Not required since Backfilling of basement shall be in the scope of AEML |
| 9 | Kindly confirm if building can be done as RCC structure instead of steel building as per PPT. | The building above GIS floor level shall be steel Structures |
| 10 | Kindly provide the exact scope of dismantling of basement structure, if any. | Shall be in the scope of AEML |
| 11 | Kindly confirm if retaining wall and filling is in scope for 12m deep basement intersection portion. | Shall be in the scope of AEML |
| 12 | Kindly confirm if any additional cutting/filling is required. | 1m Average depth of filling shall be considered. |
| 13 | Please confirm demand note charges/BG required if any by Civic Authorities shall be paid by AEML or contractor. | All official payments including BG shall be in the scope of AEML. However all the incidental charges shall be in the scope of bidder. |
| 14 | Please confirm Civic Authorities permission shall be in scope of AEML or Contractor. | Excavation related permission, Debries management plan & soild waste management permission shall be in scope of turnkey vendor. All other permission shall be under AEML scope. |
| 15 | Please confirm whether PTCC/EIG approval is required. | PTCC/EIG approval is required. |

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| 16 | Kindly confirm that as per government notification DPIIT clause is not applicable for this project. | Commercial Team (CPG) to address this query |
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