



# KOLKATA PORT TRUST

KOLKATA DOCK SYSTEM  
MECHANICAL & ELECTRICAL ENGINEERING DEPARTMENT  
8, Garden Reach Road, Kolkata – 700 043

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## **TENDER DOCUMENT**

for

**“Design, Engineering, Manufacturing, Procurement & Supply, Installation, Testing and Commissioning of cumulative 160 kWp (95 kWp at Centenary Hospital & 65 kWp at Subhas Bhawan) roof mounted Grid connected Solar Photo Voltaic Power Plant including 5 years Comprehensive Warranty obligation at Kolkata Dock System, Kolkata Port Trust”**

**Notice Inviting Tender No.: KoPT/KDS/Mech/DC-II/ADV/415 dated 18.01.2017**

**E- Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

- **Site inspection followed by pre bid meeting : 31. 01.2017 at 11.00 hrs.**
- **Start date of submission of e-tender : 07.02.2017 from 12.00 Hrs**
- **Closing date for e- Tender : 27.02.2017 up to 14.30 hrs.**
- **Date of opening of Techno commercial bid : 27.02.2017 at 15.00 hrs.**

**Tender Fee: 5000/- (Non-Refundable)**

**Chief Mechanical Engineer**

## TENDER DOCUMENT

### KOLKATA PORT TRUST KOLKATA DOCK SYSTEM

**e-TENDER FOR** “Design, Engineering, Manufacturing, Procurement & Supply, Installation, Testing and Commissioning of cumulative 160 kWp (95kWp at Centenary Hospital & 65kWp at Subhas Bhawan) roof mounted Grid connected Solar Photo Voltaic Power Plant including 5 years Comprehensive Warranty obligation at Kolkata Dock System, Kolkata Port Trust”

**NOTICE INVITING TENDER No. KoPT/KDS/Mech/DC-II/ADV/415 Dated: 18.01.2017**

#### **TENDER NOTICE:**

Mechanical & Electrical Engineering Department of Kolkata Port Trust invites E-Tender under single stage two part system (Part I: Techno-Commercial Bid and Part II: Price Bid) for “**Design, Engineering, Manufacturing, Procurement & Supply, Installation, Testing and Commissioning of cumulative 160 kWp (95kWp at Centenary Hospital & 65kWp at Subhas Bhawan) roof mounted Grid connected Solar Photo Voltaic Power Plant including 5 years Comprehensive Warranty obligation at Kolkata Dock System, Kolkata Port Trust**”

Bid Document may be downloaded from MSTC website [www.mstcecommerce.com/eprochome/kopt](http://www.mstcecommerce.com/eprochome/kopt) and KOPT website [www.kolkataporttrust.gov.in](http://www.kolkataporttrust.gov.in) Corrigenda or clarifications, if any, shall be hosted on the above mentioned websites only.

#### **SCHEDULE OF TENDER (SOT)**

<b>Work Title</b>	<b>“Design, Engineering, Manufacturing, Procurement &amp; Supply, Installation, Testing and Commissioning of cumulative 160 kWp (95kWp at Centenary Hospital &amp; 65kWp at Subhas Bhawan) roof mounted Grid connected Solar Photo Voltaic Power Plant including 5 years Comprehensive Warranty obligation at Kolkata Dock System, Kolkata Port Trust”</b>
<b>Tender Inviting Authority</b>	<b>Chief Mechanical Engineer.</b>
<b>TENDER NO.</b>	<b>KoPT/KDS/Mech/SE-I/ADV/ 415 Dated: 18.01.2017</b>
<b>MODE OF TENDER</b>	e-Procurement System (Online Part I - Techno-Commercial Bid and Part II - Price Bid through <a href="http://www.mstcecommerce.com/eprochome/kopt">www.mstcecommerce.com/eprochome/kopt</a> of MSTC Ltd. The intending bidders are required to submit their offer electronically through e-tendering portal. <b>No physical tender is acceptable by Kolkata Dock System</b>
<b>E-Tender No.</b>	KoPT/Kolkata Dock System/CME/36/16-17/ET/486
<b>Estimated Value of Work</b>	<b>Rs 1,64,80,000/-</b>
<b>Date of NIT available to parties to download</b>	27.01.2017 at 14:00 hrs.
<b>Date and time of Pre-Bid Meeting and site inspection</b>	31.01.2017 at 11:00 hrs.

<p><b>i) Earnest Money Deposit</b></p> <p><b>ii) Cost of Tender document</b></p> <p><b>iii) Transaction Fee</b></p>	<p>The intending bidders should submit Earnest Money of <b>Rs 3,29,600/- (Rupees Three Lakh Twenty Nine Thousand &amp; Six Hundred)</b> to KoPT in the form of Demand Draft/Banker's Cheque/Pay Order from any of the Nationalized/Scheduled Banks in India having branch in Kolkata drawn in favour of <b>"Kolkata Port Trust"</b>.</p> <p><b>"Cost of Tender document"</b> containing Banker's cheque or Pay Order or Demand Draft from any of the Nationalized/Scheduled Banks in India having branch in Kolkata drawn in favour of <b>"Kolkata Port Trust"</b> of <b>Rs. 5000/- (Rupees Five Thousand only)</b> as the cost towards purchase of tender document (applicable for downloaded NIT only) or Treasury Receipt of the deposit issued by the Treasurer, Kolkata Port Trust, as the case may be. <b>All Banker's cheques/Pay Orders/Demand Drafts should be drawn in favour of "Kolkata Port Trust" on any nationalized/Scheduled bank having branch in Kolkata.</b></p> <p>Rs.9476/- (0.05% of estimated value as service charge + 15% Service tax on Service Charge) Payment of Transaction fee by NEFT/RTGS in favour of MSTC LIMITED (refer clause. No. 4 of Annexure -A )</p>
<p>Last date of submission of Tender Document Fee and Earnest Money</p> <p><b>Last date of submission of Transaction fee through RTGS/NEFT in favour of MSTC Limited, Kolkata.</b></p>	<p><b>27.02.2017 up to 14.00 hrs.</b></p> <p><i><u>Three working days before the last date of closing of online bidding for the e-tender.</u></i></p>
<p><b>Date of Starting of e-Tender for submission of on line (Techno-Commercial Bid and price Bid) at</b> <b><a href="http://www.mstcecommerce.com/eprochome/kopt">www.mstcecommerce.com/eprochome/kopt</a></b></p>	<p><b>07.02.2017 at 12:00 hrs.</b></p>
<p><b>Date of closing of online e-tender for submission of Techno-Commercial Bid &amp; Price Bid.</b></p>	<p><b>27.02.2017 at 14:30 hrs.</b></p>
<p>Date and time of opening of Part-I (i.e. Techno-commercial Bid after confirmation of submission of Tender Document Fee and Earnest Money Deposit).</p>	<p><b>27.02.2017 at 15:00 hrs.</b></p>
<p>Date and time of opening of Price Bid (Part-II). Bidders hall be informed separately.</p>	<p><b>To be informed separately.</b></p>

**List of Annexure**

**Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

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**Instructions to Tenderers**

**Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

**This is an e-procurement event of Kolkata Port Trust. The e-procurement service provider is MSTC Ltd., 225C, A.J.C. Bose Road, Kolkata-700 020.**

You are requested to read the terms & conditions (Annexure- II) of this tender before submitting your online tender. Tenderers who do not comply with the conditions with documentary proof (wherever required) will not qualify in the Tender for opening of price bid.

<b>1.</b>	<p><b>Process of E-tender :</b></p> <p><b>Registration:</b> The process involves vendor's registration with MSTC e-procurement portal which is free of cost. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Techno-Commercial Bid as well as Price Bid over the internet will be done. The Vendor should possess Class III signing type digital certificate. Vendors are to make their own arrangement for bidding from a P.C. connected with Internet. MSTC is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature).</p> <p>SPECIAL NOTE: THE PRICE BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT <a href="http://www.mstcecommerce.com/eprohome/kopt">www.mstcecommerce.com/eprohome/kopt</a></p> <p>1). Vendors are required to register themselves online with <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a>→ e-Procurement →Psu/Govt depts→Register as Vendor under KOPT–Filling up details and creating own user id and password→ Submit.</p> <p>2). Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form.</p> <p><b>In case of any clarification, please contact KOPT/MSTC, (before the scheduled time of the e-tender).</b></p> <p><b>Contact person (KOPT):</b></p> <table><tr><td><b>1. Sourav Mitra</b> Dy.Chief Mechanical Engineer –II Mobile No. 9674720040 Email:souravmitra@kolkataporttrust.govin</td><td><b>2. Santanu Kr.Das</b> Superintending Engineer (Elect) Mobile No. 9674720037 <a href="mailto:santanudas@kolkataporttrust.gov.in">santanudas@kolkataporttrust.gov.in</a></td></tr></table> <p><b>Contact person (MSTC Ltd):</b></p> <table><tr><td><b>1. Mr. Arindam Bhattacharjee</b> Deputy. Manager (E-commerce) MobileNo:09330102643 Email-arindam@mstcindia.co.in.</td><td><b>2) Mr. Sabyasachi Mukherjee</b> Junior Manager (E-commerce) Mobile- 07278030407 Email: <a href="mailto:smukherjee@mstcindia.co.in">smukherjee@mstcindia.co.in</a>. Landline:03322901004</td></tr></table> <p><b>1. Ms Sumona Maity</b> Management Trainee(E-Commerce) Mobile-09831155225 <a href="mailto:Email-smaity@mstcindia.co.in">Email-smaity@mstcindia.co.in</a>.</p> <p><b>B) System Requirement:</b></p> <p>i) Windows 98 /XP-SP3 &amp; above/Windows 7 Operating System</p> <p>ii) IE-7 and above Internet browser.</p> <p>iii) Signing type digital signature</p>	<b>1. Sourav Mitra</b> Dy.Chief Mechanical Engineer –II Mobile No. 9674720040 Email:souravmitra@kolkataporttrust.govin	<b>2. Santanu Kr.Das</b> Superintending Engineer (Elect) Mobile No. 9674720037 <a href="mailto:santanudas@kolkataporttrust.gov.in">santanudas@kolkataporttrust.gov.in</a>	<b>1. Mr. Arindam Bhattacharjee</b> Deputy. Manager (E-commerce) MobileNo:09330102643 Email-arindam@mstcindia.co.in.	<b>2) Mr. Sabyasachi Mukherjee</b> Junior Manager (E-commerce) Mobile- 07278030407 Email: <a href="mailto:smukherjee@mstcindia.co.in">smukherjee@mstcindia.co.in</a> . Landline:03322901004
<b>1. Sourav Mitra</b> Dy.Chief Mechanical Engineer –II Mobile No. 9674720040 Email:souravmitra@kolkataporttrust.govin	<b>2. Santanu Kr.Das</b> Superintending Engineer (Elect) Mobile No. 9674720037 <a href="mailto:santanudas@kolkataporttrust.gov.in">santanudas@kolkataporttrust.gov.in</a>				
<b>1. Mr. Arindam Bhattacharjee</b> Deputy. Manager (E-commerce) MobileNo:09330102643 Email-arindam@mstcindia.co.in.	<b>2) Mr. Sabyasachi Mukherjee</b> Junior Manager (E-commerce) Mobile- 07278030407 Email: <a href="mailto:smukherjee@mstcindia.co.in">smukherjee@mstcindia.co.in</a> . Landline:03322901004				

	<p>iv) JRE 7 update 79 software to be downloaded and installed in the system. Security level should be medium</p> <p>To enable ALL active X controls and disable 'use pop up blocker' under Tools→Internet Options→custom level (Please run IE settings from the page <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a> once)</p>
2.	<p>The Techno-commercial Bid and the Price Bid shall have to be submitted online at <a href="http://nnexwww.mstcecommerce.com/eprohome/kopt">nnexwww.mstcecommerce.com/eprohome/kopt</a></p> <p>(A). Part – I (Techno-Commercial bid) : Would be opened electronically on specified date and time as given in the NIT. Bidder(s) can witness the opening of Techno-commercial Bid electronically.</p> <p>(B) Part – II (Price bid) : Would be opened electronically of only those bidder(s) whose Part – I Techno-Commercial bid are acceptable by KoPT. Such bidder(s) will be intimated the date of opening of Part II (Price bid) through valid e-mail confirmed by them.</p> <p>The tenderers are advised to offer their best possible rates. There would generally be no negotiations. Bidders are requested to submit their most competitive prices while submitting the price bid.</p>
3.	<p>All entries in the tender should be entered in online Technical &amp; Commercial Formats without any ambiguity.</p>
4.	<p><b>Special Note towards Transaction fee:</b>  PAYMENT OF Transaction fee BY NEFT in favour of MSTC Limited .The Bank details, format etc for sending Transaction fee by NEFT to MSTC is detailed below  Bank Details : Axis Bank, Shakespeare Sarani Branch  AC Details : Axis Bank A/c.No.005010200057840  IFSC Code No. : UTIB0000005.</p> <p>“The vendors shall enter the transaction fee details by using the “Transaction Fee Entry” Link under “My Menu” in the vendor login. The vendors have to select the particular tender in which they want to participate against the transaction fee by clicking on the tick box at the right and then Clicking on the “Submit” Button at the bottom of the page. Then the page appears where the vendors are required to fill up the transaction details, namely the UTR No, Date Of Transaction, and the Remitting Bank in the given fields and then click on the “Confirm” Button“.</p> <p>NOTE :- The bidders should submit the transaction fee well in advance before the last date of submission of tender as they will be activated for bid submission only after receipt of transaction fee by MSTC.</p> <p>Contact Details :  Fax No. : 033- 22831002.  Email ids: sanjibpoddar@mstcindia.co.in, arindam@mstcindia.co.in, rpradhan@mstcindia.co.in, smukherjee@mstcindia.co.in.</p> <p>Bidders may please note that the transaction fee should be deposited by debiting the A/C of the bidder only; transaction fee deposited from or by debiting any other party's a/c will not be accepted. Transaction fee is nonrefundable.</p> <p>In case of failure to submit the payment towards Transaction fee for any reason, the vendor, in term, will not have the access to online e-tender.</p>
5.	<p>In case of failure to submit the payment towards cost of Tender Document and Earnest Money Deposit (EMD), the vender will not have the access to on line e-tender and no correspondence in this respect will be entertained and KoPT will not be responsible for any such lapses on this account. Bidder(s) are advised to make remittance of Tender Fee and EMD through separate Banker's Cheque or Pay Order or Demand Draft, well in advance and verify completion of transaction in respect of Tender Fee and EMD.</p>

	Vendors are instructed to use <i>Upload Documents</i> link in “My menu” to upload documents in document library. Multiple documents can be uploaded. Maximum size of single document for upload is 5 MB. Once the documents are uploaded in the library, vendors can attach documents through “Attach Document” link against the particular tender. For further assistance please follow instructions of vendor guide.
6.	All notices. /corrigendum will be uploaded in KoPT’s website as well as MSTC’s portal. Bidders should keep in touch with KoPT website as well as MSTC Portal. Bidders are required to ensure that their corporate email I.D. provided is valid and updated at the stage of registration of vendor with MSTC (i.e. Service Provider). Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).
7	E-tender cannot be accessed after the due date and time mentioned in NIT.

8.	<p><b>Bidding in e-tender:</b></p> <p>(a).Bidder(s) need to submit necessary Tender Document Fee, EMD and Transaction Fee for their eligibility to bid online in the e-tender. Tender Document Fee and Transaction fees are non refundable. No interest will be paid on EMD. EMD of the unsuccessful bidder(s) will be refunded by KOPT. In case of the successful tenderer, this amount may be adjusted against the Security Deposit.</p> <p>(b). An amount of <b>Rs 3,29,600/-</b> (Rupees Three Lakh Twenty Nine Thousand Six Hundred only) has to be deposited by Demand Draft/Pay Order/ Banker’s Cheque from any Scheduled/Nationalized Bank in favour of “Kolkata Port Trust” payable at Kolkata, to be enclosed with the Techno-commercial part of the tender.</p> <p>I. If any tenderer withdraws his tender before 120 days from the date of opening of the Techno-commercial Bid of the tender, the Earnest Money Deposit will be forfeited by the Trustees.</p> <p>(d). Tender without the Earnest Money or depositing the Earnest Money in a manner other than what has been stipulated here-in-before or for an amount less than the specified amount would be considered as invalid tender and would be summarily rejected.</p> <p>(e). NSIC registered firms under Single Point Registration scheme are exempted from depositing Tender Fee and Earnest Money. But all the NSIC registered firms are not exempted from depositing Tender Fee and Earnest Money. Only those firms, having documents of such exemption for the entire tendered work (as per the Bill of Quantity) would be exempted. Documentary evidence must be uploaded in Cover-I of Tender for claim of such exemption, failing which their tender would be summarily rejected. If Micro &amp; Small Enterprises (MSEs) Registered with NSIC intends to participate in the tender for the item they are not Registered with NSIC, then they will have to deposit cost of Tender document, the full amount of Earnest money, otherwise their offer will not be considered.</p> <p>(f). The process involves Electronic Bidding for submission of Tender Document Fee and EMD, Techno- Commercial Bid as well as Price Bid.</p> <p>(g). The bidder(s) who have submitted the above fees can only submit their Techno Commercial Bids and Price Bid through internet in MSTC website <a href="http://www.mstcecommerce.com">www.mstcecommerce.com</a> → e-procurement →Psu/Govt depts→ Login under KOPT→My menu→ Auction Floor Manager→ live event →Selection of the live event.</p> <p>(h).The bidder should allow to run an application viz. enApple by accepting the risk and clicking on run. This exercise has to be done twice immediately after opening of Bid floor. Then they have to fill up Common terms/Commercial specification and save the same. After that clicking on the Techno-Commercial bid. If this application is not run then the bidder will not be able to save/submit his Techno-commercial bid.</p> <p>(i). After filling the Techno-Commercial Bid, bidder should click ‘save’ for recording their Techno-Commercial bid. Once the same is done, the Price Bid link becomes active and the same has to filled</p>
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	<p>up and then bidder should click on “save” to record their price bid. Then once both the Techno-Commercial bid &amp; price bid has been saved, the bidder can click on the “Submit” button to register their bid.</p> <p>(j). In all cases, bidder should use their own ID and Password along with Digital Signature at the time of submission of their bid.</p> <p>(k). During the entire e-tender process, the bidders will remain completely anonymous to one another and also to everybody else.</p> <p>(l). The e-tender floor shall remain open from the pre-announced date &amp; time and for as much duration as mentioned above.</p> <p>(m). All electronic bids submitted during the e-tender process shall be legally binding on the bidder. Any bid will be considered as valid bid if it fulfills all the terms and conditions of the Tender Document.</p> <p>(n). It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.</p> <p>(o). KoPT reserves the right to cancel or reject or accept or withdraw the tender in full or part as the case may be without assigning any reason thereof. <b>The tender will not be extended under any circumstances after due date is over.</b></p> <p>(p). No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms and conditions for the tender.</p> <p>(q). Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted in Indian Rupee Currency as per UOM indicated in the e-tender floor/tender document.</p>
<b>9.</b>	The e-tender shall be governed by the terms and conditions mentioned therein.
<b>10.</b>	No deviation to the technical and commercial terms & conditions are allowed.
<b>11.</b>	The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website <a href="http://www.mstcecommerce.com/eprochome/KoPT">www.mstcecommerce.com/eprochome/KoPT</a> of MSTC Ltd.
<b>12.</b>	The bidders <b><u>must upload</u></b> all the documents required as per Pre-qualification criteria and the documents enlisted under techno-commercial bid and Price-bid, failing which the tender shall lead to disqualification. Any other document uploaded which is not required as per the terms of the NIT shall not be considered.
<b>13.</b>	The bid will be evaluated based on the filled-in technical and commercial formats uploaded.
<b>14.</b>	The documents uploaded by bidder(s) will be scrutinized. In case any of the information furnished by the bidder is found to be false during scrutiny, EMD of defaulting bidder(s) will be forfeited. Punitive action including suspension and banning of business can also be taken against defaulting bidders.
<b>15.</b>	Bidders are requested to read the vendor guide and see the video in the page <a href="http://www.mstcecommerce.com/eprochome">www.mstcecommerce.com/eprochome</a> to familiarize them with the system before bidding.



**Terms and Conditions of Tender**

**Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

**1. Pre-qualification Criteria of the Bidders**

The intending Tenderers shall satisfy the following conditions with supporting documents :

- i)** The firms must have average annual financial turnover during the last three years ending 31<sup>st</sup> March, of the previous financial year of at least 30% of the estimated cost.
- ii)** The firms must have either of the following as experience of having successfully completed similar works during last seven years, ending on last day of month, previous to the one in which applications are invited:
  - a) Three similar completed works costing not less than 40% of the estimated value.  
Or
  - b) Two similar completed works costing not less than 50% of the estimated value.  
Or
  - c) One similar completed works costing not less than 80% of the estimated value.

Here “similar works” means **Design, Engineering, Manufacturing & Supply, Installation, and Testing & Commissioning of Grid connected Solar PV Power Plant of minimum 5 kWp capacity at any institution / agency / SNA/ PSU/ Govt. Organization (Solar Pump will not be considered). Bidder must be enlisted under Rooftop programme of MNRE, Govt. of India. Copy of the related page downloaded from MNRE Website / Enlistment letter of MNRE Govt. of India to be attached. Consortium bidding is strictly prohibited. Work experience as a subcontractor or supply contractor shall not be considered as requisite qualification The Tenderer shall have to upload documents (certified copy), viz. order letter and proof of execution to establish his credentials.**

2. The Cover duly marked as “EMD & Tender Fee” must contain the following:

- a) Demand Draft/Banker’s Cheque/Pay Order in original, for **Rs.5000/-** (Rupees Five Thousand only) as cost of Tender Document /NSIC Registration certificate which also needs to be physically submitted to the Chief Mechanical Engineer, Mechanical and Electrical Engineering Department, Kolkata Port Trust, 8, Garden Reach Road, Kolkata -700 043.
- b) Demand Draft/Banker’s Cheque/Pay Order in original, for **Rs. 3,29,600/-** (Rupees Three Lac Twenty Nine Thousand & Six Hundred only) as Earnest Money Deposit/ NSIC Registration certificate which also needs to be physically submitted to the Chief Mechanical Engineer, Mechanical and Electrical Engineering Department, Kolkata Port Trust, 8, Garden Reach Road, Kolkata -700 043.

**3** The Tender Document along with General Conditions of Contract, Forms and Agreement duly signed and stamped on each of the pages by the Tenderer including the page (s) of Bill of Quantities, un-priced and scored out to be **UPLOADED along with the following documents.**

- i) Copies of self attested Audited Balance Sheet and Profit and Loss Account for the financial years 2013-14, 2014-15 and 2015-16. The Auditor, in such case, must be a qualified Chartered Accountant. No self-declared document(s) would be accepted for this purpose. Work order/LOA & successful commissioning certificate of the similar work to be furnished.
- (ii) Self attested documentary evidence of successful completion of similar work as proof of fulfilling the Pre-qualification Criteria of the tender.

- (iii) Copies of self attested valid Service Tax Registration Certificate, VAT/CST Registration Certificate.
  - (iv) Certified copy of valid Electrical License of appropriate class of the person who will carry out the electrical work is to be uploaded.
  - (v) Copy of self attested PAN Card of the firm/company issued from Income Tax Department.
  - (vi) Statement to confirm the status of the Tenderer – whether a Partnership Firm, Company or Proprietorship Firm. If demanded by KoPT, the tenderer would be bound to furnish necessary documents in support of their statement in this regard.
  - (vii) Copy of valid Professional Tax clearance / Uptodate Profession Tax Payment challans have to be uploaded
  - (viii) Details of registration under ESI Act  
Copy of self-attested ESI Registration Certificate have to be uploaded, failing which tender / offer would be liable to be rejected.
  - (ix) Details of registration under EPF Act  
All intending tenderers shall have to upload the details of EPF registration along with requisite documents, failing which their tender/offer would be liable to be cancelled.
  - (x) NSIC Certificate in case of Micro and Small Enterprises (MSEs) registered with NSIC (under single point Registration Scheme) having valid certificate is to be uploaded.
  - (xi) A separate statement of the tenderer containing full name and office address of the Tenderer, names and designation of the officials of the Tenderer connected with the instant Tender, their land and mobile telephone nos., e-mail id and Fax No. etc. as per enclosed Proforma (Form-D).
  - (xii) Detailed Technical proposal of offered Solar PV Power Plant along with vendors list of make / brand of various components / brought out items and list of relevant BIS Codes, followed for different components and accessories.
  - (xiii) Declaration of the tenderer in the form of a COVERING LETTER with certain undertaking and also that they or their associates have not been banned or delisted by any Govt. or Quasi-Govt. agencies or PSUs in India as per enclosed Proforma.
4. All the document as mentioned here-in-before shall have to be UPLOADED failing which the related offer will be liable to be cancelled. The tenderer should clearly understand that no information/indication as to price should be entered in the page of “Bill of Quantities” or elsewhere in the Techno-commercial Bid. Indication of price anywhere in any manner in the Techno-commercial part of the tender would lead to rejection of the offer.
5. Please note that there is no provision to take-out the list of parties downloading the tender document from the website mentioned in NIT. As such bidders are requested to see the website once again before the due date of tender opening to ensure that they have not missed any CORRIGENDUM uploaded against the said tender after downloading the tender document. The responsibility of downloading the related CORRIGENDUM, if any, will be that of downloading parties.

Tenderers may note that non-submission of any of the aforesaid documents/non-fulfillment of any of the aforesaid criteria shall lead to disqualification of their offers. No alteration shall be made by the Tenderer in the tender and the tender must be in accordance with the specification. Non conformation to this instruction shall be treated as non responsive & hence may disqualify the tender.

6. Techno-commercial bids will be opened on the schedule date of opening of techno-commercial bid. Price Bids of only techno commercially qualified bidders shall be opened on a suitable date, to be intimated beforehand.
7. The Trustees reserve the right to accept or reject the tender without assigning any reason whatsoever.
8. The Trustees will not be responsible for any cost or expense incurred by the Tenderer in connection with preparation or submission of the tenders.
9. In case of unscheduled holiday, Strike/Bandh etc. on the scheduled date of Site Inspection, Pre-bid Meeting, submission of bids, opening of Techno-commercial or Price Bid, the same time (as per the schedule) on the next working day will be considered as scheduled time for the purpose of Site Inspection, Pre-bid meeting, submission of bids, opening of Techno-commercial or Price Bid, as the case may be. Here, Trustees' working day means Monday to Friday in between 9-30 hrs. to 17-30 hrs.
10. Should there be any doubt or ambiguity as to the meaning of any portion of the tender document or if any further information is required, the same shall be clarified/amended by KoPT in the Site Inspection and Pre-bid Meeting. No excuse of ignorance in this regard shall be accepted at a later date after the Pre-bid meeting. In the event of making any important clarification or amendment of terms of the tender, pursuant to the discussion in the Pre-bid meeting, the same shall be immediately hoisted in KoPT's website for information of all concerned and the same shall form a part of the Tender Document. Any offer having deviation from KoPT's terms and conditions shall render such offer unacceptable to KoPT. No alteration shall be made by the Tenderer in the tender document and the offer must be in accordance with the terms and conditions of the tender. The prospective tenderers may inspect the site prior to the date of Site Inspection and Pre-bid Meeting in order to make themselves fully aware of the work, site and scope of work as mentioned in the Bill of Quantity as per tender. For attending the Pre-bid Meeting, the representatives of the tenderers should accompany proper authorizations letters from their respective organizations.
11. The quoted rate should be inclusive of all taxes duties and other charges except Service Tax and Excise duty. Service Tax and applicable CESS on it and Excise duty are payable extra at actuals on submission of documentary evidence. The rate quoted in the tender shall hold good and shall be binding on the tenderer notwithstanding any increase in the prices of the materials and labour or in the freights or levy or other charges whatsoever and the tenderers shall not be entitled to claim any increase over the rates quoted by them during the pendency of the contract.
12. The quoted rates would be kept valid for **at least 120 days** from the date of opening of the Techno-commercial Bid.
13. The Trustees' reserve the right to disqualify a tender in case they are satisfied that any bribe, commission, gift or advantage has been given, promised or offered by or on behalf of any of the tenderers to any officer, employee or representative of the Trustees or to any person on his or on their behalf in relation to acceptance of the tender.
14. The tenderers shall distinctly understand that they will be strictly required to conform to all the terms of the tender and the plea of custom prevailing will not in any case be accepted as an excuse on their part for infringing of any of the conditions and they shall refrain from sending revised or amended quotations, after the closing date and time of the tender.

**15. Evaluation criteria:**

- (i) An individually fully priced Bill of Quantities for **Schedule-1 & Schedule-2** shall be uploaded in the price bid of the tender. A price shall be inserted against each item of the Bill of Quantities under **Schedule-1 & Schedule-2** respectively including all manner of labour, tools, spares and all other matters necessary for the execution of the contract in accordance with the general conditions of contract, special conditions of contract, specifications and bill of quantities of NIT.
- (ii) If there is a discrepancy between the total amount inserted in the Bill of Quantities under **Schedule-1 & Schedule-2** respectively and the amount arrived at by valuing the quantities set out there in and the rates and prices set against them by the tenderer, calculation for the total amount will be made on the basis of Unit Rates multiplied by quantities. **Evaluation of the tender will be done separately on the grand total for Bill of Quantities of Schedule-1 & Schedule-2 respectively. The tenderer must not keep any column/space blank in any item under each Schedule else the tender is liable for disqualification. Tenderer have to quote for both Schedule-1 & Schedule-2 else their offer will be treated as cancelled.**

**If excess work is required to be carried out in addition to the quantities stipulated in BOQ, the amount will be paid as per unit rate quoted in BOQ and as per actual measurement. In case of extra work, the same will be paid as per rate of PWD schedule rate/ rate of reputed manufacturer/market rate, with justification of rates as the case may be.**

The quoted rate should be inclusive of all taxes duties and other charges except Excise duty, Service tax and related cess. Excise duty, Service tax, related cess for the above work will be paid at the prevailing rate on submission of CENVAT- able document.

The rate quoted in the tender shall hold good and shall be binding on the tenderer notwithstanding any increase in the prices of the materials and labour or in the freights or other charges whatsoever and the tenderers shall not be entitled to claim any increase over the rates quoted by them during the pendency of the contract. Any modification (addition/deletion/alteration including implementation of GST) in taxes or duties in future by the GOI subsequently will be adjusted separately at the material time. Therefore, the detailed tax break-up considered in the quoted price should also be submitted by the bidders along with their price bid in order to assess the impact of future tax levied subsequently, if any, on the contract price. Any offer without the detailed tax break-up, if becomes the lowest price-bid and is accepted by KoPT with or without any negotiation of price, shall not be entitled for reimbursement of any additional amount due to modification of taxes or duties subsequently. But any recovery due on account of any modification in taxes or duties subsequently shall be determined and made by KoPT from the amount payable under the contract. Service tax including applicable Cess would also be imposed on all deductions and penalties on the contractor. However, as KoPT is not a Registered Body Corporate, it is not liable to pay Service Tax under 'Reverse Charge' mechanism. The bill/invoice to be submitted by the party should be in proper format as per Service Tax Rules.

**16.** The contract document shall be drawn in English language only. The contract shall be governed by all relevant Indian Acts as applicable only within the jurisdiction of High Court of Kolkata, West Bengal, India including the Acts like The Indian Contract Act, The Major Port Trusts Act, The Workmen's Compensation Act, The Minimum Wages Act, The Contract Labour (Regulation & Abolition) Act, The Dock Worker's Act, The Indian Arbitration & Conciliation Act, The Dock Safety Regulations, Act(s) or any other act, law, rule as may be applicable.

**Special Conditions of Contract**

**Tender No. KoPT/Kolkata Dock System/CME/036/16-17/ET/486**

1. The tender shall remain **valid** for acceptance for a period of **120 days** from the date of opening the Techno-commercial Bid. In the event of Tenderer withdrawing their tender before the expiry of tender validity period of 120 days from the date of opening of the Techno-commercial Bid, the offer of such tenderer shall be cancelled and EMD deposited by them shall be forfeited.

2. **Approval**

**sign & Drawing** :Successful Tenderer shall obtain approval for all the designs associated with civil, mechanical and electrical work which includes roof plan indicating the suitable area for installation of solar plant, dimension, north-south direction and any other relevant information for the site, PV Array Lay out, Plant Component Lay out, the structural condition of the roof / type of roof / type of roof treatment (if any) along with all technical particulars design of foundation, structure cable sizing, fabrication work , layout design, wiring diagram etc. prior to the execution of work and for this purpose the contractor will submit all design and drawing for obtaining approval from KoPT/3<sup>rd</sup> Party inspecting Agency i.e WBGEDCL. For details please refer to clause no 16 of Inspection & testing under Technical Specification.

3. **Inspection**

The total supply & installation of complete system is to be inspected by 3<sup>rd</sup> Party i.e WBGEDCL who has been appointed by KoPT. However, successful bidder has to arrange the facilities for inspection. For details please refer to Inspection & testing under Technical Specification.

4. **Materials** : Successful bidder will obtain approval for the materials deliverable under the project.

**5. Net metering arrangement** : CESC will provide export import energy meter at each location. The successful bidder should submit the required technical details to KoPT.

6. KoPT reserves the right to disqualify any offer, in case they are satisfied that any bribe/commission, gift or advantage has been given, promised or offered by or on behalf of any of the Tenderers to any officer, employee or representative of KoPT or any other person on his or their behalf in relation to the acceptance of this tender.

The Tenderer shall disclose the names of their Partners/Directors/Members in the manner stipulated in this tender document. Any change in the composition of the same during subsequent stage of tender finalization as well as during the period of execution of the contract shall be immediately notified in writing to KoPT. In the event of any Tenderer failing to comply with the aforesaid requirement, the tender/ contract, if entered into, may be terminated.

The Tenderer shall refrain from sending revised or amended quotations after the closing date and time of the tender.

7. At any time, prior to the last date of submission of Tenders, KoPT reserves the right to amend and modify the Tender Document. Such amendment shall be hoisted in KoPT's aforesaid website and KoPT would in no way be responsible for any likely ignorance of any prospective Tenderer in this regard. Such amendment/ modification shall form part of the Tender and shall be binding upon all the Tenderers.

8. **Cleaning during execution and after completion**

**Any damage done to the structures during execution of work should be made good by the contractor at his own cost.** On completion of works, the contractor shall reinstate and make good at his own expense any property or land which might have been disturbed and/or damaged by his works. He should also clean the site as required during execution and fully clear the site after completion of all the works.

The contractor shall forward any usable material found during the course of construction at the work site or its vicinity to KoPT store/yard, dispose off the debris beyond the port area all at his own expenses by his own transport and labour and clean out all part of the work and leave everything clean and tidy to the entire satisfaction of the Engineer. The contractor shall dismantle and remove the staging and other temporary structures like stores, offices, labour camps etc. On completion of the works the contractor shall clear way any and remove from the site all constructional plant, surplus materials, rubbish, debris and temporary works of every kind and leave the whole of the site and works clean and in a good and tidy condition where such temporary facilities were built and restore the same to original condition.

**Disclosure/indication of price in Techno-commercial part shall liable the tender to be disqualified.**

The Tenderer should note that the plea of custom prevailing will not in any case be admitted as an excuse on their part for infringing any of the conditions of the tender.

The Contract shall be governed by all the acts as listed under Clause No. 4.1 of the General Conditions of Contract and also by all other relevant Acts/Laws/Regulations/Bye-laws/Statutory Requirements including Dock Safety Regulations as may be in vogue as well as any amendment thereof, if any, in executing the tender and during the pendency of the contract. It will be the sole responsibility of the Contractor to comply with the same.

While submitting tender, the conditions of tender, the general conditions of contract and specifications, drawings etc. shall be read in conjunction with the bill of quantities.

**9. Completion time:**

- (i) For 95 kWp Solar power panel on the roof top of Centenary Hospital :- 120 days from the date of placement of order letter which is inclusive of the time taken for approval of the design /drawings by KoPT/Consultant and time required for 3<sup>rd</sup> party inspection.**
- (ii) For 65 kWp Solar power panel on the roof top of Subhas Bhawan :- 90 days from the date of placement of order letter which is inclusive of the time taken for approval of the design /drawings by KoPT/Consultant and time required for 3<sup>rd</sup> party inspection.**

**10.** The tenderer/s shall not rely merely on the descriptions given on the bill of quantities. The quantities shown on the bill of quantities are approximate only and the actual quantities may increase or decrease at the time of execution. Should the tenderer omit to mention the price of any item in the bill of quantities, the tender may be treated as cancelled.

The tenderer/s shall distinctly understand :-

- a.** that they will be strictly required to confirm to the General Conditions of Contract and Specification as contained in each of its clause;
- b.** Non-acceptance/or non-compliance of any of the above terms and conditions may render the tenders liable to rejection.

Tenderer/s shall also digitally sign every page of the tender documents in token acceptance thereof.

**11. Warranty/Defect Liability Period :** The contractor must ensure that the goods supplied under the contract are new, unused and of most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract.

The warranty period of the complete PV Systems will be **60 calendar months** from the date of commissioning. However, the modules will have warranty for 25 years with degradation of power generated not exceeding 20% of the minimum rated power over the 25 years period and not more than 10% after 10 years period as per guideline of MNRE Government of India.

The equipments or components, or any part thereof of the Power Plant, if so found defective during warranty period, the contractor will remain liable to repair or replace immediately under warranty obligation to the satisfaction of KoPT in order to ensure trouble free operation of the Power Plant.

In case of PV Module, the contractor has to transfer Performance Guarantee Certificate from the original manufacturer to the KoPT for subsequent arrangement.

In order to ensure satisfactory performance of the Power Plant, the contractor should take up periodic maintenance as may be required and also attend breakdown maintenance as and whenever required within the warranty period and scope under warranty obligation.

Within the scope of warranty, the Contractor will repair or replace of any defective part of the Plant & Equipment supplied, Works done and services rendered under the Contract and render periodic maintenance as a preventive measure to up keep performance of the power plant and also to attend breakdown maintenance as and whenever needed.

## **12. Safety:**

The contractor must be responsible for transportation of material, loading and unloading, safe storage at site including its security and will hand over the complete system after commissioning. Contractor will be solely responsible for recovery of any losses or damages or death or injury of their personal or others, if occur, during execution of work irrespective of insurance is done or not by the contractor. The Contractor shall take adequate safety precautions for prevention of accidents at site. The Contractor shall ensure that his employees observe the statutory safety rules and regulations.

**13. Entry Permit:** The Contractor shall be governed by the following provisions for interfacing safety custody and proper use of Permits :

- a. All representatives and workers of the contractor shall possess the entry Permit issued by Permit Office at the recommendation of concerned officer/Engineer on monthly or daily basis, free of cost. A token charge of Rs. 7.00 per person per occasion will be levied for creation of new IDs in the permit system. A separate receipt indicating the details of the ID along with the amount charged will be issued which may be kept for future reference.
- b. The Contractor shall ensure that any Permit issued to their workmen or representative by the Permit Office are not misused by un-authorized persons for entry into the protected dock area
- c. It shall amount to breach of rules and regulations regarding entry into the prohibited area by the Contractor in case the entry Permit issued at their request are found to be misused by any authority/person.
- d. The Contractor and their defaulting employees shall be liable for legal action against them for breach of rules regarding entry into the protected area.

**14. Permission from statutory bodies:** The Contractor shall make arrangement for obtaining permission and relevant clearance from the statutory bodies such as Municipal Corporation, Electricity Authorities etc. on payment of necessary charges/fees etc.

## **15. Handing Over :**

The work will be taken over by KoPT upon successful completion of all tasks to be performed at site(s) on equipment supplied, installed, erected, commissioned and run **successfully for consecutive 30 days** by the contractor in accordance with provision of this NIT. During handing over of the complete project work, the contractor will submit the followings for considering final payment.

- a) All As-Built Drawings & Design of the power plant.
- b) Detailed Engineering Document with detailed specification, schematic drawing, Design and test results, manuals for all deliverable major items, Operation, Maintenance & Safety Instruction Manual and other information about the project.
- c) Bill of materials.
- d) Site wise documentation.
- e) Performance guaranty certificate of PV Modules from the original manufacturer.
  1. Inventory of spares at projects sites.
- f) Completion certificate and agreement as per prescribed format of KoPT.
- g) Site maintenance Log Book.

**16. Testing and commissioning:** Before each test, the Contractor shall obtain permission from the Engineer and all tests shall be conducted in presence of duly authorized representative of KoPT and 3<sup>rd</sup> party Inspecting agency wherever it is necessary. Record of each test shall be prepared after the test and this record shall be signed by the Contractor's representative conducting the test. Copies of those records in triplicate shall be submitted to the Engineer. A certificate in triplicate shall be furnished by the Contractor countersigned by his certified Supervisor under whose direct supervision the installation has been carried out

**17. Identification mark:** For identification of various equipment letter/figure writing of sizes varying from 12 mm. to 75 mm. with enamel paint of approved shade /standard ferules are to be carried out as per directive of Engineer.

The tenderer must produce evidence with his tender that he have experience and fully capable of carrying out work of this class and magnitude and by way of proof shall submit along with his tender under Schedule 'O' a list of important works of a similar nature successfully carried out by him giving the dates of commencement and completion of such works and full particulars of his business organization.

**18. Forwarding of Materials:**

**All dismantled unserviceable materials are to be disposed off beyond the office compound and in conformity with the Municipal/corporation Rule at the contractor's own cost. The contractor shall have to arrange transport for forwarding the saleable/ unusable/ defective/ usable materials that may be found during the process of execution of the work to the Trustees sales yard or any other site/ Godown including labour, transportations, loading, unloading all complete as per the direction of the Engineer.**

**Fire Safety Regulations shall be applicable for the work. All Safety Regulations in vogue and as amended from time to time shall have to be satisfied.**

**The Contractor shall conform to all the formalities as laid down in the 'Contract Labour (Regulation & Abolition) Act, 1970' and the rules there under as in vogue and subsequent amendments, if any, while executing the contractual work.**

**19. Other Conditions**

**Electricity will be provided free of cost from nearest available source for carrying out the works, if necessary. Water and Toilet facility, as available within the premises, shall be extended to the Contractor's men free of cost.**

**KoPT is covered by the ISPS Code and the Contractor shall have to arrange further security for their equipment/office/stores etc. at their own cost and responsibility.**

All equipment covered under this tender must be of reputed make with proven reliability and as specified in the Tender

The tenderer/s must enclose a list of all previous suppliers made under similar contracts together with full address of the firms.

The tenderer/s shall submit manufacturers Test Certificates for all the bought-out items envisaged in the equipment.

The tenderer/s shall afford all facilities to the Engineer at their own arrangement for inspection and demonstration of the equipment, quoted for.

The tenderer shall along with the tender submit the detailed description of the equipment quoted for and enumerate the aspect of operation and maintenance facilities and shall enclose necessary literature.

Very particular emphasis will be laid on the completion period of the contract. The Trustees would desire early completion of work. The tenderer should note that time will be essence of the contract.



The equipment shall be supplied and delivered at the specified site.

The Contractor shall supply, bound into suitable folder two sets of operating and maintenance & fault finding manual for use by the Engineer with three sets of complete general lay out, assembly drawings and illustrated spare parts catalogue for the stores/ plant/ equipment/ item.

The stores/equipment/plant/machineries shall strictly conform to the tender specifications and shall be capable of satisfactorily performing the duties intended for in the specification.

For erection, if applicable, of the stores/ plant/ equipment/ machineries/ item, all connected work including grouting bolts, Base frame and Bed plate etc. shall be provided by tenderer. During erection all tools and tackles are to be provided by Tenderer. Tenderer should guard all equipments, etc. at site by his own men at his own cost. However, only space for making temporary godowns can be provided. The tenderer/s have to fill in the Technical Data. The successful tenderer shall have to supply materials and execute the work as per Technical Data offered by them. All materials are to be supplied progressively as required at site subject to prior approval of Engineer or his representative

**Contract Agreement** shall have to be executed at the expense of the Contractor within 15 days from the date of issuance of 'Order Letter' by the Successful Tenderer on a Non-judicial Stamp paper of at least Rs. 60/- as per format enclosed with the General Conditions of Contract. All correspondence between the Contractor and KoPT and all documents to be submitted from the date of opening of tender till the submission of the Security Deposit should form part of the contract agreement. The contract shall be drawn up in English language only

Any purchase for supply items from other sources, not specified will not be allowed for payment purpose.

All payments like refund of Earnest Money, Security Deposit and all bills of contractors' will be paid through ECS. For this purpose, following details are to be furnished by the tenderer:-

- i). Name of the bank with Code No. :-
- ii). Name of the Branch :-
- iii). Bank account no. :-
- iv). Type of account :- Saving / Current / Cash Credit
- v). MICR No. :-
- vi). IFSC Code. :-

The account shall have to be with a bank within the ECS zone prescribed by the RBI.

All payments due to the Contractor/successful bidder under the contract shall be made in Indian Rupee currency. No Foreign Exchange is payable on account of this contract.

## **20. Terms of Payment**

### **Supply items :-**

a. 60% payment against supply and delivery of materials / equipment / machineries / items on production of proper purchase documents/challans at site together with required Test Certificates etc. from appropriate authorities including inspection certificate of KoPT's representative/3<sup>rd</sup> Party Inspecting agency, as applicable and on submission of Custodian Certificate.

b. 30% payment against installation and commissioning.

### **Installation and Commissioning:-**

90% payment against installation, commissioning, users' training and observing the performance of the system for 30 days from the date commissioning and handing over of Power Plant .

**10% of the supply item amount and 10% of the installation & commissioning item amount will be released on yearly basis in five equal installment i.e. (2% per year) subject to satisfactory performance on submission of maintenance report on regular basis . For release of the aforesaid stage payment of 2% per year, the successful contractor has to submit bills to KDS, KOPT along with a copy of the maintenance report.**

**Any defect and / or deficiency in the equipment supplied shall have to be made good by the contractor at his cost before any bill is passed for payment. Payment will be made on the basis of actual measurement. If the cost of any additional work required to be executed at any site could not be derived from the obtained rate of different items against this tender, the cost of additional work will be considered as per PWD (Govt. of WB) Schedules (latest) rate.**

**21. CENVAT CRITERIA:**

In order to avail benefit of CENVAT CREDIT, the contractor shall have to produce relevant CENVAT-able documents. For excisable goods involved in the works, the Excise Duty and related cess will be paid extra at actuals on submission of CENVAT-able document. In all such documents, the consignee should be “KOLKATA PORT TRUST” and / or a/c “KOLKATA PORT TRUST” items to be procured from 1<sup>st</sup> / 2<sup>nd</sup> stage dealer so that KoPT can avail the CENVAT Credit. Also Service Tax and related cess, if applicable, for the work will be paid extra at actuals on submission of documentary evidence.

However, Service Tax, as applicable, on the amount of liquidated damage as well as other recoveries, i.e., damage, penalty, land rent, etc., shall be deducted from the Contractors’ bill at applicable rates and the same will not be reimbursed by KoPT.

**22. Security Deposit / Contract Performance Guarantee**

The Successful bidder(s) shall submit a Performance Bank Guarantee as Security Deposit in the prescribed format amounting to 10% of the contract value within 15 (fifteen) days from the date of issuance of order letter valid for a period of 5 years and 6 months with a claim period of another 06 (Six) months..

If the successful bidder fails to submit the Performance Bank Guarantee within the stipulated time as mentioned, his EMD will be forfeited and the job may subject to be cancelled. Decision of the competent authority in this regard will be final and bound to the contractor. The Performance BG will be released after satisfactory completion of the Comprehensive Maintenance support guided by the tender.

**Forfeiture of Performance Security / Contract Performance Guarantee**

Performance Security/ Contract Performance Guarantee shall be forfeited if,

- i. The successful bidder do not execute the work after placement of order letter and/or,
- ii. The successful bidder discontinue the work without prior permission of KOPT.

And/or,

- iii. The successful bidder fails to install/procure the total capacity of the plant as mentioned in the Bid Document.

And/or,

- iv. The successful bidder fails to rectify/replace of the defective/damaged equipment(s)/work(s) within the Defect Liability Period.

**23. Priority of Contract Documents**

The several documents forming the Contract are to be taken as mutually explanatory to one another, but in case of ambiguity or discrepancies, the same shall be explained and adjudicated by the Engineer of the Contract (EoC), who shall thereupon issue to the Contractor instructions thereon which will be final and binding on the Contractor. Unless otherwise provided in the Contract, if the stipulations in the various documents forming a part of the Contract are found to be in variation in any respect then, unless a different intention appears, the provision(s) of one will override others (but only to the extent these are at variance) in order of precedence as given in the list below i.e. a particular item in the list will take precedence over all those placed lower down the list:

The following documents of the Contract Agreement will be in the following sequence :-

- a. Letter of Intent (LoI) / Work Order
- b. Special Conditions of Contract
- c. Scope of work and Terms of Payment
- d. Bill of Quantities
- e. Instructions to the Tenderer
- f. General Conditions of Contract
- g. Any other document(s) forming part of the Contract.

**24. Custodian Certificate :** After delivery at site the supplied materials are to be verified by KoPT Officials and the custodian certificate is to be issued by the Contractor in this regard, for consumption of such materials in the instant work.

**25. Termination of contract and Risk Purchase Clause :** Will be applicable as per clause No. 8 of KoPT's General Conditions of Contract.

**26. Special / Additional Security** may be arranged by the contractor at the site at no extra cost to KoPT over and above the General Security provided within KoPT premises by Port Security Authority.

**27.** All other terms and conditions excepting those mentioned separately shall be governed by KoPT's General Condition of Contract.

**28. DETAILED SCRUTINY OF E-TENDERERS :**

**During Techno-Commercial Evaluation, an offer shall be considered non-responsive in case the following documents are not uploaded :**

- i) VAT registration certificate.
- ii) Valid Trade Licence.
- iii) Valid Professional Tax Clearance Certificate / Up to date tax payment challan.
- iv) Proof of possession of valid Employees' Provident Fund (EPF) Account.
- v) Proof of being registered with Employees' State Insurance Corporation (ESIC).
- vi) Details of the firm as per Schedule-O (in Volume-I) of the tender document.
- vii) Credentials in the form of copies of Letters of Award of Works along with corresponding successful Completion Certificates from owners to justify that the intending bidder satisfies the earlier mentioned pre-qualification criteria.
- viii) Copies of audited balance sheet and Profit and Loss account / Trading account for the last 3 (three) financial years (**i.e. 2013 – 2014 , 2014 – 2015, 2015-16**).
- ix) Addendum / Corrigendum / Notice / Extension Notice issued and drawings (if any) duly signed by the Bidder under office seal. The bidder will have to produce the original documents or any additional documents, if asked for, to satisfy the Authorities.
- x) EMD & Cost of Tender documents/NSIC Registration certificate.
- xi) Service Tax Registration Certificate.
- xii) Duly signed full Techno Commercial Part and unquoted Price Bid Document and self attested G.C.C. signed and stamped at each page.
- xiii) Copy of PAN Card.
- xiv) Form of Tender, duly filled up and signed.
- xv) Electrical Supervisory certificate of appropriate class of the person who will carry out the electrical work.

**In addition to the above, a bidder may be disqualified if :**

- a) The bidder provides misleading or false information in the statements and documents submitted.
- b) Record of unsatisfactory performance during the last seven years, such as abandoning of work or rescinding of contract for which the reasons are attributable to the non-performance of the contractor or inordinate delays in completion or financial bankruptcy, etc.

The decision of Kolkata Port Trust in this regard shall be final and binding on the Bidder

**SCOPE OF WORK**

**Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

**Title of the Work:- Design , Engineering, Manufacturing, Procurement & Supply, Installation, Testing and Commissioning of cumulative 160 kWp (95kWp at Centenary Hospital & 65kWp at Subhas Bhawan) roof mounted Grid connected Solar Photo Voltaic Power Plant including 5 years Comprehensive Warranty obligation at the office premises of Kolkata Dock System, Kolkata Port Trust**

The scope of work includes **Design, Engineering, Manufacturing, Procurement & Supply, Installation, Testing and Commissioning of (i) 95kWp roof mounted grid connected Solar Photo Voltaic panel on the roof top of Kolkata Port Centenary Hospital and (ii) 65kWp roof mounted grid connected Solar Photo Voltaic panel on the roof top of Subhas Bhawan.** The work is to be executed on turnkey basis at both the sites. KoPT will not supply any material departmentally. The scope of work will include but not limited to the followings:

- 1) Design of the system for both 95kWp and 65kWp
- 2) Obtaining technical approval from KoPT for both the sites.
- 3) Supply & delivery of PV Modules (Crystalline Silicon preferably poly crystalline)
- 4) Supply & delivery of PV Module Mounting Structure
- 5) Supply & delivery of PV Array Junction Box
- 6) Supply & delivery of Grid –Tied String Inverter
- 7) Supply & delivery of Web based on line data logger and Remote Monitoring Unit
- 8) Supply & delivery of Inverter LT Panel
- 9) Supply & delivery of Grid interfacing LT Panel
- 10) Supply & delivery of Kiosks for Inverter and accessories according to site condition
- 11) Supply & delivery of Export Import Energy Meter
- 12) Supply & delivery of necessary Cable and Wires as required as per technical specification.
- 13) Timely procurement and transportation to site in properly packed condition of all equipment, materials and miscellaneous item required to complete both the project
- 14) Receiving, unloading and transportation at both the sites.
- 15) Safe storage at both places.
- 16) Final check-up of equipment and commissioning and putting both 95 kWp and 65 kWp system into successful functional Operation.
- 17) Arrangement of Earthing system at both the places.
- 18) Installation, testing and commissioning of both 95 kWp and 65 kWp power plant
- 19) Providing of training material and onsite training to the officials and employees of KoPT.
- 20) Preparing commissioning certificate, documentation, Training and Handing over of power plant as per the purchaser format and schedule .
- 21) Necessary civil work for provision of Water pipe line with outlet tap post is to be laid down in the array field for cleaning of the PV Module
- 22) Making arrangement of Fire Extinguisher, PV Module Cleaning Arrangement, Signage, keeping necessary tools, tackles and equipment as required at both the sites and handing over of project document for both 65 kWp and 95 kWp PV panel to KoPT.
- 23) Providing of routine and break down maintenance of the Solar PV panel at both the sites , providing of Periodic operation Maintenance Log Book and Maintenance Manual, equipment Manual and fulfillment of warranty obligation as may arise.

The intending tenderer shall inspect the site of work in consultation with the Engineer and acquaint himself with the nature of Work before preparing his tender. His attention is drawn to Clause No. 3.1 of the General Conditions of Contract in this regard. No excuse on ignorance as to the site conditions will be entertained. **Danger Notice Plate** shall have to be affixed by the contractor permanently in a conspicuous position in accordance with **Indian Electricity Rules, 1956** with latest amendments .

The lengths of **Cable run**. As given in the **Bill of Quantities** are indicative only. There may be little variation in quantity during execution of the work depending upon site conditions

Any work, considered required by the contractor and not mentioned hereunder, for successful completion of the project, is to be included in the item of bill of Quantity suitably, which should be finalized in the pre bid meeting. The work shall be carried out as per Indian Electricity Act, 2003, Central Electricity Authority (Measures relating to safety & electricity supply) Regulation, 2010 with latest revised IS code of Practice and relevant portion of National Building Code particularly with respect to fire safety and also code of practice for fire safety of buildings (general): Electrical Installations, IS:1646: 1997.

#### **24. Scope of Work during Maintenance period for both 95 kWp and 65 kWp.**

All the equipments to be installed for commissioning of each of the grid connected solar rooftop power plant and the power plant in whole shall be under Comprehensive Maintenance Contract within the scope of the tender for 5(five) years from the date of commissioning. The equipments or components, or any part thereof, so found defective during Comprehensive Maintenance Contract period will be forthwith repaired or replaced within the scope of warranty obligation to the satisfaction of the Purchaser.

The maintenance of grid connected solar rooftop power plant include routine & periodic maintenance, overhauling, breakdown maintenance, and repairing or replacement of defective PV modules, invertors, and other components, providing of consumables.

**The Down-Time of PV system should not be more than 72 hours (03 days).**

##### **A) Routine maintenance:**

In order to carry out routine maintenance of both the power plants, the contractor will provide all labour, material, consumables etc. within the scope of maintenance service. Routine maintenance will include but not limited to the followings:

- i) Checking and tightening of all electrical connections
- ii) Checking and tightening of mechanical fittings
- iii) Checking and restoring of earthing system,
- iv) Dusting and cleaning of Inverter and other electrical equipments
- v) Routine maintenance as recommended by the Original Equipment Manufacturer
- vi) **Fortnightly washing / cleaning of 95 kWp SPV Modules & 65 kWp solar modules** installed at Centenary Hospital & Subhas Bhawan respectively.
- vii) Proper maintenance of safety arrangements including Renewal of Fire Extinguishers at both the site.

##### **B) Breakdown maintenance:**

Breakdown maintenance will include but not limited to the followings:

- i) Breakdown maintenance will mean the maintenance activity including repairs and replacement of any component or equipment of the power plant, which is required to be carried out as a result of any sudden failure/breakdown of that particular component or equipment while the plant is running.
- ii) The contractor will be responsible to carry out breakdown maintenance of the power plant and will provide the required manpower, materials, consumables, components or equipment etc. for breakdown maintenance.
- iii) The contractor will undertake necessary maintenance/ troubleshooting work of the Solar PV Power Systems. Down time will not be more than 03 (three) working days from time of occurrence or reporting.
- iv) Each and every complaint communicated by any either verbal or written, the contractor will acknowledge the complaint by providing specific complain registration number in order to track the response of the complaint.
- v) If the Contractor fails to complete the maintenance work within the stipulated dates as communicated by the Engineer of the contract, the Contractor shall pay as compensation to the Trustees as a penalty of **Rs 1000/- per day** or part thereof. Provided always that the amount of such compensation shall not exceed 10% of the said value of work.

- vi) Without prejudice to any of their legal rights, the Trustees shall have the power to recover the said amount of compensation/damage from any money due or likely to become due to the Contractor. The payment or deduction of such compensation/damage shall not relieve the Contractor from his obligation to complete the work or from any of his other obligations/liabilities under the contract and in case of the Contractor's failure and at the absolute discretion of the Engineer of the contract, the work may be ordered to be completed by some other agency at the risk and expense of the Contractor, after a minimum three days notice in writing has been given to the Contractor by the Engineer of the contract or his Representative

### **C. Capital Maintenance:**

Capital Maintenance shall mean the major overhaul of any component or equipment of the power plant which is not covered by routine, preventive and breakdown maintenance which may become necessary on account of excessive wear & tear, aging, which needs repair/replacement. The capital maintenance of power plant and all civil structures shall normally be planned to be carried out on an annual basis. For this purpose a joint inspection by the Contractor and KOPT official shall be carried out of all the major components of the power plant, about two months in advance of the annual maintenance period, in order to ascertain as to which components of the power plant require capital maintenance. In this regard the decision of competent authority will be final and binding.

However, if the condition of any plant component warrants its capital maintenance at any other time, a joint inspection of KOPT official and supplier shall be carried out immediately on occurrence of such situation and capital maintenance shall be carried out by arranging the shutdown of the plant/part of the plant, if required, in consultation with concerned authorities. The decision of competent authority shall be final and binding to the contractor. The capital maintenance also includes painting of mechanical & civil structures etc. Adequate measures should be taken for prevention of wear and tear of the machines. Solar PV Power System is to be designed to operate with a minimum maintenance.

The scope of support service provides preventive maintenance as & when necessary within the contract period and break down maintenance in the event of malfunctions, which prevent the operation of the power system or part of it within the stipulated time period & free replacement of spares required for maintenance. The contractor shall provide Spare parts & Measuring Instruments.

The contractor shall submit the detailed schedule for routine and preventive maintenance before final commissioning of the plant. The contractor shall also submit Detailed Report to KDS, KOPT for any capital or breakdown maintenance mentioning the cause of breakdown, actions taken to resolve that issue and preventive measures taken to avoid failure/damage/loss of generation due to similar incidents/accidents in future etc. within 07 (seven) days from the date of recovery

### **25. PV Array Cleaning Arrangement**

Necessary equipment is to be provided at site to facilitate easy cleaning of the PV Array.

Water pipe line with minimum ten numbers of outlet tap with post is to be laid down in the array field for cleaning of the PV Module. The water line is to be connected to the suitable nearest point of water source. The whole work will be executed within the contract value

### **26. Fire extinguisher**

At least three number of minimum 5 kg ABC type dry power portable fire extinguishers shall be provided at each site. The installation of Fire Extinguishers should confirm to TAC regulations and BIS standards.

## **27. Spares ,Tools and Measuring Instruments:**

The minimum number and different type of recommended spares, tools and measuring instruments must be supplied under this project within the contract value.

<b>Sl. No.</b>	<b>Description</b>
1	Digital Multimeter to measure AC & DC parameters
2	Screw driver
3	Spanner
4	Pliers

If any special tools, spares and measuring instruments are required at a site, those shall be provided by the contractor within the contract value .Necessary spares for comprehensive maintenance for 5 years shall be supplied by the contractor. Approval for list of spares shall be accorded by the contractor

## **28. Signage:**

Project information Signage: The Signage will be made up of metallic base of 12 SWG of minimum size 4'x 3' with suitable frame. The Signage provide with detail of the project as approved by KDS, KoPT . The font size on the signage has to be big enough so that everyone can read it easily. The Signage will have to be fixed up in two (02) prominent places of each of the project area.

## **29. Schematic Diagram:**

Schematic Diagram of Installation must be provided on a display board made up of metallic base 12 SWG of minimum size 3'x 2' with suitable frame as approved by KoPT. The schematic diagram must be fixed up at any prominent place of installation.

## **30. Equipment labeling:**

Labeling of all the Major Equipments have to be made in metallic base plate.

**31 .Safety Signage:** Safety Signage must be provided mentioning the level and type of voltage and symbols as per IE Rule at different position as may be required.

## **32. Codes and Standards**

All equipment and materials to be furnished under this specification will be designed, manufactured and tested in accordance with the latest revisions of the relevant Indian Standard (IS)/IEC/MNRE as applicable. The electrical installation will meet the requirement of Indian Electricity Act, and Indian Electricity Rules as amended up-to-date and also the applicable section of the latest revision of the relevant IS Code of Practice.

**TECHNICAL SPECIFICATIONS****Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486****Technical Specification of Grid –Connected Solar PV Power Plant( applicable to both 95 kWp & 65 kWp Solar Power plant)****1.0 Outline of the scheme of the project :**

- 1.1** The array capacity of the PV Power plant will be minimum **95 kWp for Power plant at Centenary Hospital and 65 kWp for power plant at Subhas Bhawan.**
- 1.2** The PV array is to be installed at the available space earmarked at project site.
- 1.3** The power from PV array is to be feed into grid through one or more than one number grid Connected string inverter. The capacity of one inverter or the cumulative capacity of the inverters should be minimum nominal capacity of 95 kVA 3Ø 415 V 50Hz AC or more for Centenary Hospital and 65 kVA, 3Ø 415 V 50Hz AC or more for Subhas Bhawan.
- 1.4** Outputs of the grid-tied string inverter will be terminated to an **Inverter LT Panel** to be located close to the inverters at both the locations.
- 1.5** The output of the **Inverter LT Panel** is to be terminated and connected with supply mains through a **Grid interfacing LT Panel.**
- 1.6** An Export Import Energy Meter is to be installed nearer to the Grid interfacing Panel before connecting to the mains to measure the energy produced from the PV Power Plant.
- 1.7** The Grid connected string Inverter, Inverter LT Panel is to be installed in suitable kiosk with proper security and protection with arrangement of proper shed (if required).
- 1.8** The SPV power plant is to be installed at both the sites should be Robust, Economic, Efficient and Time tested and having a good aesthetic view matched with the Building.

***Note: The contractor/contractors have to submit the Design of the Power plant as per site for approval.***

**2.0 Solar PV Modules**

The Cell of the Modules are to be crystalline silicon preferably poly-crystalline silicon. The capacity will be consider as per declared capacity in the published technical brochures of the proposed PV Module Manufacturer.

Any of the following types of PV Modules can be used:

<b>Type</b>	<b>PV Module capacity type</b>	<b>No of PV Cell</b>
Type -1	240 Wp/250 Wp	60 Nos.
Type-2	290 Wp / 300 Wp	72 Nos.

However no mismatch in PV Module type will be allowed

The PV modules must qualify the relevant **IEC 61215 or IS 14286 and IEC 61730**. The proposed PV Module must have the Test Certificate issued from accredited test laboratories of MNRE Government of India under JNNSM Programme. The test certificates issued from IEC accredited laboratories will also be acceptable.



Each PV module used in this solar power project must use an RF identification tag. The information must be mentioned in the RFID used on each module as per guideline of MNRE Government of India (This can be inside or outside the laminate, but must be able to withstand harsh environmental condition). Manufacturer of proposed PV modules must have the ISO 9001:2008 or ISO 14001 Certification for their manufacturing unit for their said manufacturing item.

### **Warranty:**

**A. Material Warranty:** The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than five (05) years from the date of commissioning of the PV Power Plant..

- i. Defects and/or failures due to manufacturing
- ii. Defects and/or failures due to quality of materials
- iii. Non conformity to specifications due to faulty manufacturing and/or inspection processes.

If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the contractor's cost & risk. The contractor shall be responsible to contact with the manufacturer if any of the above mentioned cases occurred.

**B. Performance Warranty:** The manufacturer should warrant the output of Solar Module(s) for at least 90% of its rated power after initial 10 years & 80% of its rated power after 25 years from the completion of trial run at site/date of final commissioning. The contractor shall collect the Warranty Certificate for performance of the modules from the manufacturer and submit the same to KoPT through WBGEDCL prior to delivery of the products to the respective sites.

If, Module(s) fail(s) to exhibit such power output in prescribed time span, the Contractor will bound to either deliver additional PV Module(s) to replace the missing power output with no change in area of site used or replace the PV Module(s) with no extra cost within the contract period claimed at Owner's sole option.

Manufacturer of proposed PV modules must have the ISO 9001:2008 or ISO 14001 Certification for their manufacturing unit for their said manufacturing item.

**Note: Only indigenously manufactured PV cells & modules should be used in Grid Connected Rooftop Solar PV Power Plants under this scheme. However, other imported components can be used, subject to adequate disclosure and compliance to specified quality norms and standards.**

**Desired specification of the PV Module will include but not limited to the following:**

Sl No	Item	Description
1.0	Certification	i) IEC 61215 or IS 14286 ii) IEC 61730
1.1	Type Test certificate issuing authority.	NABL/ IEC Accredited Testing Laboratories or MNRE accredited test centers.
2.0	PV Cell	
2.1	Type	Crystalline Silicon preferably Poly-crystalline Silicon
2.2	Indigenous Identification	Manufacture Identification mark on each cell
3.0	PV Module	
3.1	Rating at STC	i) 240 Wp/ 250Wp, 60 cells (without any negative tolerance) ii) 290 Wp / 300Wp, 72 cells (without any negative

Sl No	Item	Description
		tolerance)
3.2	Efficiency	minimum15%
3.3	Fill factor	Minimum 70%
3.4	Withstanding voltage	1000V DC
3.5	Glass	
3.5.1	Thickness	3.2 mm (minimum)
3.5.2	Type	High transmission, low iron, tempered & textured glass.
3.6	PV Module Junction Box	
3.6.1	Protection level	IP 65 or above
3.7	Bypass Diode	
3.7.1	System Voltage (V sys)	1000 V dc
3.7.2	Number	3 numbers (minimum )
3.8	Module Frame	
3.8.1	Type	Anodized aluminum frame

### 3.0 PV Array

**Desired specification of the PV Array will include but not limited to the following:**

Sl No	Item	Description
1.0	Nominal Capacity	Minimum 95 kWp for Centenary Hospital and 65 kWp for Subhas Bhawan
2.0	PV Module interconnection connector	MC-4 / Tyco connector or equivalent
3.0	PV Module interconnection cable and array cable	PV 1-F standard /NEC standard “USE-2 or RHW-2” type
4.0	PV array String Voltage	Compatible with the MPPT Channel of the inverter

### 4.0 PV Module Mounting Structure

**During Structural design following points must be include but not limited to the following:**

- (i) The Module Mounting structure must be made of MS as per IS Standard (latest edition) ISI Make.
- (ii) The contractor shall have to submit the drawing of PV Module mounting structure supported by Stad- pro design to KDS (KoPT) for necessary approval. In general angle-channel structure shall only be considered.
- (iii) For special type of roof, special type of structure shall be provided after getting approval from KDS (KoPT).
- (iv) The PV Array should be capable of withstanding **a wind load of 160 km/hr after installation.**
- (v) All structures including any metallic part thereof must be protected against any corrosion. The structures must also be compatible with the materials used in the module frame, fasteners, fixtures, nuts, bolts or any similar nature of metallic components whichever are required to complete the job.
- (vi) The array structure is to be made of hot dip galvanized MS structure of minimum galvanizing thickness **85 micron.**
- (vii) Structures are to be supplied complete with all members to be compatible for allowing easy installation.
- (viii) The module mounting structure will have to be designed and fabricated with tilt angle for obtaining optimum generation from the PV power Plant as per site condition.
- (ix) The structures will be designed for simple mechanical and electrical installation. There will be no requirement of welding or complex machinery at the installation site.

- (x) The PV Array structure will support SPV modules at the mentioned orientation and absorb, transfer the mechanical loads to the ground or any suitable/ existing strength structure as deemed fit.
- (xi) Nuts and Bolts of Array structure

Usage Location	Type of Nuts and Bolt
PV Module fixing nuts and Bolts with the PV Module structure	Stainless steel
All other Nuts and Bolts of PV Module mounting Structure	MS chrome plated (GI)

- (xii) All fasteners, fixtures for supporting conduits Shall be made with stainless steel or aluminum or UV Protected PVC
- (xiii) The structural condition of the roof / type of roof / type of roof treatment (if any) should be precisely assessed by the contractor during site surveying and that should be clearly mentioned in design document.
- (xiv) Safety of the roof structure should be properly maintained all through the work. If any damages of the structure occurred by the contractor, necessary rectification is to be made by the contractor immediately at his own cost.
- (xv) The footing base of the structure should be painted by good quality (IS approved) water proofing bituminous paint.

## 5.0 **PV Array Junction Box (AJB) for both 95 kWp and 65 kWp**

**Array Junction Box (AJB) shall have to be used for termination of string prior connecting array with each inverter.** Minimum one number of PV Array Junction Box will have to be installed **against each inverter**. The desired specification of the PV Array Junction Box and accessories shall include but not limited to the following:

Sl No	Item Description	Desired Data
1.0	Enclosure	
1.1	Degree of Protection	IP65 with UV Protected
1.2	Material	Polycarbonate.
1.3	Withstanding voltage	1000V DC
1.4	Withstanding Temperature	100 °C
1.5	Accessories mounting arrangement	DIN Rail or as suitable
1.6	Front cover	Transparent
1.7	Number of Strings entry	As may be required
2.0	Cable Entry and Exit	
2.1	Position	Bottom at cable entry and exit
2.2	Cable Entry and Exit connector type	MC 4 / Tyco Connector ( PV Array String cable)
2.3	Cable gland	Earthing cable entry
3.0	Surge Protecting Device (SPD)	
3.1	Type	DC
3.2	Protection class	Type 2
3.3	Rating (8/20)	20 kA
3.4	Number of set	As may be required as per string Design (minimum 1 set against each MPPT Chanel)
4.0	Fuse with fuse holder	

4.1	Position	Positive and negative terminal for each series string
4.2	Type	Glass fuse, for PV Use only
4.3	Rating	Current: Minimum <b>1.25</b> times the rated short circuit current of the series string
4.4	Approved make	<i>(as per acceptability of KDS – KoPT)</i>
5.0	Earthing Provision	Terminal blocks will have to be provided for Earthing
6.0	Terminals, lugs and bus bar	Tinned copper

## 6.0 Grid Connected String Inverter for both 95 kWp and 65 kWp

The power from PV array is to be feed into grid through one or more grid Connected string inverter. The capacity of one inverter or the cumulative capacity of the inverters should be of minimum nominal capacity of 95 kVA 3Ø 415 V 50Hz AC or more for Centenary Hospital and 65 kVA, 3Ø 415 V 50Hz AC or more for Subhas Bhawan. The string inverter to be supplied should be field proved in Indian context and must have good track record for satisfactory operation for at least six months. In this respect, performance certificate from any user may have to be submitted in due course (during finalization of inverter). The Inverter to be supplied must have technical service support setup in India and having the factory testing facility (Routine test) in India.

Desired **specification of each** string inverter will include but not limited to the following:

Sl. No.	Operating Parameter	Desired specification
1.0	Type	Grid Connected String Inverter
2.0	Usage	Specially used for PV system
3.0	Standards	
3.1	Efficiency Measurement	<b>IEC 61683/ Equivalent BIS Std.</b>
3.2	Environmental testing	<b>IEC 60068-2 (1,2,14,30) / Equivalent BIS Std.</b>
3.3	Interfacing with utility grid	<b>IEC 61727 or Equivalent</b>
3.4	Islanding Prevention Measurement	<b>IEC 62116 or Equivalent</b>
3.5	Type Test certificate issuing authority (for item no 3.1 , 3.2)	Accredited Testing Laboratories.
4.0	<b>Input (DC)</b>	
4.1	Aggregated PV array connectivity capacity	Total individual/ cumulative capacity 95 kWp and 65 kWp (minimum) respectively
4.2	MPPT Voltage range	Compatible with the array voltage
4.3	Total number of MPPT	two or more
5.0	<b>Output (AC)</b>	
5.1	AC Active Power	Total individual/ cumulative 95 kW & 65 kW at unity pf respectively
5.2	AC Grid Connection	3Ø , 415 V & N, 50Hz
5.3	Adjustable AC voltage range	As per prevailing Grid code.
5.5	Frequency range	As per prevailing grid code
5.6	AC wave form	Pure Sine wave
5.7	THD	As per prevailing Grid code.
6.0	<b>General Electrical data</b>	
6.1	Efficiency	minimum 95 %
6.2	Sleep mode consumption	Less than 10 W
7.0	<b>Protection</b>	

Sl. No.	Operating Parameter	Desired specification
7.1	DC Side	<ol style="list-style-type: none"> <li>Reverse-polarity protection</li> <li>Reverse current to PV array protection, over voltage, Under voltage protection</li> <li>Over current</li> </ol>
7.2	AC side	<ol style="list-style-type: none"> <li>DC inject protection to grid</li> <li>Over voltage and Under voltage</li> <li>Over current</li> <li>Over and under grid frequency protection,</li> <li>Anti Islanding protection</li> </ol>
7.3	Isolation Switch	PV array Isolation switch (DC) (If DC isolating Switch is not provided in the inverter it will be provided by the contractor separately nearer to the inverter)
7.4	Ground fault detection device (RCD) which can detect changes in ground current. Rating will be as suitable for inverter	To be provided for transformer-less inverter.
8.0	Display	
8.1	Display type	LCD /LED Display
8.2	Display parameter	
8.2.1	DC	Voltage Current Power
8.2.2	On grid connected mode	Line status Grid voltage Grid frequency Export Power Cumulative Export Energy
9.0	Interface (Communication protocol)	Suitable port must be provided in the inverter for <ol style="list-style-type: none"> <li>On site upgrade of Software,</li> <li>Instant on site data dumping facility,</li> <li>Compatible to Web based remote monitoring system</li> </ol>
10.0	Web monitoring	Matched with the monitoring and data logging system
11.0	Mechanical Data	
11.1	Protection Class	IP 65( Outdoor type)
11.2	Temperature	0 °C to 55°C
11.3	Cooling	Natural / forced cooling
11.4	Type of Fixing	Wall Mounted / floor mounted

## **7.0 Web enable on line data logger and Remote Monitoring Unit for both 95KWp and 65KWp :**

- Web enable data logging system may be an integrated part of the inverter or a separate unit.
- The data Logger should have the provision of recording electrical parameters on DC and AC side at different stages to study performance of system as well as to study status of the system at a particular instant. The data logger should have required transducer to monitor and record the required system data.
- Web based Remote Monitoring system must be compatible with data logger.

- (iv) The other required accessories, hardware and compatible software will have to be provided as an integrated part of the system to monitor the real time data (maximum 20 minutes delay) through web server. The Data logger will have to continuously send data to the server.
- (v) The system can be monitored from anywhere through internet without installing any specific application software. The server will not be provided by the KDS-KoPT.
- (vi) **The rental charges and other charges of the IP address, data storage space in the host server and free access of the Data through Web for a period of five (5) years is to be included in the Quoted price.**
- (vii) The contractor will supply and install data cable/30 Dongle with required switch or router having sufficient number of port from the Web-enabled Data Logger up to the existing/ future internet facility at the project site for data communication to WEB. KoPT-KDS will provide the Internet connectivity.
- (viii) In case the data cable to be laid at outdoor for a significant distance, SPD (surge suppressing device) suitable for communication network, as much number at suitable location are required must be provided with the system.
- (ix) The data logger and remote monitoring system is not inbuilt to the inverter then the data logger and the remote monitoring system must be put into a Polycarbonate enclosure having transparent front panel
- (x) The Web based monitoring system should have the provision of graphical representation of the data will include but not limited to the following:

Sl. No.	Operating Parameter	Desired specification
1.0	Input data	PV Power PV Energy
2.0	Output data	
2.1	Inverter	Export Power Export energy

All data will be recorded chronologically date wise. The data file should be MS Excel/XML/or any readable form compatible and should have the facility of easy downloads

## 8.0 **Inverter LT Panel for both 95 kWp and 65 kWp**

Each output of the string Inverter will be terminated in the **Inverter LT Panel** through 415V TPN MCB at the output of each string inverter.

Desired specification of **Inverter LT Panel** will include but not limited to the following:

Sl No	Parameter	Desired Specification
1.0	In coming MCB (Inverters side )	
1.1	Number	As required ( Actual number will depend on the number of Inverters used)
1.2	Type	4 pole
1.3	Rating	415V, 10 kA , current rating will depend on the design of the power plant i.e the rating of inverters used.
2.0	Outgoing MCCB (Grid Side)	
2.1	Number	01(one) number
2.2	Type	TPN
2.3	Rating	415V , 250 A , 30 kA. ( Indicated minimum rating to be used. However rating may change depending on the

Sl No	Parameter	Desired Specification
		particular design of the power plant)
3.0	Surge protection device	
3.1	Number	one number against each inverter.
3.2	Usage as declare by Manufacturer	For AC use only
3.3	Protection class	Type 2
3.4	Number of set	01 Set
3.5	Rating	20 kA (minimum)
4.0	Indicator	R,Y,B
4.0	Earthing Provision	Terminal Blocks will have to be provided for Earthing
5.0	Enclosure	
5.1	Degree of Protection	IP-42/43 for indoor type or IP 65 for outdoor type
5.2	Type	Double door sheet steel (16SWG), powder horizontal / vertical enclosure dust and vermin proof applicable for IP-42/43 and Polycarbonate Enclosure applicable only for IP 65 incase of outdoor installations.
5.3	Type of Fixing	Wall mounted
5.4	Accessories mounting arrangement	DIN Rail or as suitable
5.5	Number of entry and exit	As may be required

#### 9.0 **(a) Grid interfacing LT Panel for 95 kWp**

Output of the Inverter LT panel is to be terminated to a **Grid Interfacing LT Panel**. The Grid Interfacing LT Panel is to be installed in the electrical substn/ switch room situated at Centenary Hospital and in the electrical goomty at Subhas Bhawan .

Desired specification of each **Grid interfacing LT Panel** will include but not limited to the following:

Sl No	Parameter	Desired Specification
1.0	Isolator	
1.1	Rating	250 A ( Min)
1.2	Type	TPN
1.3	Handle	To be provided
1.4	Approved make	ABB / L&T / Siemens/ Schneider /Hager/ Legrande or equivalent (as per acceptability of KDS-KOPT)
4.0	Indicator	R,Y,B
5.0	Earthing Provision	Terminal Blocks will have to be provided for Earthing
6.0	Enclosure of the control panel	
6.1	Degree of Protection	IP-42/43 for indoor type or IP 65 for outdoor type.
6.2	Type	Double door sheet steel (16SWG), powder horizontal / vertical enclosure dust and vermin proof applicable for IP-42/43 and Polycarbonate Enclosure applicable only for IP 65 incase of outdoor installations.
6.3	Type of Fixing	Wall mounted/ structure mounted type
6.4	Accessories mounting arrangement	DIN Rail or as suitable
3.0	Bus Bar	
3.1	Position	In the Bus Bar Chamber

Sl No	Parameter	Desired Specification
3.2	Rating	3 Ph Neutral 415 V, 250 A
3.3	Type	Copper
3.4	Termination point	06 (six) nos (minimum )
4.0	Indicator	R,Y,B
5.0	Earthing Provision	Terminal Blocks will have to be provided for Earthing
1.0	Metering Arrangement	
1.1	Instantaneous Measuring parameter	i. Voltage, ii. Current
1.2	CT/ PT Make	KAPPA/ SERVO/AE/ KALPA or equivalent make ( <i>as per acceptability of KDS-KOPT</i> ).
1.3	Type of meter	Electronics
1.4	Display type of meter	LED/LCD

**(b) Grid interfacing LT Panel for 65 kWp**

Sl No	Parameter	Desired Specification
1.0	Isolator	
1.1	Rating	160 A ( Min)
1.2	Type	TPN
1.3	Handle	To be provided
1.4	Approved make	ABB / L&T / Siemens/ Schneider /Hager/ Legrand or equivalent (as per acceptability of KDS-KOPT)
4.0	Indicator	R,Y,B
5.0	Earthing Provision	Terminal Blocks will have to be provided for Earthing
6.0	Enclosure of the control panel	
6.1	Degree of Protection	IP-42/43 for indoor type or IP 65 for outdoor type.
6.2	Type	Double door sheet steel (16SWG), powder horizontal / vertical enclosure dust and vermin proof applicable for IP-42/43 and Polycarbonate Enclosure applicable only for IP 65 incase of outdoor installations.
6.3	Type of Fixing	Wall mounted/ structure mounted type
6.4	Accessories mounting arrangement	DIN Rail or as suitable
3.0	Bus Bar	
3.1	Position	In the Bus Bar Chamber
3.2	Rating	3 Ph Neutral 415 V, 160 A
3.3	Type	Copper
3.4	Termination point	06 (six) Set (minimum )
4.0	Indicator	R,Y,B
5.0	Earthing Provision	Terminal Blocks will have to be provided for Earthing
1.0	Metering Arrangement	
1.1	Instantaneous Measuring parameter	i. Voltage, ii. Current
1.2	CT/ PT Make	KAPPA/ SERVO/AE/ KALPA or equivalent make ( <i>as per acceptability of KDS-KOPT</i> ).
1.3	Type of meter	Electronics
1.4	Display type of meter	LED/LCD



## 10.0 Kiosk :

The Array Junction Box, Solar String Inverter, Inverter LT Panel shall be installed in suitable locations in Metallic Kiosks. The kiosks must be of a suitable design, painted for avoiding rust, covered with a door and locking arrangement with good air circulation. The Kiosks must have security arrangement against theft, manhandling etc. Minimum clearance of the lower edge of the equipments from floor should be 1.0 m. Clearance from the front door of the Kiosk with any of the equipments / panel within the Kiosk shall be minimum 100 mm. The kiosk may be outdoor type or indoor type as per site. For outdoor type proper shed have to be provided.

The contractor shall submit details of Material and Design of the Kiosk with their Detailed Design Report to KDS, KoPT for according approval. Depending on the design and site condition, the contractor have to supply more than one KIOSK if required.

Necessary civil work as required to construct / fixing the Kiosk(s) shall be done by the contractor. If any civil construction is required for installing the whole arrangement, as and where required, it will be within the cost of contract value.

## 11.0 Export Import Energy Meter :

One number 3 Ø, 4 wire 415V AC **Export Import Energy Meter** of suitable current range, Accuracy Class-1.0 conforming with IS 13779 standards with latest amendments if any **is to be supplied and installed**. The Meter to be supplied must be tested and calibrated. The Export Import Energy meter is to be installed at the separate housing within an enclosure. The Export Import Energy meter is to be installed at a suitable location before Point of Common Coupling (PCC) near Grid Interfacing Panel. The meter must be put into a Polycarbonate enclose of IP 54 with transparent front cover.

## 12.0 Cables & Wirings

### a) Cables & Wirings for 95 kWp :

The Specification of wiring material of PV Power plant will include but not limited to the following:

Sl. No.	Item	Description
A	DC Cable	
1.1	Conductor	Tinned annealed stranded flexible copper according to IEC 60228 class 5
1.2	Standard	PV-1F / 2 PfG 1169/08.2007 / VDE Standard E PV 01:2008-02 /Equivalent
B	AC Cable	
2.1	Rated Voltage	1.1kV
2.2	Construction	
2.2.1	Conductor	Copper
2.2.2	Insulation	XLPE
2.2.3	Size	3.5 Core 150 sq mm
C	PVC Conduit tees, bends etc	
3.0	Standard	ASTM D 1785 uPVC
3.1	Ambient Temperature	0 °C to 50 °C
3.2	Type	UV stabilized , temperatures, Shock proof chemical resistant

### b) Cables & Wirings for 65 kWp :

The Specification of wiring material of PV Power plant will include but not limited to the following:

Sl. No.	Item	Description
A	DC Cable	
1.1	Conductor	Tinned annealed stranded flexible copper according to IEC 60228 class 5
1.2	Standard	PV-1F / 2 PfG 1169/08.2007 / VDE Standard E PV 01:2008-02 /Equivalent
B	AC Cable	
2.1	Rated Voltage	1.1kV
2.2	Construction	
2.2.1	Conductor	Copper
2.2.2	Insulation	XLPE
2.2.3	Size	3.5 Core 70 sq mm
C	PVC Conduit tees, bends etc	
3.0	Standard	ASTM D 1785 u PVC
3.1	Ambient Temperature	0 °C to 50 °C
3.2	Type	UV stabilized , temperatures, Shock proof chemical resistant

### 13. Guideline of Cabling

It shall be ensured that before dispatch, both ends of the cables are properly sealed to prevent ingress of moisture in the insulation. Direction of arrow must be marked on the cable drum.

#### Cable Laying

##### **Laying on wall or structure:**

Where cable shall be laid on wall or structure, the cable shall be laid by using MS Clamp of adequate strength and size. The maximum distance between clamps shall not be more than 400mm. The cable shall run as straight as possible. There shall be GI pipe protection of 1 meter from each floor level during vertical run. When the cable shall pass through wall/floor etc necessary pipe protection shall have to be given. Where there is existing pipe between the floors is in a good condition, the same may be utilized. Neatness must be maintained.

##### **Laying Underground:-**

- a) Cable shall be laid generally in accordance with I S:1255-1983. The average depth of trench for laying cable shall be as below:-
  - i) Directly on ground – 0.75 m.
  - ii) At road crossing - 1.00 m.

The trenches shall be excavated in reasonably straight line, and where there is a change in direction suitable curvature shall be provided. With 12D radius where D is the diameter of the cable. Where gradients and changes in depth are unavoidable, this shall be gradual, except where otherwise directed by the Engineer. The cable shall be laid on a cushion of sand, protected with bricks placed on both sides (along the length of the cable) and top (across the length of the cable). After laying of the cable the duct shall have to be filled up by sand. **G.I. pipe of ISI make of suitable diameter** shall have to be used where cable pass through walls, roads, drains, culverts, railway line etc. GI pipe also shall be used if depth of cable trench is less than 750mm and further excavation is not possible due to obstruction of existing material, which will be paid in actual. For one run of cable one GI pipe is to be considered. In other word two or more run of cable will not pass through one pipe. The cable trench shall be filled back with riddled soil obtained from excavation. This shall be done in layer and compacted. Cable route marker shall have to be provided at a maximum distance of 50 m.

- b) The Buried Cables must be run through GI conduit in case the cable is unarmored. The cable must be laid through PVC conduit or GI pipe on roof and indoor. In case of using metallic pipe as

conduit proper grounding of the conduit must be done. Conductor size of cables and wires is to be selected based on efficient design criteria. The cable/wire size to be chosen are to be designed such that maximum voltage drop at full power

From the PV Array to Inverter(s) should be less than 2%.

From Inverter to AC Grid interfacing panel should be less than 3%.

- c) Cable terminations are to be made with suitable cable lugs & sockets etc, crimped properly and cables will be provided with dry type compression glands wherever they enter junction boxes/ panels/ enclosures at the entry & exit point of the cubicles. The panels bottoms should be properly sealed to prevent entry of snakes/lizard etc. inside the panel. All cables are to be adequately supported.. Termination of cable shall have to be made by using suitable compression cable gland and sockets by crimping to the size of the cable. Only terminal cable joints will be accepted. Cable joint to join two cable ends will not be accepted.
- d) All cable/wires/control cable are to be marked or coded properly for easy identification. Cables and wires have to conform to the relevant standards suppliers to specify the specification. GI cable tray with perforation of suitable size must be used for laying of cable on the floor or Roof.

**14 a) Cable from Inverter Panel to Grid Interfacing Panel upto Point of Common Coupling for 95 kWp**

Supply laying fixing of **3 and ½ core 1.1 kV** Grade armoured, XLPE insulated , minimum **150 sqmm** copper cable comply with the design and guideline as per Technical Specification clause **No 12.0** from Inverter Panel to Grid interfacing Panel to Point of Common Coupling (Supply Mains) .

**b) Cable from Inverter Panel to Grid Interfacing Panel upto Point of Common Coupling for 65 kWp**

Supply laying fixing of **3 and ½ core 1.1 kV** Grade armoured, XLPE insulated , minimum **70 sqmm** copper cable comply with the design and guideline as per Technical Specification clause **No 12.0** from Inverter Panel to Grid interfacing Panel to Point of Common Coupling (Supply Mains) .

**15. Equipment and array structure earthing for 95 KWp:**

- i. Equipment grounding (Earthing) will connect all non-current carrying metal receptacles, electrical boxes, appliance frames, chassis and PV Panel mounting structures in one long run. The grounding wire should not be switched, fused or interrupted.
- ii. Earth bus bar of galvanized (Hot Dip) MS flat 25 mm x 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required
- iii. Connecting the equipments to earth bus bar including S & F GI (Hot Dip) wire of size as below on wall/floor with staples buried inside wall/floor as required and making connection to equipments with bolts, nuts, washers, cable lugs etc. as required and mending good damages Solid GI wire of 4 SWG or 20 mm x 3 mm galvanized (Hot Dip) MS flat as per suitability.
- iv. Array Structure must have multiple earth connectivity as may be required with 20 mm x 3 mm galvanized (Hot Dip) MS flat on wall/floor with GI saddles as required and connection to equipments incl. drilling holes, with bolts, nuts, washers etc.
- v. The complete earthing system will be electrically connected to provide return to earth from all equipment independent of mechanical connection.
- vi. Test point will be provided for earth pits.
- vii. Earthing system design should be as per the standard practices.
- viii. Type of Earthing – Pipe Earthing
- ix. The Code of Practice for Earthing will be IS 3043 (latest edition)
- x. Necessary provision will be made for bolted isolating joints of each earthing pit for periodic checking of earth resistance.
- xi. Minimum Ten (10) numbers of earth pit needs to be provided (System Earthing should be separately interconnected and Module Mounting Structure ( MMS) Earthing should

be separately interconnected). Minimum required gap shall be provided in between earth pits as per relevant standard.

- xii. Each pit will have to be connected to the equipments/MMS with individual MS flat strip.
- xiii. Earthing Pit Cover needs to be provided. Masonry enclosure with the earth pit of size not less than 600 mm X 600 mm X 500 mm (depth) complete with cemented brick work (1:6) of minimum 150 mm width duly plastered with cement mortar (inside) shall be provided. Hinged inspection covers of size not less than 300 mm X 300 mm with locking arrangement shall be provided. Suitable handle shall be provided on the cover by means of welding a rod on top of the cover for future maintenance.
- xiv Earthing system must be interconnected through GI Strip to arrive equi-potential bonding.

#### **16. Equipment and Array structure earthing for 65 KWp:**

- i. Equipment grounding (Earthing) will connect all non-current carrying metal receptacles, electrical boxes, appliance frames, chassis and PV Panel mounting structures in one long run. The grounding wire should not be switched, fused or interrupted.
- ii. Earth bus bar of galvanized (Hot Dip) MS flat 25 mm x 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required
- iii. Connecting the equipments to earth bus bar including S & F GI (Hot Dip) wire of size as below on wall/floor with staples buried inside wall/floor as required and making connection to equipments with bolts, nuts, washers, cable lugs etc. as required and mending good damages Solid GI wire of 4 SWG or 20 mm x 3 mm galvanized (Hot Dip) MS flat as per suitability.
- iv. Array Structure must have multiple earth connectivity as may be required with 20 mm x 3 mm galvanized (Hot Dip) MS flat on wall/floor with GI saddles as required and connection to equipments incl. drilling holes, with bolts, nuts, washers etc.
- v. The complete earthing system will be electrically connected to provide return to earth from all equipment independent of mechanical connection.
- vi. Test point will be provided for earth pits.
- vii. Earthing system design should be as per the standard practices.
- viii. Type of Earthing – Pipe Earthing
- ix. The Code of Practice for Earthing will be IS 3043 (latest edition)
- x. Necessary provision will be made for bolted isolating joints of each earthing pit for periodic checking of earth resistance.
- xi. Minimum ten (10) numbers of interconnected earth pit needs to be provided (System Earthing should be separately interconnected and Module Mounting Structure (MMS) Earthing should be separately interconnected). Minimum required gap shall be provided in between earth pits as per relevant standard.
- xii. Each pit will have to be connected to the equipments/MMS with individual MS flat strip.
- xiii. Earthing Pit Cover needs to be provided. Masonry enclosure with the earth pit of size not less than 600 mm X 600 mm X 500 mm (depth) complete with cemented brick work (1:6) of minimum 150 mm width duly plastered with cement mortar (inside) shall be provided. Hinged inspection covers of size not less than 300 mm X 300 mm with locking arrangement shall be provided. Suitable handle shall be provided on the cover by means of welding a rod on top of the cover for future maintenance.
- xiv. Earthing system must be interconnected through GI Strip to arrive equi-potential bonding.

## 17. List of Approved Makes

Item	Make
PV Module/PV Cell	Maker enlisted under MNRE website
Array Junction Box	Hensel/ Spelsberg /ABB /Ensto or any other equivalent make
Surge Protection Device	OBO Betterman / Dehn / Citel /ABB or any other equivalent make
Fuse with Fuse Holder	Cooper Bussman/ Ferazz Shamut or any other equivalent make
String Inverter	KACO/ABB/SMA/GE/Mitsubishi Electric/Siemens/Toshiba or any other reputed make
AC Armoured Cable	Havells/ Gloster/National/Nicco/Polycab
DC Cable	LAPP/Top Solar/Nexans/ Schneider/Polycab or any other equivalent make
MCB, MCCB	L&T/Havells/Legrand/ABB/Hager/Siemens
CT/PT	KAPPA/ SERVO/AE/ KALPA or any other equivalent make
Export Import meter	L&T / Genus / Secure/HPL or any other equivalent make
GI Pipe	TATA/Bansal/Jindal/Utkarsh

**N.B: Any other reputed make of any particular item will only be considered if none of the specified make for that particular item is available in the market for some reason or the other which is to be acceptable to competent authority**

## 18. Inspection & Testing

Inspection & testing of plant and equipment shall be carried out by Purchaser / 3<sup>rd</sup> party i.e WBGEDCL at the works of successful bidder during manufacturing and /or on final product to ensure conformity of the same with the acceptable criteria of technical specifications, approved drawings, manufacturing drawings and applicable national/international standard.

- (i) The Contractor would have to submit Quality Assurance Plan (s) [QAP] for acceptance by KoPT, within **10 (Ten) days** from the date of issue of order letter. The QAP shall, contain:
  - a. List of the tests and inspections proposed to be done to ensure quality.
  - b. List of the standards to be followed for execution of the work as well as tests and inspections.
  - c. One set of the standards to be followed for the execution of the work / test and inspection schedule shall have to be submitted, by the Contractor along with the QAP for reference, to KoPT.
- ii). The contractor must offer all facilities to Enginners of KoPT or his authorized representative / Third Party Inspection agency, **for inspection and testing** of the materials/ equipments, at contractor's own risk, cost and arrangement.
- iii). KoPT / Third Party Inspection Agency will carry out stage –wise **inspection & testing of the tendered job, as per Quality Assurance Plan (QAP)**, at the cost & arrangement of the contractor. Authorized representative of KoPT may witness inspection & testing process during inspection & testing by Third Party Inspection Agency.
- iv) **The scope of the Third Party Inspection Agency i.e WBGEDCL also includes:**
  - a. **Design appraisal** of the Solar Plant as stipulated in the Tender, including calculation checking, as per design parameters. The design parameters of offered new solar plant shall have to be submitted to KoPT, within 15 days from the date of receipt of order letter. KoPT/Consultant will give their comments/approval of the design calculation/drawing within 21 days from the date of submission of the drawing and document by the successful bidder.
  - b. **Approval of Quality Assurance Plan** (based on Technical Specification & Scope of Work), as submitted by the contractor. Based on the approved QAP (Quality Assurance Plan), Technical Specification & Scope of Work, inspection will be carried out by the 3<sup>rd</sup> Party Inspection Agency.
- v). The inspection & testing may take place at contractor's premises before dispatch or at KoPT's site after delivery, at the discretion of Chief Mechanical Engineer and as per QAP.

- vi. The Contractor shall submit an inspection /test offer compatible with the QAP. The Contractor shall offer inspection / tests offer to KoPT, at least 7 days in advance.
- vii. KoPT reserves the right to inspect, test and where necessary, reject the Goods after the Goods' arrival in KoPT's premises shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by KoPT or its representative prior to the Goods' shipment from the place of origin.
- viii. KoPT also reserves the right to subject any part / component / equipment for re-test and on written instruction from KoPT, the Contractor shall arrange for the re-test and the cost shall be borne by the Contractor. In case of unsatisfactory test results, the part / component / equipment shall be rejected and the Contractor shall be responsible for replacement of the item at his own cost and also bear the cost of the re-test.
- ix. The Engineer or his authorized representative, on giving 7 (seven) days notice in writing to the contractor, setting out any ground of objections, in respect of the work, shall be at liberty to reject all or any materials or workmanship in the subject of any of the said grounds of objection, which are not in accordance with the contract.
- x. In case of sub-letting to other contractors or manufacturers or suppliers by the contractor, the Engineer] will reserve the right as follows :-
  - a. that inspection and / or testing will be carried at the sub- contractor's works or
  - b. that inspection will be carried out at site or
  - c. that inspection will be waived subject to the contractor furnishing a certificate of compliance with specification by a competent authority recognized by national/ international institutes.
- xi. Notwithstanding the fact that the materials or part of equipment or the whole equipment has passed the inspection, the contractor is not relieved from his obligations to conform to the quality, workmanship, guaranteeing the performance etc., as per the contract.
- xii. Before any electrical system is put to use, the contractor shall carry out all the tests as per Indian Electricity Rules, 1956, with latest amendments if any, for electrical installations.
- xiii. Manufacturer's Test and guarantee certificate as applicable will have to be submitted for verification.

The successful bidder/bidders shall at no stage should attempt to contact the 3<sup>rd</sup> Party Inspecting agency or its officials regarding approval or inspections. All communications of the bidders will have to be with KoPT.

**BIDDERS ARE REQUESTED NOT TO QUOTE HERE.  
THE PRICE PART TO BE QUOTED ONLINE ONLY.**

**UNPRICED Bill Of Quantity (BOQ)**

**Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

**Work :** Design, Engineering, Manufacturing, Procurement & Supply, Installation, Testing and Commissioning of 95 kWp at Centenary Hospital roof mounted Grid connected Solar Photo Voltaic Power Plant including 5 years Comprehensive Warranty obligation at Kolkata Dock System, Kolkata Port Trust.

**SCHEDULE 1**

**UN –PRICED BOQ for 95 kWp roof mounted Grid Connected Solar PV Panel**

<b>Sl No</b>	<b>Description of item</b>	<b>Qty</b>	<b>Unit</b>	<b>Unit price including all taxes duties and other charges except Excise duty, service tax and related cess (in Rupees)</b>	<b>Total price including all taxes duties and other charges except Excise duty, service tax and related cess(in Rupees)</b>
1	Supply & delivery of PV Array of minimum capacity of 95 kWp Grid tied Solar Power at site as per Technical specification	1.00	Set		
2	Installation, Testing & Commissioning of the above PV Array of minimum capacity of 95 kWp	1.00	Set		
3	Supply & delivery of PV Module Mounting Structure and Structure Accessories for the 95 kWp grid connected Solar power at site	1.00	Set		
4	Installation Testing and Commissioning of the above PV Module Mounting Structure and Structure Accessories	1.00	Set		
5	Supply & delivery of PV Array Junction Boxes (AJB) for 95 kWp grid connected solar power at site as per Technical specification	1.00	Set		
6	Installation Testing and Commissioning of the above PV Array Junction Boxes (AJB) as per Technical specification	1.00	Set.		
7	Supply & delivery of Grid connected String Inverter at site for 95 kWp Grid Connected solar power as per Technical specification	1.00	Set.		
8	Installation Testing and Commissioning of the above Grid Connected String Inverter	1.00	Set.		
9	Supply & delivery of Web enable on line data logger and Remote Monitoring Unit including all Remote Monitoring Arrangement with Data Cable etc. at site as per Technical specification	1.00	Set.		
10	Installation Testing and Commissioning of Web enable on line data logger and Remote Monitoring Unit including all Remote Monitoring Arrangement with Data Cable from Data Logger to the Existing Location of the Modem as per site requirement	1.00	Set.		
11	Supply & delivery of Inverter LT Panel at site for 95 kWp Grid Connected Solar power as per technical specification	1.00	Set.		

12	Installation Testing and Commissioning of the above Inverter LT Panel as per site requirement	1.00	Set.		
13	Supply & delivery of Grid interfacing LT panel at site for 95 kWp Grid Connected Solar power as per technical specification	1.00	Set.		
14	Installation Testing and Commissioning of the above Grid interfacing LT panel as per site requirement	1.00	Set.		
15	Supply & delivery of Kiosk at site for housing AJB, String Inverter, Inverter LT panel and other accessories as per site requirement	1.00	Set.		
16	Installation of the above Kiosk as per site requirement	1.00	Set		
17	Supply and delivery of Export Import Energy Meter at site as per Technical specification	1.00	No		
18	Installation Testing and Commissioning of Export Import Energy Meter in the Electrical switch room of Centenary Hospital	1.00	No		
19	Supply and delivery of Cables and Wires as per Technical specification related to 95 kWp Grid Connected Solar power	1.00	Lot		
20	Laying and Termination of Cables and Wires for connecting the equipments and for necessary wiring as per technical specification.	1.00	Lot		
21	Supply & delivery of 3.5 Core 150 sq.mm. XLPE insulated armoured copper cable	100.00	Mtr		
22	Laying and Termination of the above XLPE insulated armoured copper cable from Inverter LT panel to Grid interfacing LT Panel along with any other place if required as per site requirement as per technical specification.	100.00	Mtr		
23	Supply, installation & commissioning of Earthing as per clause no. 15 of technical specification for 95 kWp	1	Lot		
24	Supply & delivery of plumbing materials and equipments for PV Array cleaning arrangement as mentioned in clause no. 25 of scope of work.	1	Lot		
25	Installation of the above required plumbing materials & equipments for PV Array cleaning facility	1	Lot		
26	Supply, delivery and installation of Fire Extinguishers as mentioned in clause no. 26 of scope of work .	1	Lot		
27	Supply & delivery of Spares, tools and measuring instruments as mentioned in scope of work as mentioned in clause no. 27 of scope of work. .	1	Lot		
28	Supply , delivery & installation of Project Information signage and schematic diagram as mentioned in clause no. 28 & 29 of scope of work..	1	Lot		

**Note:** (i) The quantity above may increase or decrease as per requirement, for which payment will be made as per actual.  
(ii) Evaluation will be done on the basis of the Grand total price inclusive of all taxes, duties and other charges except Excise duty, service tax and related cess (in Rupees) as per Bill of Quantities. Excise Duty and Service Tax along with cess as applicable would be payable extra, at actual.  
(iii) Excise duty, Service tax, related cess for the above work will be paid at the prevailing rate on submission of CENVAT- able document.  
(iv) KoPT does not enjoy any concession regarding Sales Tax and does not provide any 'C' or 'D' Form in this regard. Hence, full amount of WBST or CST or State Sales Tax or VAT, if any, will be applicable and is to be considered accordingly.  
(v) As KoPT is not a Registered body corporate, it is not liable to pay Service Tax under 'Reverse charge Mechanism' as per Service Tax Law. The service provider is liable to recover Service Tax as applicable.  
(vi) If Way Bill(s) is / are required to be issued with respect to delivery of materials in connection with the instant work, the same would be issued by KoPT, on written request from the contractor. However, the contractor should plan delivery of materials so as to keep the no. of Way Bill(s) required to a minimum.

\_\_\_\_\_  
(Office Rubber Stamp of the  
Tenderer Firm)

\_\_\_\_\_  
Signature of the Tenderer

Dated, the \_\_\_\_\_  
Signature of the Witness



**BIDDERS ARE REQUESTED NOT TO QUOTE HERE.  
THE PRICE PART TO BE QUOTED ONLINE ONLY.**

**UNPRICED Bill Of Quantity (BOQ)**

**Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

**Work :** Design, Engineering, Manufacturing, Procurement & Supply, Installation, Testing and Commissioning of 65 kWp at Subhas Bhawan roof mounted Grid connected Solar Photo Voltaic Power Plant including 5 years Comprehensive Warranty obligation of Kolkata Dock System, Kolkata Port Trust.

**SCHEDULE 2**

**UN –PRICED BOQ for 65 kWp roof mounted Grid Connected Solar PV Panel**

Sl No	Description of item	Qty	Unit	Unit price including all taxes duties and other charges except Excise duty, service tax and related cess (in Rupees)	Total price including all taxes duties and other charges except Excise duty, service tax and related cess(in Rupees)
1	Supply & delivery of PV Array of minimum capacity of 65 kWp Grid tied Solar Power at site as per Technical specification	1.00	Set		
2	Installation, Testing & Commissioning of the above PV Array of minimum capacity of 65 kWp	1.00	Set		
3	Supply & delivery of PV Module Mounting Structure and Structure Accessories for the 65 KWp grid connected Solar power at site	1.00	Set		
4	Installation Testing and Commissioning of the above PV Module Mounting Structure and Structure Accessories	1.00	Set		
5	Supply & delivery of PV Array Junction Boxes (AJB) for 65 kWp grid connected solar power at site as per Technical specification	1.00	Set		
6	Installation Testing and Commissioning of the above PV Array Junction Boxes (AJB) as per Technical specification	1.00	Set.		
7	Supply & delivery of Grid connected String Inverter at site for 65 kWp Grid Connected solar power as per Technical specification	1.00	Set.		
8	Installation Testing and Commissioning of the above Grid Connected String Inverter	1.00	Set.		
9	Supply & delivery of Web enable on line data logger and Remote Monitoring Unit including all Remote Monitoring Arrangement with Data Cable etc at site as per Technical specification	1.00	Set.		
10	Installation Testing and Commissioning of Web enable on line data logger and Remote Monitoring Unit including all Remote Monitoring Arrangement with Data Cable from Data Logger to the Existing Location of the Modem as per site requirement	1.00	Set.		
11	Supply & delivery of Inverter LT Panel at site for 65 kWp Grid Connected Solar power as per technical specification	1.00	Set.		
12	Installation Testing and Commissioning of the above Inverter LT Panel as per site requirement	1.00	Set.		
13	Supply & delivery of Grid interfacing LT panel at site for 65 kWp Grid Connected Solar power as per technical specification	1.00	Set.		
14	Installation Testing and Commissioning of the above Grid interfacing LT panel as per site requirement	1.00	Set.		
15	Supply & delivery of Kiosk at site for housing AJB, String Inverter, Inverter LT panel and other accessories as per site requirement	1.00	Set.		

16	Installation of the above Kiosk as per site requirement	1.00	Set		
17	Supply and delivery of Export Import Energy Meter at site as per Technical specification	1.00	No		
18	Installation Testing and Commissioning of Export Import Energy Meter in the Electrical switch room of Subhas Bhawan	1.00	No		
19	Supply and delivery of Cables and Wires as per Technical specification related to 65 kWp Grid Connected Solar power	1.00	Lot		
20	Laying and Termination of Cables and Wires for connecting the equipments and for necessary wiring as per technical specification.	1.00	Lot		
21	Supply & delivery of 3.5 Core 70 sqmm XLPE insulated armoured copper cable	100.00	Mtr		
22	Laying and Termination of the above XLPE insulated armoured copper cable from Inverter to and from Inverter LT panel to Grid interfacing LT Panel along with any other place if required as per site requirement as per technical specification.	100.00	Mtr		
23	Supply, installation & commissioning of Earthing as per clause no. 16 of Technical specification for 65 kWp	1	Lot		
24	Supply & delivery of plumbing materials and equipments for PV Array cleaning arrangement as mentioned in clause no. 25 of scope of work..	1	Lot		
25	Installation of the above required plumbing materials & equipments for PV Array cleaning facility	1	Lot		
26	Supply, delivery and installation of Fire Extinguishers as mentioned in clause no. 26 of scope of work..	1	Lot		
27	Supply & delivery of Spares, tools and measuring instruments as mentioned in clause no. 27 of scope of work..	1	Lot		
28	Supply, delivery & installation of Project Information signage and schematic diagram as mentioned in clause no. 28 & 29 of scope of work.	1	Lot		

**Note: (i)** The quantity above may increase or decrease as per requirement, for which payment will be made as per actual.

(ii) Evaluation will be done on the basis of the Grand total price inclusive of all taxes, duties and other charges except Excise duty, service tax and related cess (in Rupees) as per Bill of Quantities. Excise Duty and Service Tax along with cess as applicable would be payable extra, at actual.

(iii) Excise duty, Service tax, related cess for the above work will be paid at the prevailing rate on submission of CENVAT- able document.

(iv) KoPT does not enjoy any concession regarding Sales Tax and does not provide any 'C' or 'D' Form in this regard. Hence, full amount of WBST or CST or State Sales Tax or VAT, if any, will be applicable and is to be considered accordingly.

(v) As KoPT is not a Registered body corporate, it is not liable to pay Service Tax under 'Reverse charge Mechanism' as per Service Tax Law. The service provider is liable to recover Service Tax as applicable.

(vi) If Way Bill(s) is / are required to be issued with respect to delivery of materials in connection with the instant work, the same would be issued by KoPT, on written request from the contractor. However, the contractor should plan delivery of materials so as to keep the no. of Way Bill(s) required to a minimum.

\_\_\_\_\_  
(Office Rubber Stamp of the  
Tenderer Firm)

Signature of the Tenderer

Dated, the \_\_\_\_\_  
Signature of the Witness

**Profile of Tenderer / FORM –D****Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

This is to confirm that we agree to abide by all the terms and conditions of this NIT No. **KoPT/KDS/Mech/SE-I/ADV/415 Dated: 18.01.2017**, those mentioned in the “General Conditions of Contract” enclosed with this Tender Document as well as decisions taken in the pre-bid techno-commercial conference, if any.

Our relevant particulars are furnished hereunder:

<b>Particulars</b>	<b>To be filled in by the Tenderer or to be mentioned as “none ”</b>
Name of the Tenderer	
Name of the owner(s) of the Tenderer	
Full postal address of the Tenderer including Police Station.	
Telephone No. of the Tenderer	
Fax No. of the Tenderer	
E-mail ID of the Tenderer	
Name of the contact person of the Tenderer	
Mobile/land line Telephone No. of the contact person of the Tenderer.	
Name of the partners/directors/ members, as applicable, in this particular contract	
Name of their authorized representative(s) who would handle the contract on their behalf.	

Signature of the Tenderer

Date .....

Office seal of the Tenderer.

**E Tender No. KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

**[DOCUMENT TO BE DOWNLOADED, FILLED IN UNDER BIDDER'S LETTERHEAD, SIGNED, SCANNED AND UPLOADED]**

**Covering Letter**

Ref. No.....

Date

The Chief Mechanical Engineer,  
Kolkata Port Trust,  
Mechanical and Electrical Engineering Department,  
8, Garden Reach Road,  
Kolkata – 700 043

Dear Sir,

1. We, .....(Name of Tenderer) having examined the Tender Document and understood its contents, hereby submit our Tender for ..... ( NIT No. KoPT/KDS/Mech/DC-II/ADV/..... dated. ....) And confirm that we unconditionally accept all the terms and conditions of the same including the Addendum (if issued).

2. All information and proofs provided in the Tender including Addendum and in the Appendices are true and correct and all documents accompanying such tender are true copies of their respective originals.

3. We shall make available to Kolkata Port Trust (hereinafter referred to as KoPT) any additional information it may find necessary or require to supplement or authenticate the Tender.

4. We, .....(Name of Tenderer) hereby undertake that we will abide by the decisions of KoPT in the matter of examination, evaluation and selection of Successful Tenderer and shall refrain from challenging or questioning any decision taken by KoPT in this regard. We further acknowledge the right of KoPT to reject our tender without assigning any reason or otherwise and hereby waive our right to challenge the same on any account whatsoever.

5. We also certify the following

(a) We have not been debarred by the Central/State Govt. or any entity controlled by them or any other legal authority from participating in any Tender/Contract/Agreement of whatever kind.

(b) We have also not been expelled from any project or contract nor have had any contract terminated for breach in the last 3 years ending on the date of opening of the techno commercial part of the tender.

2. We declare that:

(a) We have examined and have no reservations to the Tender Document, including the Addendum, if any, issued by KoPT thereon.

(b) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any corrupt, fraudulent or coercive practices to influence the evaluation process of the tender.

3. We understand that KoPT reserves the right to accept or reject any tender and to annul the tendering process and reject all tenders at any time without any liability or any obligation for such acceptance, rejection or annulment without assigning any reason thereof.

Yours faithfully,

Signature of Tenderer.....

Name: .....

Designation: .....

Date : .....

Seal of the tenderer.....

**Bidders Letterhead**

**MODE OF TRANSACTION STATEMENT OF MATERIALS AND EQUIPMENTS**

**E Tender No : KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

**Work :** Design, Engineering, Manufacturing, Procurement & Supply, Installation, Testing and Commissioning of cumulative 160 kWp (95 kWp at Centenary Hospital & 65 kWp at Subhas Bhawan) roof mounted Grid connected Solar Photo Voltaic Power Plant including 5 years Comprehensive Warranty obligation at Kolkata Dock System, Kolkata Port Trust.

Sl. No.	Item Description	Quantity	Unit	Mode of Transaction (Direct or Bought Out)
0	1	2	3	4
1	Supply & delivery of PV Array of minimum capacity of 95 & 65 kWp Grid tied Solar Power at site as per Technical specification	1+1	Set	
2	Supply & delivery of PV Module Mounting Structure and Structure Accessories for the 95 & 65 kWp grid connected Solar power at site	1+1	Set	
3	Supply & delivery of PV Array Junction Boxes (AJB) for 95 & 65 kWp grid connected solar power at site as per Technical specification	1+1	Set	
4	Supply & delivery of Grid connected String Inverter at site for 95 & 65 kWp Grid Connected solar power as per Technical specification	1+1	Set.	
5	Supply & delivery of Web enable on line data logger and Remote Monitoring Unit including all Remote Monitoring Arrangement with Data Cable etc. at site as per Technical specification	1+1	Set.	
6	Supply & delivery of Inverter LT Panel at site for 95 & 65 kWp Grid Connected Solar power as per technical specification	1+1	Set.	
7	Supply & delivery of Grid interfacing LT panel at site for 95 & 65 kWp Grid Connected Solar power as per technical specification	1+1	Set.	
8	Supply & delivery of Kiosk at site for housing AJB, String Inverter, Inverter LT panel and other accessories as per site requirement	1+1	Set.	
9	Supply and delivery of Export Import Energy Meter at site as per Technical specification	1+1	No	
10	Supply and delivery of Cables and Wires as per Technical specification related to 95 & 65 kWp Grid Connected Solar power	1+1	Lot	
11	Supply & delivery of 3.5 Core 150 sqmm. XLPE insulated armoured copper cable	100.00	Mtr	
12	Supply & delivery of 3.5 Core 70 sqmm. XLPE insulated armoured copper cable	100.00	Mtr	
13	Supply & delivery of plumbing materials and equipments, Fire Extinguishers, Spares, tools and measuring instruments, Project Information signage for 95kWp & 65kWp	1+1	Lot	

**Signed and Upload**

**(Bidders Letterhead)**

**Statement of similar type of order orders executed as on date of issuance of the NieT**  
**[Applicability up to the extent of meeting Technical QR].**

E Tender No : **KoPT/Kolkata Dock System/CME/36/16-17/ET/486**

Bidder's Name & Address:

To  
The Chief Mechanical Engineer  
Kolkata Port Trust  
Mechanical & Electrical Engineering Department  
8, Garden Reach Road  
Kolkata-700 043

Sl No	Name of the Installed Plants/ Project	Financial year	Order No. and date	Name of Owner / order issuing authority	Cumulative capacity of the order ( Considering similar type of work ) (scanned copy of certificate to be Submitted in non- statutory cover) (kWp)	Ordered Value/Time (extended time, if any) of Completion	Cumulative capacity installed ( Considering similar type of work ) (kWp)	Completion report of installed systems (scanned copy of certificate to be Submitted in non- statutory cover )	Remarks

- Continuation sheets of like size and format may be used and annexed to this format if required.

Date : (Printed Name).....

Place : (Designation).....

**Signed and Upload**

**DOCUMENTS TO BE UPLOADED ALONG WITH PART – I**  
**Scanned copy of the following documents to be uploaded:**

- i) VAT registration certificate.
- ii) Valid Trade Licence.
- iii) Valid Professional Tax Clearance Certificate / Up to date tax payment challan.
- iv) Proof of possession of valid Employees' Provident Fund (EPF) Account.
- v) Proof of being registered with Employees' State Insurance Corporation (ESIC).
- vi) Details of the firm as per Schedule-O (in Volume-I) of the tender document.
- vii) Credentials in the form of copies of Letters of Award of Works along with corresponding successful Completion Certificates from owners to justify that the intending bidder satisfies the earlier mentioned pre-qualification criteria.
- viii) Copies of audited balance sheet and Profit and Loss account / Trading account for the last 3 (three) financial years (**i.e. 2013 – 2014 , 2014 – 2015, 2015-16**).
- ix) Addendum / Corrigendum / Notice / Extension Notice issued and drawings (if any) duly signed by the Bidder under office seal.  
The bidder will have to produce the original documents or any additional documents, if asked for, to satisfy the Authorities.
- x) EMD & Cost of Tender documents/NSIC Registration certificate.
- xi) Service Tax Registration Certificate.
- xii) Duly signed full Techno Commercial Part and unquoted Price Bid and the G.C.C. duly signed and stamped at each page.
- xiii) Copy of PAN Card.
- xiv) Form of Tender, duly filled up and signed.
- xv) Electrical Supervisory certificate of appropriate class of the person who will carry out the electrical work.



**KOLKATA PORT TRUST**  
**SCHEDULE – “O”**

Tenderers must fill in the undernoted column :

Sl. No.	Full particulars of similar works carried out by Tenderer	Value of work	Contract for completion time	Actual completion time	Name and Addresses of Authorities for whom work was carried out	Name and Addresses to whom reference can be made

## **SCHEDULE – “O”**

### **Sheet – 2**

The Tenderers are also requested to furnish the following particulars :

#### **A. In case of a Limited Company:**

1. Name of the Company :
2. Address of its present registered office :
3. Date of its incorporation :
4. Full ;name and address of each  
of its Directors – any special particulars  
as to Directors if desired to be stated :
5. Name, address and other necessary  
particulars of Managing Agents, if any,  
appointed by the Company :
6. Copies of Memorandum and Articles of  
Association(with the latest amendments,  
if any) :
7. Copies of audited Balance Sheets of the  
Company for the last three years :

**SCHEDULE – “O”**

**SHEET – 3**

**B. In case of a Firm :**

1. Name and address of the firm :
2. When business started :
3. If registered, a certified copy of Certificate of Registration :
4. A certified copy of the Deed of Partnership :
5. Full name and address of each of the Partners and the interest of each partner in the Partnership. Any special particulars as to Partners if desired to be stated :
6. Whether the firm pays income tax over Rs.10, 000/- per year :

**SCHEDULE – “O”**

**SHEET – 4**

**C. In case of an Individual :**

1. Full name and address of the Tenderer; any special particulars of the Tenderer if desired to be stated :
2. Name of the father of the Tenderer :
3. Whether the Tenderer carried on business in his own name or any other name :
4. When business was started any by whom :
5. Whether any other person is interested in the business directly or indirectly, if so, name, address, etc. of such persons and the nature of such interest. :
6. Whether the Tenderer pays income tax over Rs.10,000/- per year :

DATED, the.....

Signature of Tenderer

**Tender No. KoPT/Kolkata Dock System/CME/0/15-16/ET/000**

**KOLKATA PORT TRUST**



**MECHANICAL ENGINEERING DEPARTMENT  
8, Garden Reach Road, Kolkata – 700 043.**

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**GENERAL CONDITIONS OF CONTRACT**

**FORMS AND AGREEMENTS**

**SANCTIONED BY TRUSTEES UNDER RESOLUTION NO. 92  
OF  
THE 6<sup>TH</sup> MEETING HELD ON 27<sup>TH</sup> MAY, 1993.**

**(Copy of Booklet Published on May, 1993)**

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## 1. DEFINITIONS

- 1.0. In the contract, as here-in-after defined, the following words and expressions shall have the meaning here-in assigned to them, except where the context otherwise required.
- 1.1. "**Employer**" or "Board" or "Trustees" means the Board of Trustees for the Port of Kolkata, a body corporate under Section 3 of the Major Port Trust Act, 1963, including their successors, representatives and assigns.
- 1.2. "**Chairman**" means the Chairman of the Board and includes the person appointed to act in his place under Sections 14 and 14A of the Major Port Trusts Act, 1963.
- 1.3. "**Contractor**" means the person or persons; Firm or Company whose tender /offer has been accepted by the Trustees and includes the Contractor's representative's heirs, successor and assigns, if any permitted by the Board / Chairman.
- 1.4. "**Engineer**" means the Board's official who has invited the tender on its behalf and includes the Chief Engineer, the Chief Mechanical Engineer, the Senior Executive Engineer the Chief Hydraulic Engineer, the Deputy Chief Engineer, the Deputy Chief Mechanical Engineer, the Senior Resident Engineer, The Manager (Infrastructure & Civic Facilities), the Manager (Plant & Equipment) the Deputy Manager ( Infrastructure & Civic Facilities) and the Deputy Manager (Plant & Equipment), or other official as may be appointed from time to time by the employer, with written notification to the Contractor, to act as Engineer for the purpose of the contract, in place of the "Engineer" so designated.
- 1.5. "**Engineer's Representative**" means any subordinate Engineer or Assistant to the Engineer or any other official appointed from time to time by the Engineer to perform the duties set forth in Clauses 2.4 to 2.6 hereof.
- 1.6. "**Work**" means the Work to be executed in accordance with the Contract and includes authorized "Extra Works" and "Excess Works" and Temporary Works.
- 1.7. "**Temporary Works**" means all temporary works of every kind required in or about the execution, completion or maintenance of the works and includes (without thereby limiting the foregoing definitions) all temporary erections, scaffolding, ladders, timbering, soaking vats, site offices, cement and other god owns, platforms and bins for stacking building materials, gantries, temporary tracks and roads, temporary culverts and mixing platforms.
- 1.8. "**Extra Works**" means those works required by the Engineer for completion of the Contract which were not specifically and separately included in the schedule of items of works (i.e., Bills of Quantities) of the tender. "Excess Works" means the required quantities of work in excess of the provision made against any item of the Bill of Quantities.
- 1.9. "**Specifications**" means the relevant and appropriate Bureau of Indian Standard's Specifications (latest revisions) for materials and workmanship unless stated otherwise in the Tender.
- 1.10. "**Drawings**" means the drawings referred to in the Tender and specification and any modification of such drawings approved in writing by the Engineer and such other drawings as may from time to time be furnished or approved in writing by the Engineer.
- 1.11. "**Contract**" means and includes the General and Special Conditions of Contract, Specifications, Drawings, priced Bill of Quantities, the Tender/ Offer, the letter of acceptance of the Tender/Offer, the Contract Agreement if separately entered into and the Schedule of Rates and Price, if any, adopted by the Trustees at their discretion.
- 1.12. "**Constructional Plant**" means all appliances or things of whatsoever nature required in or about the execution, completion or maintenance of the works or temporary works and includes (without thereby limiting the foregoing definition) all machinery and tools but does not include materials or other things intended to form or forming part of the permanent work.
- 1.13. "**Site**" means the land and other places, on, under, in or through which the works are to be executed or carried out and any other lands or places provided by the Trustees for the purpose of the Contract.
- 1.14. "**Contract Price**" means the sum named in the letter of acceptance of the Tender/ Offer of the Contractor, subject to such additions thereto and deduction there from as may be made by the Engineer under the provisions here-in-after contained.
- 1.15. "**Month**" means English Calendar Month.
- 1.16. "**Excepted risks**" are riot in so far as it is uninsurable, war, invasion, act of foreign enemies, hostilities (whether war be declared or not) Civil War, rebellion, revolution, insurrection or military or usurped power or use or occupation by the Trustees of any portion of the works in respect of which a certificate of completion has been issued (all of which are herein collectively referred to as the excepted risks)
- 1.17. Word importing the **singular** only, also includes the **plural** and vice-versa where the context so required.
- 1.18. The **headings and marginal notes** in these General Conditions of Contract shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
- 1.19. Unless otherwise stipulated the word "Cost" shall be deemed to include overhead costs of the contractor, whether on or off the site.

## **2. DUTIES & POWERS OF ENGINEER & ENGINEER'S REPRESENTATIVE**

- 2.1. The Contractor shall execute, complete and maintain the works in terms of the contract to the entire satisfaction of the Engineer and shall comply with the Engineer's direction on any matter whatsoever.
- 2.2. The Contractor shall take instructions from the Engineer and subject to limitation of Clause 2.5 herein, from the Engineer's Representative
- 2.3. The Engineer shall have full power and authority
  - (a) to supply to the contractor from time to time during the progress of the works such further drawings and instructions as shall be necessary for the purpose of proper and adequate execution and maintenance of the works and the contractor shall carry out and be bound by the same.
  - (b) to alter or modify the specification of any material and workmanship and to inspect the work at any time.
  - (c) to order for any variation, alternation and modification of the work and for extra works.
  - (d) to issue certificates as per contract
  - (e) to settle the claims & disputes of the Contractor and Trustees, as the first referee.
  - (f) to grant extension of completion time.
- 2.4. The Engineer's representative shall:
  - (a) watch and supervise the works,
  - (b) test and examine any material to be used or workmanship employed in connection with the work.
  - (c) have power to disapprove any material and workmanship not in accordance with the contract and the contractor shall comply with his direction in this regard.
  - (d) take measurements of work done by the contractor for the purpose of payment or otherwise.
  - (e) order demolition of defectively done work for its reconstruction all by the Contractor at his own expense,
  - (f) have powers to issue alteration order not implying modification design and extension of completion time of the work and
  - (g) have such other powers and authorities vested in the Engineer, which have been delegated to him in writing by the Engineer under intimation to the Contractor.
- 2.5. Provided always that the Engineer's Representative shall have no power:
  - (a) to order any work involving delay or any extra payment by the Trustees,
  - (b) to make variation of or in the works and
  - (c) to relieve the Contractor of any of his duties or obligations under the Contract.
- 2.6. Provided also as follows:
  - (a) Failure of Engineer's Representative to disapprove any work or materials shall not prejudice the power of the Engineer thereafter to disapprove such work or materials and to order the pulling down, removal, bracing-up thereof and re-construction at the contractor's cost and the contractor shall have no claim to compensation for the loss sustained by him.
  - (b) If the contractor shall be dissatisfied by reason of any decision of the Engineer's Representative, he shall be entitled to refer the matter to the Engineer who shall thereupon confirm, reverse or vary such decision.
  - (c) Any written instructions or written approval given by the Engineer's Representative to the contractor, within the terms of delegation of power and authority vested in Engineer to his Representative in writing shall bind the contractor and the Trustees as though it had been given by the Engineer, who may from time to time make such delegation. Contractor and the Trustees as though it had been given by the Engineer, who may from time to time, make such delegation.

## **3. THE TENDER / OFFER AND ITS PRE-REQUISITES**

- 3.1. The Contractor shall, before making out and submitting his tender / offer be deemed to have inspected and examined the site, fully consider all factors, risks and contingencies, which will have direct and in direct impact on his expenses and profit from the work and shall be specifically deemed to have taken the following aspects into consideration:
  - (a) The form and nature of the site and its surroundings including their sub-surface, hydrological, tidal and climate conditions, the means of access to the site and all other local conditions including the likely charges and costs for temporary way-leave, if any, required for the work.
  - (b) The drawings, specifications, the nature and extent of work to be executed and the quality, quantity and availability of the required materials and labour for the work and the need to execute the work to the entire satisfaction of the Engineer, and also by complying with the General and Special Conditions of Contract.
  - (c) The accommodation required for the workmen and site office, mobilization / demobilization and storage of all plant, equipment and Construction materials.
  - (d) The sources and means of procurement of water for drinking, washing and execution of work, and source and availability of electrical power, all of Contractor's cost.

- (e) Payment of taxes and duties and compliance of all applicable statutes, ordinances and law together with the rules made there under, the rules, regulations and bye-laws of public bodies or any local or other authority by the Contractor, keeping the Trustees indemnified against penalties and liabilities of every kind arising from the Contractor's failure in such compliance.
- (f) Payment of all kinds of stamp-duty for exacting the agreement or for any legal instrument including Bank Guarantees and Indemnity Bonds.
- 3.2. The Contractor's tender shall be in ink on the Tender Forms supplied by the Trustees, unless stipulated otherwise in the Notice-Inviting the Tender and shall be faultless in figures and free from erasing. Corrections, if any, shall only be made by scoring out and initialing of the revised figure.
- 3.3. If required by the Engineer or the Trustees, the Contractors in their tender or subsequently, shall disclose the names of their owners/partners/Share Holders at the required points of time. The failure in this regard shall be treated as a breach and a contract, if entered into, shall be liable to be cancelled.
- 3.4 (a) Unless other wise stipulated in the Notice Inviting the Tender/Offer, every tender must be submitted with Earnest Money of the amount calculated as per the following scale.

Estimated Value	Amount of Earnest Money	
	For works contract.	For contract of supplying materials of equipment only
Up to Rs.1,00,000/-	5% of the estimated value of work	1% of the estimated value of work.
Over Rs. 1,00,000/-	2% of the estimated value of work subject to a maximum of Rs.20,000/- and minimum of Rs. 5,000/-	1/2% of the estimated value of work subject to a maximum of Rs. 10,000/- and minimum of Rs. 1,000/-

(b) Earnest Money shall be deposited with Trustees' treasurer in cash or by Banker's Cheque of any Kolkata Branch of a Nationalized Bank of India drawn in favour of Kolkata Port Trust or in the form of an "Kolkata Port Trust" and payable at Kolkata / Haldia Holding as the case may be and the receipt granted there for be kept attached to the Tender / offer in the Sealed Cover.

(c) Earnest Money of un-accepted tender shall be refunded without any interest through A/c. Payee Cheque drawn on a Nationalized Bank of Kolkata / Haldia.

(d) The enlisted (registered) Contractors of the Trustees, who have deposited fixed Security with the Trustees FA & CAO / Manager (Finance) according to his Class of Registration, shall be exempt from depositing the Earnest Money, as per the following scale:

Class of Registration	Amount of Fixed Security	Financial limit of each tender
A	Rs. 10,000/-	Any tender priced up to Rs. 2,00,000/-
B	Rs. 5,000/-	Any tender priced up to Rs.1,00,000/-
C	Rs. 2,500/-	Any tender priced up to Rs.50,000/-

- (a)
- (i) Tender submitted without requisite Earnest Money may be liable to rejection.
- (ii) If before expiry of the validity period of his Tender / offer, the tender amends his quoted rates or tender/ offer making them unacceptable to the Trustees and / or withdraws his tender / offer, the Earnest Money deposited shall be liable to forfeiture of the option of the Trustees.
- (b) The Earnest Money of accepted Tender / offer shall be retained by the Trustees as part of the Security Deposit, for which a separate Treasury Receipt shall be issued to the Contractor after cancellation of the previous Receipt of Earnest Money.
- (c) Balance security for works contract shall be recovered by deduction from all progressive Bill (including final Bill, if necessary) @ 10% of the gross value of work in each such bill, so that the total recovery may not exceed the quantum computed as per the under noted percentages of the total value of work actually done up to the stage of completion.



Value of Work	% of Security Deposit for works contract	% of Security Deposit for Contract of supplying materials and equipments only
For works up to Rs. 10,00,000/-	10% (Ten percent )	1% ( One percent )
For works costing more than Rs.10,00,000/- and up to Rs.20,00,000/-	10% on first Rs. 10,00,000/- + 7 1/2% on the balance	1% on first Rs.10,0,000/-+1/2% on the balance
For works costing more than Rs.20,00,000/-	10% on first Rs. 10,00,000/- + 7 1/2% on next Rs.10,00,000/-+ 5% on the balance	1% on first Rs.10,0,000/-+1/2% on next Rs.10,00,000/-+ 1/4% on the balance

- (d) Balance Security for Contract of supplying materials and equipment computed in terms of the percentages given above, shall have to be deposited with the trustees' Treasurer in advance and within 30 days from the date of placement of supply order, either in cash or by A/c. Payee Draft of a Nationalized Bank of India drawn in favour of Kolkata Port Trust and payable at Kolkata / Haldia, as the case may be.
- (e) No interest shall be paid by the trustees to the Tenderer / Contractor on the amount of Earnest Money / Security Deposit held by the Trustees, at any stage.

### 3.4.

- (i) The Security Deposit shall be refunded to the Contractor in terms of Clause 9.3 hereinafter and subject to deduction, if any, under the provision of Sub-Clause 3.5(ii) herein below. If, however, the contract provides for any maintenance period, 50% of the Security Deposit may be refunded against any of the Treasury Receipt for that amount on expiry of half of the maintenance period and the balance deposit on the said maintenance period and after the Engineer has certified the final completion of work in form G.C.2 and the Contractor has submitted his "No Claim" Certificate in form G.C.3.
- (ii) The Security Deposit/Earnest Money may be liable to forfeiture at the option of the Trustees, if the Contractor fails to carry out the work or to perform/observe any of the conditions of the contract. The Trustees shall also be at liberty to deduct any of their dues from the Security Deposit, fixed Security, Earnest Money or from any sum due or to become due to the Contractor under any other contract.

3.5. If stipulated in the contract as a Special Condition, the Contractor shall have to submit to the Engineer a performance Bond in the form of an irrevocable guarantee from Kolkata/Haldia Branch, as the case may be, of any Nationalized Bank of India in the proforma annexed hereto and for the sum and period as mentioned in the letter of acceptance of the Tender/Offer, within 15 days from the date of such letter, failing which the contract shall be liable to be terminated and the Earnest Money are liable to forfeiture; all at discretion of the Engineer. The cost of obtaining this or any other Bank Guarantee and/or the revalidation thereof, wherever required, has to be borne by the Contractor and it shall be his sole responsibility to arrange for timely revalidation of such bank guarantee, failing which and for non-fulfillment of any contractual obligation by the Contractor, the Engineer and/or the Trustees shall be at liberty to raise claim against the Guarantee and/or enforce the same unilaterally.

## 4. THE CONTRACT & GENERAL OBLIGATIONS OF CONTRACTOR

### 4.1.

- (a) The contract documents shall be drawn-up in English language.
- (b) The contract shall be governed by all relevant Indian Acts as applicable only within the jurisdiction of the High Court at Kolkata, India, including the following Act:
- The Indian Contract Act, 1872.
  - The Major Port Trust, Act, 1963.
  - The Workmen's Compensation Act, 1923.
  - The Minimum Wages Act, 1948.
  - The Contract Labour (Regulation & Abolition) Act, 1970.
  - The Dock Workers' Act, 1948.
  - The Indian Arbitration Act (1940) (in the case of a definite arbitration Agreement only).

- 4.2. After acceptance of his Tender / Offer and when called upon to do so by the Engineer or his representative, the Contractor shall, at his own expense, enter into and execute a Contract Agreement to be prepared by him in the form annexed hereto. Until such Contract Agreement is executed the other documents referred to in the definition of the term "Contract" here-in-before shall collectively be the Contract.
- 4.3. Several documents forming the contract are to be taken as mutually explanatory of one another. Should there be any discrepancy, ambiguity, omission or error in the various contract documents, the Engineer shall have the power to correct the same and his decision shall be final and binding on the parties to the Contract.
- 4.4. Two copies of the Drawing referred to in the General and Special Conditions of Contract and in the Bill of Quantities, shall be furnished by the Engineer to the Contractors free of cost for his use on the work, but these shall remain the property of the Trustees and hence, the Contractor shall return them to the Engineer or his Representative on completion of the work. if not torn or mutilated on being regularly used at site.

- 4.5. The Contractor shall prove and make at his own expense any working or progress drawings required by him or necessary for the proper execution of the works and shall, when required, furnish copies of the same free of cost to the Engineer for his information and/ or approval, without meaning thereby the shifting of Contractor's responsibility on the engineer in any way whatsoever.
- 4.6. The Contractor shall not directly or indirectly transfer, assign or sublet the Contract or any part thereof without the written permission of the engineer. Even if such permission be granted, the Contractor shall remain responsible (a) for the acts, defaults and neglect of any sub-contractor, his agents servants or workmen as fully as if these were the acts, defaults or neglects of the Contractor himself or his agents, servants or workmen, and (b) for his full and entire responsibility of the contract and for active superintendence of the works by him despite being sublet, provided always that the provision of labourers on a "piece rate" basis shall not be deemed to be subletting under this clause.
- 4.7. Unless otherwise specified, the Contractor shall be deemed to have included in his Tender / Offer all his cost for supplying and providing all constructional plant, temporary work, materials both for temporary and permanent works, labour including supervision thereof transporting to and from the site and in and about the work, including loading, unloading, fencing, watching, lighting, payment of fees, taxes and duties to the appropriate authorities and other things of every kind required for the construction, erection, completion and maintenance of the work.
- 4.8. The Contractor shall be solely responsible for the adequacy, stability and safety of all site operations and methods of construction, even if any prior approval thereto has been taken from the Engineer or his Representative. The Contractor shall not be responsible for the correctness of the design or specification of the Temporary and Permanent works formulated by the Engineer; but the contractor shall be fully responsible for the correct implementation thereof as also for any design and specification prepared / proposed / used by the Contractor.
- 4.9. Whenever required by the Engineer or his Representative, the Contractor shall submit to him the details of his (a) programme for execution of the work, (b) proposed procedure and methods of work, (c) proposed deployment of plant, equipment labour, materials and temporary works. The submission to and/ or any approval by the Engineer or his Representative to any such programme or particulars, shall not relieve the Contractor of any of his obligations under the contract. If for any reason the contractor be unable to adhere to his earlier programme, he shall submit his revised programme for completion of work within the stipulated time whenever asked to do so.
- 4.10. Necessary and adequate supervision shall be provided by the Contractor during execution of the works and as long thereafter as the Engineer or his Representative shall consider necessary during the maintenance period. The Contractor or his competent and authorised agent or representative shall be constantly at site and instructions given to him by the Engineer or his Representative in writing shall be binding upon the Contractor subject to limitation in clause 2.5 hereof. The Contractor shall inform the Engineer or his Representative in writing about such representative/agent of him at site.
- 4.11. The Contractor shall employ in execution of the Contract only qualified, careful and experienced persons and the Engineer shall be at liberty to direct the Contractor to stop deployment of any of his staff, workmen or official at site and the Contractor shall within 48 hours comply with such instruction without any demur, whenever the Engineer shall feel that the deployment of the person concerned will not be conducive to the proper and timely completion of the work.
- 4.12. The Contractor shall be responsible for the true and proper setting-out of the works in relation to reference points/lines/levels given by the Engineer in writing. The checking of any setting-out or of any alignment or level by the Engineer or his Representative shall not in any way relieve the contractor of his responsibility for the correctness thereof and he shall fully provide, protect and preserve all stakes, templates, bench marks, sight rails, pegs, level marks, profile marks and other things used in setting-out the works.
- 4.13. From the commencement of the works till issue of the completion certificate in Form G.C.1, vide Clause 5.12 hereof, the contractor shall take full responsibility for the care thereof. Save for the excepted risks, any damage, loss or injury to the work or any part thereof shall be made good by the Contractor at his down cost as per instruction and to the satisfaction of the Engineer, failing which the Engineer or his Representative may cause the same to be made good by any other agency and the expenses incurred and certified by the Engineer, shall be recoverable from the Contractor in whatever manner the Engineer shall deem proper. This Clause will not apply to that part of the work, which might have been taken over by the Trustees on partial completion of the work and in such case the Contractor's obligation will be limited to repairs and replacement for manufacturing or construction defects during the Maintenance period (Guarantee Period) as per the directions of the Engineer as also for defects/ damages if any caused to the work by the Contractor during such repairs and replacement in the maintenance period.
- 4.14. The Contractor shall at his own cost protect, support and take all precautions in regard to the personnel or structure or services or properties belonging to the Trustees or not, which may be interfered with or affected or disturbed or endangered and shall indemnify and keep indemnified the Trustees against claim for injury, loss or damage caused by the Contractor in connection with the execution and maintenance of the work to the aforesaid properties, structures and services and/ or to any person including the Contractor's workmen. Cost of Insurance Cover, if any, taken by the Contractor shall not be reimbursed by the Trustees, unless otherwise stipulated in the Contract.
- 4.15. The Contractor shall immediately inform the Engineer's Representative if any fossil, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological importance be discovered at

site which shall remain the property of the Trustees and protect them from being damaged by his workmen and arrange for disposal of them at the Trustees expense as per the instruction of the Engineer's Representative.

- 4.16. The Contractor shall be deemed to have indemnified the Trustees against all claims, demands, actions and proceedings and all costs arising there from on account of:
- (a) Infringement of any patent right, design, trade-mark, or name or other protected right, in connection with the works or temporary work.
  - (b) Payment of all royalties, rent, toll charges, local taxes, other payments or compensation, if any, for getting all materials and equipment required for the work.
  - (c) Unauthorized obstruction or nuisance caused by the Contractor in respect of Public or Private road, railway tracks, footpaths, crane tracks, waterways, quays and other properties belonging to the Trustees or any other person.
  - (d) Damage / injury caused to any highway and bridge on account of the movement of Contractor's plants and materials in connection with the work
  - (e) Pollution of waterway and damage caused to river, lock, sea-wall or other structure related to waterway, in transporting contractor's plants and materials.
  - (f) The Contractor's default in affording all reasonable facilities and accommodation as per the direction of the Engineer or his Representative to the workmen of the Trustees and other agencies employed by or with the permission and / or knowledge of the Trustees on or near the site of work.
- 4.17. Debris and materials, if obtained by demolishing any properly, building or structure in terms of the Contract shall remain the property of the Trustees.
- 4.18. The Contractor's quoted rates shall be deemed to have been inclusive of the following:
- (a) Keeping the site free of unnecessary obstruction and removal from site of constructional plant wreckage, rubbish, surplus earth or temporary works no longer required.
  - (b) Cleaning and removal from site all the surplus materials of every kind to leave the site clean and tidy after completion of the work, without which payment against final bill may be liable to be withheld.
  - (c) Precautionary measures to secure efficient protection of Docks, the River Hooghly and other waterways against pollution of whatever nature during execution and maintenance of the works, and to prevent rubbish, refuse and other materials from being thrown into the water by the Contractor's men or those of his agency.
  - (d) Making arrangements for deployment of all labourers and workers, local or otherwise including payment for their wages, transport, accommodation, medical and all other statutory benefits and entry permits, wherever necessary.
  - (e) Making arrangements in or around the site, as per the requirements of Kolkata Municipal Corporation or other local authority or the Engineer or his Representative, for preventing (i) spread of any infectious disease like smallpox, cholera, plague or malaria by taking effective actions for destruction of rats, mice, vermin, mosquitoes etc. and by maintaining healthy and sanitary condition, (ii) illegal storage and distribution of Drugs, Narcotics, Alcoholic liquor, Arms and Ammunitions, (iii) unlawful, riotous or disorderly conduct of the Contractor's or his Sub-Contractor's workmen, (iv) deployment of workmen of age less than 16 years.
- 4.19. Every direction or notice to be given to the Contractor shall be deemed to have been duly served on or received by the Contractor, if the same is posted or sent by hand to the address given in the tender or to the Contractor's Site Office or in case of Trustee's enlisted Contractor to the address as appearing in the trustee's Register or to the Registered Office of the Contractor. The time mentioned in these conditions for doing any act after direction or notice shall be reckoned from the time of such posting or dispatch.
- 4.20. The Contractor and his sub-contractor or their agents and men and any firm supplying plant, materials, and equipment shall not publish or caused to be published any photographs or description of the works without the prior authority of the Engineer in writing.
- 4.21. The Contractor shall, at the Trustees' cost to be decided by the Engineer, render all reasonable facilities and Co-operation as per direction of the Engineer or his representative to any other Contractor engaged by the Trustees and their workmen, to the Trustees' own staff and to the men of other Public Body on or near the site of work and in default, the contractor shall be liable to the trustees for any delay or expense incurred by reason of such default.
- 4.22. The work has to be carried out by the Contractor causing the minimum of hindrance for any maritime traffic or surface traffic.
- 4.23. All constructional plants, temporary works and materials when brought to the site by the contractor, shall be deemed to be the property of the Trustees who will have a lien on the same until the satisfactory completion of the work and shall only be removed from the site in part or in full with the written permission of the Engineer or his Representative.

## 5. COMMENCEMENT, EXECUTION AND COMPLETION OF WORK

- 5.1. The contractor shall commence the work within 7 days of the receipt of Engineer's letter informing acceptance of the Contractor's tender / offer by the Trustees or within such preliminary time as mentioned by the contractor in the Form of Tender or the time accepted by the Trustees. The contractor shall then proceed with the work with due expedition and without delay, except as may be expressly sanctioned or ordered by the Engineer or his Representatives, time being deemed the essence of the contract on the part of the Contractor.
- 5.2. The Contractor shall provide and maintain a suitable office at or near the site, to which the Engineer's Representative may send communications and instructions for use of the Contractor.
- 5.3. Unless specified otherwise in the contract or prior permission of the Engineer has been taken, the contractor shall not execute the work beyond the working hours observed by the Engineer's Representative and on Sundays and Holidays observed in the trustees system, except in so far as it becomes essential on account of tidal work or for safety of the work. If the progress of the work lags behind schedule or the work has been endangered by any act or neglect on the part of the contractor, then the Engineer or his Representative shall order and the contractor at his own expense shall work by day and by night and on Sundays and Public Holidays. Any failure of the Engineer or his Representative to pass such an order shall not relieve the contractor from any of his obligations. The Engineer's decision in this regard shall be final, binding and conclusive.
- 5.4. Unless stipulated otherwise in the contract, all materials required for the work shall be procured and supplied by the contractor with the approval of the Engineer or his Representative and subject to subsequent testing as may be required by the Engineer or his Representative. The engineer shall exercise his sole discretion to accept any such materials.
- 5.5. Unless stipulated otherwise, in the contract, all materials, workmanship method of measurement shall be in accordance with the relevant Codes (Latest Revision) of the Bureau of Indian Standards and the written instructions of the Engineer or his Representative. Where no specific reference is available in the contract, the materials and workmanship shall be of the best of their respective kinds to the satisfaction of the Engineer.
- 5.6. Samples shall be prepared and submitted for approval of the Engineer or his Representative, whenever required to do so, all at the contractor's cost.
- 5.7. Unless stipulated otherwise in the contract, the cost of any test required by the Engineer or his representative in respect of materials and workmanship deployed on the work shall be borne by the contractor.
- 5.8. Regarding the supply of any materials by the Trustees to the contractor in accordance with the contract, the following conditions shall apply:
  - (a) The contractor shall, at his own expense, arrange for transporting the materials from the Trustees' Stores, watching, storing and keeping them in his safe custody, furnishing of statement of consumption thereof in the manner required by the Engineer or his representative, return of surplus and empty container to the Trustees' Stores as per the direction of the Engineer or his Representative.
  - (b) Being the custodian of the Trustees' materials, the contractor shall remain solely responsible for any such materials issued to him and for any loss or damage thereof for any reason other than "Excepted Risks", the contractor shall compensate the Trustees' in the manner decided by the Engineer and shall at no stage remove or cause to be removed any such material from the site without his permission.
  - (c) The Trustees' materials will generally be supplied in stages and in accordance with the rate of progress of work, but, except for grant of suitable extension of completion time of work as decided by the Engineer, the contractor shall not be entitled to any other compensation, monetary or otherwise, for any delay in the supply of Trustees' materials to him. The Contractor shall, however communicate his requirement of such materials to the Engineer from time to time.
  - (d) Unless stipulated otherwise in the contract, the value of the Trustees' materials issued to the contractor shall be recovered from the Contractor's bills and / any of his other dues. Progressively according to the consumption thereof on the work and / or in the manner decided by the Engineer or his Representative and at the rate / stipulated in the contract. These rates shall only be considered by the contractor in the preparation of his tender / offer and these will form the basis of escalation / variation, if in future the contractor is required to procure and provide any such material on the written order of the Engineer consequent on the Trustees' failure to effect timely supply thereof.
  - (e) If the Engineer decides that due to the contractor's negligence, and of the Trustees' materials issued to the contractor has been – (i) lost or damaged, (ii) consumed in excess of requirement, and (iii) wasted by the contractor in excess of normal wastage, then the value thereof shall be recovered from the contractor's bills or from any of his other dues, after adding 19 ¼% extra over the higher one of the followings—
    - i. The issue rate of the materials at the Trustees' Stores, and
    - ii. The market price of the material on the date of issue as would be determined by the Engineer.
- 5.9. The Engineer or his Representative shall have the power to inspect any material and work at any time and to order at any time – (i) for removal from the site of any material which in his opinion is not in accordance with the contract or the instruction of the Engineer or his Representative, (ii) for the substitution of the proper and suitable materials, or (iii) the removal and proper re-execution of any work, which in respect of material and workmanship is not in accordance with the contract or the instructions of the Engineer. The contractor shall

comply with such order at his own expense- and within the time specified in the order. If the contractor fails to comply, the Engineer shall be at liberty to dispose of such materials and re-do any work in the manner convenient to the Trustees by engaging any outside agency at the risk and expense of the contractor and after giving him a written prior notice of 7 days.

- 5.10. No work shall be covered up and put out of view by the contractor without approval of the Engineer or his Representative and whenever required by him the contractor shall uncover any part or parts of the work or make openings in or through the same as may be directed by the Engineer or his Representative from time to time and shall reinstate or make good those part of works thus affected to the satisfaction of the Engineer, all at the cost of the contractor. The Trustees shall reimburse such cost as determined by the Engineer, if the initial covering up was with prior written order of the Engineer or his Representative.
- 5.11. On a written order of the Engineer or his Representative the contractor shall delay or suspend the progress of the work till such time the written order to resume the execution is received by him. During such suspension the contractor shall protect and secure the work to the satisfaction of the Engineer or his Representative. All extra expenses in giving effect to such order shall be considered by the Trustees, unless such suspension is
- Otherwise provide for in the contract, or
  - Necessary by reason of some default on the part of the Contractor, or
  - Necessary by reason of climatic conditions on the site, or
  - Necessary for proper execution of the works or for the safety of the works or any part thereof.
- The Engineer shall settle and determine such extra payment and / or Extension of completion time to be allowed to the contractor, as shall, in the opinion of the Engineer, be fair and reasonable.
- If at any time before or after commencement of the work the Trustees do not require the whole of the work tendered for, the Engineer shall notify the same to the contractor in writing and the contractor shall stop further works in compliance of the same. The Contractor shall not be entitled to any claim for compensation for underived profit or for such premature stoppage of work or on account of curtailment of the originally intended work by reason of alteration made by the Engineer in the original specifications, drawings, designs and instruction.
- 5.12. When the whole of the work has been completed to the satisfaction of the Engineer and has passed any final test prescribed in the contract, the contractor shall, within 21 days of submission of his application to the Engineer be entitled to receive from him a certificate for completion of work in Form G.C.1 annexed hereto. If any part of the total work having been completed to the satisfaction of the Engineer, be takeover and / or used by the Trustees the Contractor shall on application be entitled to partial completion certificate in the Form of G.C.1 indicating the portion of the work covered by it, so that the Contractor's liability during maintenance period of the contract, if any, shall commence from the date mentioned in such certificate so far as the completed portion of the work is concerned.

## **6. TERMS OF PAYMENT:**

- 6.1. No Sum shall be considered as earned by or due to the Contractor in respect of the work till final and satisfactory completion thereof and until a certificate of final completion in Form G.C.2 has been given by the Engineer. On account payments, if any, made prior to issue of the certificate in Form G.C.2, shall all be treated as mere advances, which shall stand recoverable in full or in part, if the Engineer so decides in the context of Contractor's unfulfilled contract condition, if any.
- 6.2. All payments shall be made to the Contractor on the basis of measurement of actual work done, as recorded in the Trustees' measurement books and at accepted tendered or at agreed rates, as the case may be except as otherwise provided in the contract and when the Engineer decided any other rate for change in the scope of work or omission, if any, on the part of the Contractor.
- 6.3. For work of sanctioned tender value more than Rs. 50,000/- or having an initially stipulated completion period of 4 months or more, on account payments may be made at the discretion of the Engineer or his Representative at intervals deemed suitable and justified by him. Provided always that, subject to execution of work of substantial value in the context of the contract price, the interval of such on account payments shall be decided by the Engineer or his Representative, which shall ordinarily not be less than 1 month in between two payments for on account bill and / or advance.
- 6.4. Measurement for works done shall be progressively taken by the Engineer's Representative and entered in the Trustees' Measurement Book, at intervals deemed suitable and proper by him and / or the Engineer. The Contractor or his duly accredited Representative or Agent shall remain present at the time of such measurement and assist the Engineer's Representative in every manner required by him. After the measurements taken have been entered in the Measurement Book, the Contractor or his Agent shall sign the Measurement Book at the end of such Measurements over the Contractor's Rubber Stamp as a taken of acceptance of all such measurements, recorded above and prior to such signature. If the Contractor or his Agent fails to participate even after 3 days written notice from the Engineer's Representative the measurement shall be taken ex-parte by the Engineer's representative and those shall be accepted by the Contractor.

- 6.5. Based on the quantum of work and the value thereof computed in the Measurement Book, the Contractor shall type out his bill in the proforma approved by the Engineer and submit the same to the Engineer's Representative in quadruplicate, duly signed by him or his accredited Agent over his Rubber Stamp. The Engineer or his Representative may, in his absolute discretion, allow advance payment against such bill to the extent of an amount not exceeding 75% of the "net payable" sum of the said bill, subject to adjustment thereof against the bill at the time of checking and auditing the bill at the Trustees end., The measurement Book will not be handed over to the Contractor; but he will obtain the abstracts of quantities, amount and recoveries to type out the bill.
- 6.6. At the discretion of the Engineer or his Representative and only in respect of accepted offers/ where estimated amount put to tender would be Rs. 2,00,000/- or more, advance payment may be made to the extent of 75% of the value of any material purchased and brought to the site by the Contractor. Provided always that—
- i. The materials shall, in the opinion of the Engineer or his Representative, be of imperishable nature.
  - ii. The value of such materials shall be assessed by the Engineer or his Representative, at their own discretions,
  - iii. A formal agreement has been drawn up with the contractor, under which the Trustees secure a lien on the contractor's materials.
  - iv. The materials are safe-guarded by the contractor against losses, shortage and misuse due to the contractor postponing the execution of the work or otherwise,
  - v. In the event of shortage of such materials within the Trustees' protected areas in the Docks, the contractor shall submit an indemnity Bond in the proforma and manner acceptable to Trustee' whereby the contractor shall indemnify the Trustees' against all financial loss/ damage, on account of loss/ damage to such materials for whatever reasons.
  - vi. In the event of storage of such materials outside the Trustees' protected areas the Contractor shall submit to the Engineer an irrevocable Bank Guarantee favouring the Trustees and for the same sum as is being advance, in the proforma and manner acceptable to the Trustees. The Guarantee shall be of a Kolkata / Haldia Branch of any Nationalised Bank or a Scheduled Commercial bank, as the case may be, acceptable to the Trustees and shall remain valid till the anticipated period of consumption of such materials in the work. The Bank Guarantee must bear an undertaking by the issuing Bank guaranteeing automatic payment of the guaranteed sum to the Trustees by the Bank on the date of expiry of the validity of the Guarantee, unless with the prior written approval of the Engineer on behalf of the Trustees, the Bank has extended the validity of the Guarantee.
  - vii. The amount of advance shall be recoverable from the contractor's bills or any other dues, progressively with the consumption of the materials on the basis of quantity consumed. Consequent on full recovery of the advance the Indemnity Bond / Bank Guarantee, vide sub-clause (v) & (vi) above, shall be returned to the Contractor duly discharged by the Engineer on behalf of the Trustees.
- 6.7. No Certificate of the Engineer or his Representative shall protect the Contractor against or prevent the Trustees from obtaining repayment from the Contractor, in case the Engineer or his Representative should over certify for payment or the Trustees should over-pay the Contractor on any account.
- 6.8. No claim for interest shall be admissible to the Contractor at any stage and in respect of any money or balance or Bank Guarantee, which may be due to the Contractor from the Trustees, owing to dispute or otherwise or for any delay on the part of the Trustees in making interim or final payment or otherwise.

## **7. VARIATION AND ITS VALUATION:**

- 7.1. The Quantities set out in the Bill of Quantities of the tender shall be treated as estimated quantities of the work and shall never be deemed as actual or correct quantities of the works to be executed by the contractor in fulfillment of his obligation under the contract.
- 7.2. The Engineer shall have the power to order the Contractor in writing to make any variation of the Quantity, quantity or form of the works or any part thereof that may, in his opinion, be necessary and the Contractor upon receipt of such an order shall act as follows:
- a) Increase or decrease the quantity of any work included in the contract.
  - b) Omit any work included in the contract.

- c) Change the Character or quality or kind of any work included in the contract.
- d) Change the levels, lines, position and dimensions of any part of the work, and
- e) Execute extra and additional work of any kind necessary for completion of the works.

7.3. No such variation shall in any way vitiate or invalidate the contract or be treated as revocation of the contract, but the value (if any) of all such variations evaluated in accordance with the Engineer's sole decision shall be taken into account and the contract price shall be varied accordingly.

7.4. Provided always that written order of the Engineer shall not be required for increase or decrease in the quantity of any work up to 15% where such increase or decrease is not the result of any variation order given under this clause but is the result of the quantities exceeding or being less than those stated in the bill of quantities. Provided also that verbal order of variation from the Engineer shall be complied with by the Contractor and the Engineer's subsequent written confirmation of such verbal order shall be deemed to be an order in writing within the meaning of this clause.

7.5. a) The Contractor shall not be entitled to any claim of extra or additional work unless they have been carried out under the written orders of the Engineer.

b) The Engineer shall solely determine the amount (if any) to be added to or deducted from the sum named in the tender in respect of any extra work done or work omitted by his order.

c) All extra, additional or substituted work done or work omitted by order of the Engineer shall be valued on the basis of the rates and prices set out in the contract, if in the opinion of the Engineer, the same shall be applicable. If the contract does not contain any rates or prices directly applicable to the extra additional or substituted work, then the Engineer may decide the suitable rates on the basis of Schedule of Rates (including surcharge in force at the time of acceptance of tender), if any, adopted by the Trustees with due regard to the accepted contractual percentage, if any thereon. In all other cases the Engineer shall solely determine suitable rates in the manner deemed by him as fair and reasonable, and his decision shall be final, binding and conclusive.

d) If the nature or amount of any omission or addition relative to the nature or amount of the whole of the contract work or to any part thereof shall be such that, in the opinion of the Engineer, the rate of prices contained in the contract for any item of the works or the rate as evaluated under sub-clauses (b) and (c) of this clause, is by reason of such omission or addition rendered unreasonable or in-applicable the Engineer shall fix such other rate or price as he deems proper and the Engineer's decision shall be final, binding and conclusive.

## **8. DELAY / EXTENSION OF COMPLETION TIME / LIQUIDATED DAMAGE / TERMINATION OF CONTRACT**

8.1. Should the quantum of extra or additional work of any kind or delayed availability of the Trustees' materials to be supplied as per contract or exceptionally adverse climatic conditions and natural phenomenon or strikes, lock-outs, civil commotions or other special circumstances of any kind beyond the control of the Contractor cause delay in completing the work, the contractor shall apply to the Engineer in writing for suitable extension of completion time within 7 days from the date of occurrence of the reason and the Engineer shall thereupon consider the stated reasons in the manner deemed necessary and shall either reject the application or determine and allow in writing the extension period as he would deem proper for completion of the work, with or without the imposition of "Liquidated Damages" Clause (No.8.3 hereof) on the Contractor and his decision shall be binding on the contractor. If an extension of completion time is granted by the Engineer, the clause No.8.3 of the Liquidated damage shall apply from its date of expiry, if the work be not completed within the extended time, unless stated otherwise in the decision communication by the Engineer, as aforesaid.

8.2. a) If the Contractor fails to complete the work within the stipulated dates or such extension thereof as communicated by the Engineer in writing, the contractor shall pay as compensation (Liquidated Damage) to the Trustees and not as a penalty, ½ % (half percent) of the total value of work (contract price) as mentioned in the latter of acceptance of the tender/offer, for every week or part thereof the work remains unfinished. Provided always that the amount of such compensation shall not exceed 10% the said value of work.

b) Without prejudice to any of their legal rights, the Trustees shall have the power to recover the said amount of compensation / damage in Sub-Clause (a) of this clause, from any money due or likely to become due to the contractor. The payment or deduction of such compensation / damage shall not relieve the Contractor from his obligation to complete the work or from any of his other obligations / liabilities under the contract and in case of the Contractor's failure and at the absolute discretion of the Engineer, the work may be ordered to be completed by some other agency at the risk and expense of the Contractor, after a minimum three days notice in writing has been given to the contractor by the Engineer or his Representative.

- 8.3. Without being liable for any compensation to the Contractor, the Trustees may, in their absolute discretion, terminate the contract due to occurrence of any of the following reasons and decision of the Trustees in this respect, as communicated by the Engineer shall be final and conclusive:
- (i) The Contractor has abandoned the contract.
  - (ii) In the opinion of the Engineer, either the performance of the Contractor is not satisfactory or the work is not getting completed within the agreed period on account of Contractor's lapses.
  - (iii) The Contractor has failed to commence the work or has without any lawful excuse under these conditions, has kept the work suspended despite receiving the Engineer's or his Representative's written notice to proceed with the work.
  - (iv) The Contractor has failed to remove materials from site after receiving from the Engineer or his Representative the written notice stating that the said materials or work are rejected by him.
  - (v) The Contractor is not executing the work in accordance with the contract or is persistently or flagrantly neglecting to carry out his obligations under the contract.
  - (vi) Any bribe, commission, gift or advantage is given, promised or offered by or on behalf of the contractor to any officer, servant or representative of the Trustees or to any person on his or their behalf in relation to the obtaining or to the execution of the contract.
  - (vii) The Contractor is adjudged insolvent or enters into composition with his creditors or being a company goes into liquidation either compulsorily or voluntarily.
- 8.3.1 Upon receipt of the letter of termination of work, which may be issued by the Engineer on behalf of the Trustees, the Contractor shall hand over all the Trustees' tools, plant and materials issued to him at the place to be ascertained from the Engineer, within 7 days of receipt of such letter.
- 8.3.2 In all such cases of Termination of work, the Trustees shall have the power to complete the Work through any other agency of the Contractor's risk and expense and the Contractor shall be debited any sum or sums that may be expended in completing the work beyond the amount that would have been due to the contractor, had he duly completed the whole of the work in accordance with the contract.
- 8.3.3 Upon termination of contract, the contractor shall be entitled to receive payment of only 90 % of the value of the work actually done or materials actually supplied by him and subject to recoveries as per contracts, provided the work done and materials conform to specifications at the time of taking over by the Trustees. The payment for work shall be based on measurements of actual work done and priced at approved contract rates or other rates, as decided by the Engineer. The payment for materials supplied shall be at the rates as decided by the Engineer, which shall in no case be more than market rates prevailing at the time of taking over by the Trustees. The Engineer's decision in all such case shall be final, binding and conclusive.
- 8.3.4 The Trustees shall have the power to retain all moneys due to the Contractor until the work is completed by other agency and the Contractor's Liabilities to the Trustees and known in all respect.

## **9. MAINTENANCE AND REFUND OF SECURITY DEPOSIT**

- 9.1. On completion of execution of the work the contractor shall maintain the same for a period, as may be specified in the form of a Special Condition of the Contract, from the date mentioned in the initial Completion Certificate in the Form G.C.1. Any defect / fault, which may appear in the work during aforesaid maintenance period, arising, in the sole opinion of the Engineer or his Representative, from materials or workmanship not in accordance with the contract or the instruction of the Engineer or his Representative, shall, upon the written notice of the Engineer or his Representative, be amended and made good by the Contractor at his own cost within seven days of the date of such notice, to the satisfaction of the Engineer or his Representative, failing which the Engineer or his Representative shall have the defects amended and made good through other agency at the Contractor's risk and cost and all expenses, consequent thereon or incidental thereto, shall be recoverable from the Contractor in manner deemed suitable by the Engineer.
- 9.2. The Contract shall not be considered completed and the work shall not be treated as finally accepted by the Trustees, until a final Completion Certificate in Form G.C. 2 annexed hereto shall have been signed and issued by the Engineer to the contractor after all obligations under the Contract including that in the maintenance period, if any, have been fulfilled by the Contractor. Previous entry on the works or taking possession, working or using thereof by the trustees shall not relieve the Contractor of his obligations under the contract for full and final completion of the work.



- 9.3. On completion of the contract in the manner aforesaid, the Contractor may apply for the refund of his Security Deposit by submitting to the Engineer (i) The Treasury Receipts granted for the amount of Security held by the Trustees, and (ii) his "No further claim" Certificate in from G.C.3 annexed hereto (in original), where upon the Engineer shall issue Certificate in from G.C.2 and within two months of the Engineer's recommendation, the Trustees shall refund the balance due against the Security Deposit to the Contractor, after making deduction there from in respect of any sum due to the Trustees from the Contractor.

## **10. INTERPRETATION OF CONTRACT DOCUMENTS , DISPUTES & ARBITRATION**

- 10.1. In all disputes, matters , claims , demands or questions arising out of or connected with the interpretation of the Contract including the meaning of Specifications and Instructions or as to the quality of workmanship or as to the materials used in the work or the execution of the work whether during the progress of the work or after the completion and whether before or after the determination , abandonment or breach of the contract the decision of the Engineer shall be final and binding on all parties to the contract and shall forthwith be given effect to by the Contractor .
- 10.2. If, the Contractor be dissatisfied with any such decision of the Engineer, he shall within 15 days after receiving notice of such decision require that the matter shall be referred to Chairman, who shall thereupon consider and give a decision.
- 10.3. If , however , the contractor be still dissatisfied with the decision of the Chairman , he shall, within 15 days after receiving notice of such decision required that within 60 days from his written notice , the Chairman shall refer the matter to an Arbitrator of the panel of Arbitrators to be maintained by the Trustees for the purpose and any such reference shall be deemed to be a submission to arbitration within the meaning of Indian Arbitration Act , 1940 or any statutory modification thereof .
- 10.3.1 If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another person from panel shall be appointed as Sole Arbitrator and he shall proceed from the stage at which it was left by his predecessor.
- 10.3.2 The Arbitrator shall be deemed to have entered on reference on the date he issues notice to both the parties fixing the date of first hearing.
- 10.3.3 The time limit within which the Arbitrator shall submit his award shall normally be 4 months as provided in Indian Arbitration Act, 1940 or any amendment thereof. The Arbitrator may, if found necessary, enlarge the time for making and publishing the award, with the consent of the parties.
- 10.3.4 The Venue of the arbitration shall be Kolkata or as may be fixed by the Arbitrator in his sole discretion. Upon every or any such reference to cost of any incidental to the reference and award respectively shall be in discretion of the Arbitrator who may determine, the amount thereof or by whom and to whom and in what manner the same shall be borne and paid .
- 10.3.5 The Award of the Arbitrator shall be final and binding on all parties subject to the provisions of the Indian Arbitration Act, 1940 or any amendment thereof. The Arbitrator shall give a separate award in respect of each item of disputes and respective claim referred to him by each party and give reason for the award.
- 10.3.6 The Arbitrator shall consider the claims of all the parties to the contract within only the parameters of scope and conditions of the contract in question.
- 10.3.7 Save as otherwise provided in the contract the provisions of the Arbitration Act, 1940 and rules made there under, for the time being in force, shall apply to the arbitration proceedings under this Clause.
- 10.4. The Contractor shall not suspend or delay the work and proceed with the work with due diligence in accordance with Engineer's decisions. The Engineer also shall not withhold any payment, which, according to him, is due or payable to the Contractor, on the ground that certain disputes have cropped up and are likely to be referred to arbitration.

10.5. Provided always as follows:

(a) Nothing of the provisions in paragraphs 8.3 to 8.3.7 hereinabove would apply in the case of contracts , where tendered amount appearing in the letter of acceptance of the tender / offer is less than Rs.40,00,000/-.

(b) The Contractor shall have to raise disputes or differences of any kind whatsoever in relation to the execution of the work to the Engineer within 30 days from the date of occurrence of the cause of dispute and before the preparation of the final bill, giving detailed justifications, in the context of contract conditions.

(c) Contractor's dispute, if any, arising only during the maintenance period stipulated in the contract, must be submitted to the Engineer, with detailed justifications in the context of contract Conditions, before the final completion of the work.

No dispute or difference on any matter whatsoever, pertaining to the contract can be raised by the contractor after the completion of the work.

(d) Contractor's claim / dispute raised beyond the time limits prescribed in sub-clauses 8.5(b) and 8.5(c) hereinabove, shall not be entertained by the Engineer and / or by any Arbitrator, subsequently.

(e) The Chairman / Trustees shall have the right to alter the panel of Arbitrators on their sole discretion, by adding the names of new Arbitrators and / or by deleting the names of existing Arbitrators, without any reference to the Contractor.

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**THE BOARD OF TRUSTEES FOR THE PORT OF KOLKATA**  
**FORM OF TENDER**

**CONTRACT NO.**.....

To,

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

I/We ..... of

.....

having examined the site of works, inspected the Drawings and read the Specifications, General and Special Conditions of Contract and Conditions of Tender, hereby tender and undertake to execute and complete all the works required to be performed in accordance with the Specification, Bill of Quantities, General & Special Conditions of Contract and Drawings prepared by or on behalf of the Trustees and at the rates and prices set out in the annexed Bill of Quantities with ..... month/week from the date of the order to commence the work and in the event of our Tender being accepted in full or in part, I/We also undertake to enter into a Contract Agreement in the Form hereto annexed with such alterations or additions thereto which may be necessary to give effect the acceptance of the Tender and incorporating such Specification, Bill of Quantities, Drawings and Special & General Conditions of Contract and I/We hereby agree that until such Contract Agreement is executed the said Specifications, Bill of Quantities, Conditions of Contract and the Tender, together with the acceptance thereof in writing by or on behalf of the Trustees shall be the Contract.

**THE TOTAL AMOUNT OF TENDER Rs** .....

(Repeat in words).....

.....

\*I/We require ..... days/months preliminary time to arrange and procure the materials required by the work from date of acceptance of the Tender before I/We could commence the Work.

(\* This should be scored out in the case of labour contracts)

I/We have deposited with the Trustees' Financial Advisor & Chief Accounts Officer / Manager (Finance), Haldia Dock Complex vide Receipt No ..... of ..... as Earnest Money.

I/We agree that period for which the Tender shall remain open for acceptance shall not be less than four months.

Signature of the Tenderer

Witness:

(Seal of the Tenderer)

Signature .....

Name of the Tenderer .....

Name .....

(In Block Letters)

(In Block Letters)

Address .....

Dated .....

.....

Address .....

Occupation .....

.....

**THE BOARD OF TRUSTEES FOR THE PORT OF KOLKATA**  
**FORM OF AGREEMENT**

THIS AGREEMENT made this .....day of.....200.....between the Board of Trustees for the Port of Kolkata, a body corporate constituted by the Major Port Trusts Act, 1963 (hereinafter called “Trustees” which expression shall unless excluded by or repugnant to the context be deemed to include their successors in office) of the one part and .....(hereinafter called “ the Contractor ”, which expression shall unless excluded by or repugnant to the context be deemed to include its heirs, executors, administrators, representatives and assignees or successors in office) of the other part.

WHEREAS the Trustees are desirous that certain works should be executed / constructed, viz. ....and have accepted a Tender / Offer by the Contractor for the execution and maintenance of such work NOW THIS AGREEMENT WITNESSETH as follows :

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in General Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.
  - (a) The said Tender / Offer & the acceptance of the Tender / Offer
  - (b) The General Conditions of Contract
  - (c) The Special Conditions of Contract
  - (d) The Conditions of Tender
  - (e) The Technical Specifications
  - (f) The Schedule of Rates
  - (g) The Terms of Payment
  - (h) All correspondence by which, the contract is added, amended, varied or modified in any way by mutual consent.

3. In consideration of the payments to be made by the Trustees to the Contractor as hereinafter mentioned, the Contractor hereby covenant with the Trustees to execute and maintain the work in conformity in all respects with the provisions of the contract.
4. The Trustees hereby covenants to pay to the Contractor, in consideration of such execution and maintenance of the Work, the Contract Prices at the times and in the manner prescribed by the Contract.

IN WITNESS whereof of the parties hereto have caused their respective Common Seals to be hereunto affixed  
(or have hereunto set their respective hands and seals) the day and year first above written.

The Seal of.....

.....

Was hereunto affixed in the presence of:

Name .....

Address .....

.....

**Or**

**SIGNED, SEALED AND DELIVERED**

by the said .....

*In the presence of:*

Name .....

Address: .....

.....

*The Common Seal of the Trustees was hereunto affixed in the presence of:*

Name.....

Address: .....

KOLKATA PORT TURST

FORM G.C.1

Contract .....

Address .....

.....

Date of Completion .....

Dear Sir/s,

This is to certify that the following works viz.

Name of the Work.....

Estimate Number E.E.O .....dt .....

C.E.O .....dt .....

Work Order Number .....

Allocation .....

Contract Number .....

Which was carried out by you is in the opinion of the undersigned completing in every respect on the  
..... Day of .....20..... in accordance with clause 62 of the  
General Conditions of Contract and under the provisions of the Contract for a period of  
..... Days /weeks / months / years.

From the ..... day of ..... 20 .....

of the ..... day of ..... 20 .....

Signature (.....)

(Engineer / Engineer's Representative)

Name.....

Designation.....

Office Seal

c.c. to The Deputy Chief Engineer ( )

The Deputy Manager ( )

Financial Adviser & Chief Accounts Officer/  
Manager (Finance), Haldia Dock Complex.

**KOLKATA PORT TRUST**

**FORM G.C.2**

The Financial Adviser & Chief Accounts Officer.

The Manager (finance), Haldia Dock Complex.

**CERTIFICATE OF FINAL COMPLETION**

This is to certify that the following works viz.

Name of Work .....

Estimate No. E.E.O. No. .... dt .....

C.E.O. No .....dt .....

Work Order No .....dt .....

Contract No .....

Resoln. No & Meeting No .....

Allocation .....

Which was carried out by Shri / Messrs.....is now complete in every respect in accordance with the terms of the Contract and that all the obligations under Contract have been fulfilled by the Contractor.

Signature (.....)  
(Engineer / Engineer's Representative)

Name.....

Designation.....

Office Seal



**KOLKATA PORT TRUST**

**FORM G.C.3**

(‘No Claim’ Certificate From Contractor)

The Engineer  
Kolkata Port Trust  
Kolkata / Haldia

(Attn .....)

(Address, the Trustees’ Official, mentioned in  
the work Order and under whom the Contract  
was executed)

Dear Sir,

I/We do hereby declare that I/We have received full and final payment from Kolkata Port Trust for the execution of the  
following work, viz.

Name of Work .....

Work Order No ..... dt .....

Contract No .....dt.....

Agreement No .....dt.....and I/We have no  
further claim against Kolkata Port Trust in respect of the above mentioned job.

Yours faithfully,

(Signature of Contractor)

Date .....

Name of Contractor .....

Address .....

.....

(Official Seal of the Contractor)

**Draft Proforma of Bank Guarantee (Performance Bond) in lieu of cash Security Deposit, to be issued by the Kolkata/Haldia, as the case may be, of any nationalized Bank of India on Non-Judicial Stamp Paper worth Rs.50/- or as decided by the Engineer / Legal Adviser of the Trustees.**

To

The Board of Trustees

for the Port of Kolkata.

BANK GUARANTEE NO.....DATE.....

Name of issuing Bank.....

Name of Branch.....

Address.....

In consideration of the Board of Trustees of the Port Kolkata, a body corporate - duly constituted under the Major port Trust Act, 1963 ( Act 38 of 1963), having agreed to exempt Shri / Messrs ..... a proprietary / Partnership / Limited / Registered Company, having its Registered Office at ..... ..

(hereinafter referred to as "The Contractor") from cash payment of Security Deposit / Payment of Security Deposit through deduction from the Contractors' bills under the terms and conditions of a contract made between the Trustees and the Contractor for ..... (write the name of the work as per Work Order) in terms of the Work order No ..... dated.....(hereinafter referred to as "the said contract"), for the due fulfillment by the contractor of all the terms and conditions contained in the said contract, on submission of a bank Guarantee for Rs ..... (Rupees ..... )

we,.....Branch, Kolkata...../ Haldia, do on the advise of the contractor, hereby undertake to indemnify and keep indemnified the Trustees to the extent of the said sum of Rs ..... (Rupees ..... )

We.....Branch,Kolkata ...../Haldia, further agree that if a written demand is made by the Trustees through any of its officials for honoring the Bank Guarantee constituted by these presents, We,..... Branch, Kolkata ..... /Haldia shall have no right to decline to cash the same for any reason whatsoever and shall cash the same and pay the sum so demanded to the Trustees within a week from the date of such demand by an A/c. Payee Banker's Cheque drawn in favour of "Kolkata Port Trust", without any demur. Even if there be any dispute between the contractor and the Trustees, this would be no ground for us,.....(Name of Bank), ..... Branch, Kolkata...../Haldia to decline to honour the Bank Guarantee in the manner aforesaid. The very fact that We, ..... Branch,Kolkata ..... /Haldia, decline or fail or neglect to honour the Bank Guaranteed in the manner aforesaid shall constitute sufficient reason for the Trustees to enforce the Bank Guarantee unconditionally without any reference, whatsoever, to the contractor.

2. We,.....Branch,Kolkata..... /Haldia, further agree that a mere demand by the Trustees at any time and in the manner aforesaid, is sufficient for us, ..... Branch, Kolkata ..... / Haldia, to pay the amount covered by this Bank Guarantee in full and in the manner aforesaid and within the time aforesaid without reference to the contractor and no protest by the contractor, made either directly or indirectly or through Court , can be valid ground for us, ..... Branch,Kolkata ..... /Haldia, to decline or fail or neglect to make payment to the Trustees in, the manner and within the time aforesaid.

3. We, ..... Branch, Kolkata ..... /Haldia, further agree that the Bank Guaranteed herein contained shall remain in full force and effect, during the period that is taken for the due performance of the said contract by the contractor and that is shall continue to be enforceable till all the dues of the Trustees under and/or by virtue of the terms and conditions of the said contract have been fully paid and its claim satisfied and/or discharged in full and/or till the Trustees certify that the terms and conditions of the said contract have been fully and properly observed/fulfilled by the contractor and accordingly, the Trustees have discharged the Bank Guarantee, subject however, that this guarantee shall remain valid up to and inclusive of .....day of .....19.....and subject all so that the provision that the Trustees shall have no right to demand payment against this guarantee after the expiry of 6(six) calendar months from the expiry of the aforesaid validity period up to ..... Or any extension thereof made by us, .....Branch, Kolkata ...../Haldia, in further extending the said validity period of this Bank Guarantee on Non-Judicial Stamp Paper of appropriate value, as required / determined by the Trustees, only on a written request by the Trustees to the contractor for such extension of validity of this Bank Guarantee.

4. We, ..... Branch,Kolkata ..... /Haldia, further agree that, without our consent and without affecting in any manner our obligations hereunder, the Trustees shall have the fullest liberty to vary from time to time any of the terms and conditions of the said contract or to extend the time for full performance of the said contract including fulfilling all obligations under the said contract by the contractor or to postpone for any time or from time to time any of the powers exercisable by the Trustees against the contractor and to forebear or enforce any of terms and conditions relating to the said contract and We, ..... Branch, Kolkata ...../Haldia, shall not be relieved from our liability by reason of any such variation or extension being granted to the contractor or for any fore-bearance, act or commission on the part of the Trustees or any indulgence by the Trustees to the contractor or by any such matter or thing of whatsoever nature, which under the law relating to sureties would, but for this provision, have effect of so relieving us,.....Branch, Kolkata...../Haldia.

5. We ..... Branch, Kolkata ...../Haldia, lastly undertake not to revoke this Bank Guarantee during its currency except with the previous consent of the Trustees in writing.

SIGNATURE.....  
NAME.....  
DESIGNATION.....

(Duly constituted attorney for and on behalf of)

BANK.....  
BRANCH.....  
Kolkata...../Haldia.

(OFFICIAL SEAL OF THE BANK)

### **ADDENDUM**

**Modification of clause no.3.4 of GCC as sanctioned vide Reso. No.210 by the Board of Trustees for the Port of Kolkata in the 13<sup>th</sup> Meeting held on 26.02.2013.**

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- i. Earnest Money :** Earnest money deposit @ 2% of the estimated cost will be applicable for works / service / O&M contract only and not for procurement contract for which existing system as mentioned in the GCC should be followed.
- ii. There will be no minimum ceiling of Earnest Money** which will be @ 2% of estimated cost of projects upto Rs.10 crore. EMD of project estimated above Rs.10 crore will be Rs.20 lakh + 1% of estimated cost by which it exceeds Rs.10 crore.
- iii. Upto Rs.10 lakh Earnest Money** will be accepted by Banker's cheque / Demand Draft / Pay order. EMD beyond Rs.10 lakh may be accepted in the form of Bank Guarantee issued by an Indian Nationalized / Scheduled Bank.
- iv. Refund of Earnest money** to other than L-1 bidders will be made within 2 month of opening of bid or on finalization / acceptance of tender, whichever is earlier.