

स्यामाप्रसाद मुखर्जी पोर्ट , कोलकाता  
Syama Prasad Mookerjee Port, Kolkata  
(Formerly Kolkata Port Trust)  
हल्दिया गोदि परिसर  
HALDIA DOCK COMPLEX



श्यामा प्रसाद मुखर्जी पोर्ट , कोलकाता  
**SYAMA PRASAD MOOKERJEE PORT, KOLKATA**  
Formerly Kolkata Port Trust

**PLANT AND EQUIPMENT DIVISION**  
**under**  
**ENGINEERING DEPARTMENT**  
**INVITE E-TENDER**

**[Tender No. : SDM(P&E)/TSEM/T05/2021-2022]**

**FOR**

*SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 01 NO. 1010 KVA, 11KV, DG SET (AT SUBSTATION-3), 01 NO. 500 KVA, 415V DG SET (FOR GUEST HOUSE & PORT HOUSE) AND 01 NO. 250 KVA, 415V DG SET (FOR PORT HOSPITAL), IN THE RESIDENTIAL ZONE OF HALDIA DOCK COMPLEX, AT HALDIA.*

**[Under two part system]**

**September - 2021**

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**SYAMA PRASAD MOOKERJEE PORT, KOLKATA**  
(FORMERLY KOLKATA PORT TRUST)

**HALDIA DOCK COMPLEX**

**SHORT E-TENDER NOTICE**

[Tender No. : SDM(P&E)/TSEM/T05/2021-2022]

Online e-tenders are invited for the work of “Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia”.

Date of Pre-Bid meeting: **08.10.2021** 11:00 Hrs. onwards (on-line/off-line).

Closing date & time of online submission of e-tender: 22.10.2021, up to 15:00 Hrs.

**Estimated Cost: ₹ 4,05,98,156.67 (excluding GST).**

For details of tender and any corrigendum / addendum, please visit

<https://kopt.enivida.in> of eNivida Portal of RailTel.

**or**

<https://eprocure.gov.in/epublish/app> of Central Public Procurement Portal, Government of India.

**or**

<https://smportkolkata.shipping.gov.in> of Syama Prasad Mookerjee Port, Kolkata (Formerly Kolkata Port Trust).

However, intending bidder shall have to participate in bidding process through <https://kopt.enivida.in> only.

Date: 24.09.2021

**General Manager (Engineering)**  
**Haldia Dock Complex**  
**Syama Prasad Mookerjee Port, Kolkata.**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**SYAMA PRASAD MOOKERJEE PORT, KOLKATA**  
**(FORMERLY KOLKATA PORT TRUST)**  
**HALDIA DOCK COMPLEX**

**NOTICE INVITING E-TENDER**

**[Tender No. : SDM(P&E)/TSEM/T05/2021-2022]**

E-Tenders, under single stage two part system [Part I: Pre-qualification & Techno-commercial Bid and Part II: Price Bid] are invited on behalf of Haldia Dock Complex (HDC), Syama Prasad Mookerjee Port, Kolkata (SMPK), from the intending bidders, fulfilling the “Minimum Eligibility Criteria (MEC)” and possessing the required documents (mentioned below), for the work of “Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia”.

**2.1 MINIMUM ELIGIBILITY CRITERIA (MEC):**

**2.1.1** The average annual financial turnover of the bidder, during the last three (3) years, ending 31<sup>st</sup> March, 2021, must be at least ₹ 1,21,79,447.00. Auditor’s Report of the bidding firm, certified by Chartered Accountant (CA), for the years 2018-19, 2019-20 and 2020-2021, including relevant Audited Balance Sheets and Profit & Loss Accounts, should be made available.

**Note:** The bidder should upload the scanned copies of Annual Financial Turnover Statement (certified by CA) for the years 2018-19, 2019-20 and 2020-2021, along with Audited Balance Sheets and Profit & Loss Accounts.

**2.1.2** The bidder must have experience of having successfully completed “Similar Works” [defined below] during last seven (7) years, ending last day of month previous to the one in which tenders are invited, and the experience must be either of the following:-

a) Three similar completed works of contract value not less than ₹ 1,62,39,263.00 each.

Or

b) Two similar completed works of contract value not less than ₹ 2,02,99,078.00 each.

Or

c) One similar completed work of contract value not less than ₹ 3,24,78,525.00.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

The term “*similar works*” means -

***“Supply, installation, testing and commissioning of HT Electrical installations, at Port Sectors / Central Govt. / State Govt. / PSU / Other Reputed Organisations”.***

**Note:** The bidder should upload the scanned copies of work order(s) for similar works, successful completion certificates (with performance) from clients, indicating the date of completion, value of work done, etc.. *Work Experience as a sub-contractor or supply contractor shall not be considered as requisite qualification.*

- 2.1.3** The bidder must be a reputed Electrical Contractor, having experience of supply, installation, testing and commissioning of Diesel Generator Set (of capacity of 500 kVA & above) during the last 07 years.

**Note:** The bidder should upload the scanned copies of work order(s) and successful Completion Certificates.

- 2.1.4** The bidder must have valid Electrical Contractor’s License issued by competent authority of State / Central Govt., under relevant rules of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, as amended upto date.

**Note:** The bidder should upload scanned copy of valid Electrical Contractor’s License.

## **2.2 DOCUMENTS TO BE UPLOADED :**

### **2.2.1 ESSENTIAL DOCUMENTS:**

- i) Scanned copies of Annual Financial Turnover Statement (certified by CA) for the years 2018-19, 2019-20 and 2020-2021, along with Audited Balance Sheets and Profit & Loss Accounts , in support of MEC, as per **Clause No. 2.1.1.**
- ii) Scanned copies of work order(s) for similar works, successful completion certificates (with performance) from clients, indicating the date of completion, value of work done, etc.. , in support of MEC, as per **Clause No. 2.1.2.**
- iii) Scanned copies of work order(s) and successful Completion Certificates, in support of MEC, as per Clause No. 2.1.3.
- iv) Scanned copy of valid Electrical Contractor’s License issued by competent authority of State / Central Govt. , under relevant rules of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, as amended upto date , in support of MEC, as per **Clause No. 2.1.4.**
- v) Scanned copy of Power of Attorney (if applicable).

**Note:** In case the tender is submitted by the Proprietor of the Firm, Power of Attorney is not required.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

### 2.2.2 OTHER DOCUMENTS

- i) Goods and Services Tax (GST) Registration Certificate, issued by Government of India.
- ii) Valid **Profession Tax Clearance Certificate (PTCC)** or Up-to-date **Profession Tax payment challan**, if applicable. If this is not applicable, the bidder must submit [upload] a declaration in this regard.
- iii) Certificate for allotment of **Employees' Provident Fund (EPF) Code No.** [**Latest challan** is to be submitted (uploaded)], if applicable. If this is not applicable, the Bidder should submit [upload] a declaration [in the form of Affidavit, in line with the enclosed Format (Bidding Form)], in this regard.
- iv) Registration certificate of **Employees' State Insurance (ESI)** authority, if applicable.

If this is not applicable, necessary document(s) [to establish Non-applicability], along with **affidavit** [Format enclosed (Bidding Form)], **affirmed before a first-class Judicial Magistrate** to that effect, are to be submitted [uploaded]. Moreover, such bidder(s) shall have to submit a declaration [as per the Format enclosed (Bidding Form)], confirming that they will obtain registration certificate of ESI authority, if required, and they will indemnify **Syama Prasad Mookerjee Port, Kolkata (Formerly Kolkata Port Trust)** against all damages & accident occurring to their labourer (including that of sub-contractor's labourers), in connection with the instant contract, in case they become a Successful Bidder [Format of Indemnity Bond enclosed (Contract Form)].

- v) PAN Card, issued by Income Tax Department, Government of India.
- vi) **Certificate of MSME / Micro & Small Enterprises (MSEs) / DIC / SSI / National Small Industries Corporation (NSIC)** to get benefit in this regard.

**2.3** The bidders are required to submit bid as per the instructions of the instant bidding documents (including Notice Inviting e-Tender). Bid will be considered rejected if any of the essential documents (as mentioned in Clause no. 2.2.1) is not submitted by the bidder. Essential documents mean papers related to "Minimum Eligibility Criteria (MEC)", including Bid Document fee and Earnest Money Deposit / Bid Security Declaration (as applicable).

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## 2.4 AVAILABILITY OF THE BIDDING DOCUMENTS:

The bidding documents (in full) would be available in the following websites: -

- <https://kopt.enivida.in> of eNivida Portal of RailTel.
- <https://eprocure.gov.in/epublish/app> of Central Public Procurement Portal, Government of India.
- <https://smpportkolkata.shipping.gov.in> of Syama Prasad Mookerjee Port, Kolkata (Formerly Kolkata Port Trust).

Corrigenda, Addenda, if any, would also be available in the aforesaid websites.

## 2.5 PARTICIPATING IN THE BIDDING PROCESS:

The bidders will have to participate in the *electronic bidding process through the website* of RailTel [eNivida Portal (<https://kopt.enivida.in>)] *only*.

Date: 24.09.2021

**General Manager (Engineering)**  
**Haldia Dock Complex**  
**Syama Prasad Mookerjee Port, Kolkata**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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

**[Tender No.: SDM(P&E)/TSEM/T05/2021-2022]**

<b>3.1.</b>	<b>Name of work</b>	::	Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.
<b>3.2.</b>	<b>Tender Inviting Authority</b>	::	<b>General Manager (Engg.)</b> Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata.
<b>3.3.</b>	<b>Mode of Tender</b>	::	<b>e-Procurement System</b> Online ( <b>Part I: Pre-qualification &amp; Techno-commercial Bid</b> and <b>Part II: Price Bid</b> ) through <b><a href="https://kopt.enivida.in">https://kopt.enivida.in</a></b> of <b>eNivida Portal of RailTel</b> . <i>No physical tender is acceptable by Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata.</i>
<b>3.4.</b>	<b>Estimated Cost</b>	::	<b>₹ 4,05,98,156.67</b> (excluding GST).
<b>3.5.</b>	<b>Fees &amp; Deposits</b>		
	i) <b>RailTel Tender Processing Fee (Non-refundable)</b>	::	<p>a) Mode of Payment: - E-payment Only through Debit / Credit Card or Net Banking.</p> <p>b) Tender Processing Fee (TPF) - 0.1% of estimate cost (Minimum 750/- and Maximum 7500/-) plus GST @ 18%.</p> <p>c) Registration Charges: Rs. 2000/- + Applicable GST Per Year.</p> <p><b><u>Note:</u></b></p> <p>i) The bidders, who are not yet to be registered with RailTel, are advised to get themselves registered with RailTel, at least 72 (seventy-two) hours prior to bid submission.</p> <p>ii) Bidders are required to ensure that their corporate e-mail ID provided is valid and updated at the stage of registration of vendor with <b>RailTel's eNivida Portal</b> (i.e., Service Provider).</p>

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



	ii) <b>Bid Document Fee</b> (Cost of Bidding Documents)  (Non- refundable)	::	<p>The intending bidders should deposit <b>₹ 2,950.00 (Indian Rupees: Two thousand nine hundred fifty) only [including GST @ 18%], as Bid Document Fee (non-refundable)</b>, to Haldia Dock Complex, through Banker's Cheque or Pay Order or Demand Draft, drawn in favour of '<b>Syama Prasad Mookerjee Port, Kolkata, Haldia Dock Complex</b>' on any Scheduled / Nationalized Bank, payable at Haldia.</p> <p><i>Scanned copy of the Banker's Cheque / Pay Order / Demand Draft, should be uploaded alongwith the Bid. Otherwise, the respective bid will be summarily rejected, treating the same as non-responsive.</i></p> <p><b>For exemption of Bid Document Fee [applicable for Micro &amp; Small Enterprises (MSEs) only], the Bidders shall have to upload the scanned copy of the certificate from MSME / DIC / SSI / National Small Industries Corporation (NSIC) or any empowered Central / State Govt. authority.</b></p>
	iii) <b>Earnest Money Deposit (EMD)</b>	::	<p>No Earnest Money is required to be deposited to Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata.</p> <p>All bidders shall upload a Bid-securing Declaration, as per format attached [Bidding Form-II].</p>
	<p><b><u>NOTE::</u></b></p> <p><b>Bid Document Fee / Document(s) for availing exemption of Bid Document Fee and Bid-securing Declaration</b> [as per format attached as Bidding Form-II] are to be physically deposited at the concerned office of the Tendering Inviting Authority [Dy. Manager (P&amp;E), Haldia Dock Complex, Township Electrical Maintenance Office, Haldia Township, Pin - 721607], separately in a single sealed envelope, mentioning Tender no., Subject &amp; Name of the Bidder, with proper marking.</p>		
<b>3.6.</b>	<b>Bid Validity</b>	::	180 days.
<b>3.7.</b>	<b>Completion Period</b>	::	10 months.
<b>3.8.</b>	<b>Defect Liability Period / Guarantee Period</b>	::	02 years.
<b>3.9.</b>	<b>Security Deposit / Performance Guarantee</b>	::	3 % of the Contract Value (excluding GST) till date of completion and during Defect Liability Period.

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

3.10.	<b>Date, time and venue of Pre-Bid Meeting (on-line / off-line).</b>	::	<b>08.10.2021 at 11:00 Hrs (IST).</b>  Office of Sr. Dy. Manager (P&E); Chiranjibpur; P.O. Haldia; Dist. Purba Medinipur; PIN: 721 604; West Bengal; India.
3.11.	i) <b>Publish date of e-Tender</b> at <a href="https://kopt.enivida.in">https://kopt.enivida.in</a>	::	24.09.2021
	ii) <b>Closing date &amp; time of submission of e-Tender</b> at <a href="https://kopt.enivida.in">https://kopt.enivida.in</a>	::	22.10.2021, up to 15:00 Hrs. (IST).
	iii) <b>Date &amp; time of opening of Part-I (Techno-commercial Bid)</b>	::	22.10.2021, 15:30 Hrs. (IST) onwards.
	iv) <b>Date &amp; time of opening of Part-II (Price Bid)</b>	::	<b>Shall be informed separately.</b>
3.12.	<b>Address of the Employer</b>	::	<b>Syama Prasad Mookerjee Port, Kolkata [SMP, Kolkata]</b> <b>(Formerly Kolkata Port Trust).</b> 15 Strand Road, Kolkata – 700 001, West Bengal, India.
3.13.	<b>Address of Engineer</b>	::	<b>General Manager (Engineering)</b> Haldia Dock Complex; Syama Prasad Mookerjee Port, Kolkata.  <b><u>Address:</u></b> Engineering Department Jawahar Tower Complex; P.O.: Haldia Township; Dist.: Purba Medinipur; PIN: –721607 West Bengal, India.  <b>Telephone no.:</b> + 91-3224- 264496 <b>e-mail :</b> <a href="mailto:aganesan.hdc@kolkataporttrust.gov.in">aganesan.hdc@kolkataporttrust.gov.in</a>

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

3.14.	<b>Address of the Engineer's representative</b>	::	Shri R. N. Roy, Sr. Dy. Manager (P&E), Haldia Dock Complex, Operational Administrative Building (1 <sup>st</sup> floor), Chiranjibpur; P.O. Haldia, Dist. Purba Medinipur; PIN: 721 604; West Bengal, India.  <b>Telephone no. :</b> + 91-3224-252526 <b>Mobile no. :</b> + 91 94340 74411 <b>e-mail :</b> <a href="mailto:rnroy.hdc@kolkataporttrust.gov.in">rnroy.hdc@kolkataporttrust.gov.in</a>
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Date: 24.09.2021

**General Manager (Engineering)**  
 Haldia Dock Complex  
 Syama Prasad Mookerjee Port, Kolkata.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **SECTION - IV**

### **INSTRUCTIONS FOR ONLINE BID SUBMISSION**

#### **4.1 Introduction:**

- 4.1.1** Bidders are requested to use internet Browsers Firefox version below 50 / Internet Explorer version 8 or above, and Java 8 Update 151 or 161.
- Further, bidders are requested to go through the following information and instructions available on the **<https://kopt.enivida.in>** of **eNivida Portal of RailTel**, before responding to this e-tender :
- Bidders Manual Kit
  - Help for Contractors
  - FAQ
- 4.1.2** Intending Bidders are requested to read the vendor guide and see the video in the web-page **<https://kopt.enivida.in>** to familiarize them with the system before bidding.
- 4.1.3** The intending bidders are requested to go through the “**Instructions To Bidders (ITB)**” and contents of this bidding document, including all terms & conditions and ‘Technical Specification & Scope of Work’, before submitting online tender. Bidders who do not comply with the requirements / conditions, with documentary proof (wherever required), will not qualify in the tender.
- 4.1.4** **SPECIAL NOTE:**  
**THE PRE-QUALIFICATION & TECHNO-COMMERCIAL BID AND PRICE BID SHALL HAVE TO BE SUBMITTED ON-LINE AT <https://kopt.enivida.in> only.**
- 4.1.5** Possession of valid Digital Signature Certificate (DSC) and Registration of the intending bidder with **RailTel** are pre-requisites for the instant e-Tendering.
- 4.1.6** The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website **<https://kopt.enivida.in>**.
- 4.1.7** All entries in the tender should be entered in online Technical & Commercial formats, without any ambiguity.
- 4.1.8** The e-Tender platform shall remain open from the pre-announced date & time and for as much duration as mentioned in the Schedule of Tender (SOT).
- 4.1.9** E-tender cannot be accessed after the closing date and time of e-Tender, mentioned in the Schedule of Tender (SoT) of the instant bidding documents.
- 4.1.10** **The intending bidders are requested to submit their bids, keeping sufficient time in hand.**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 4.1.11** In case of any clarification regarding online submission of bids, the intending bidders are requested to contact HDC / RailTel, well in advance, keeping sufficient time in hand.

**Contact person (Haldia Dock Complex):**

- (i) Shri R. N. Roy  
Designation: Sr. Dy. Manager (P&E)  
Mobile No.: + 91 94340 74411  
Landline: + 91-3224-252526  
E-mail : rnroy.hdc@kolkataporttrust.gov.in
- (ii) Shri D. Mallik  
Designation: Deputy Manager ( P&E)  
Mobile No.: + 91 94340 31335  
Landline: + 91-3224-263936  
E-mail : [dmullick.hdc@kolkataporttrust.gov.in](mailto:dmullick.hdc@kolkataporttrust.gov.in)

**Contact persons (RailTel Portal):**

- (i) Shri Siddharth Ghosh  
Mobile No.: + 91 9355030604  
E-mail : [ewizardsiddharth@gmail.com](mailto:ewizardsiddharth@gmail.com)
- (ii) Shri Deepak Jha  
Mobile No.: +91 8448288981  
E-mail : [ewizarddipak@gmail.com](mailto:ewizarddipak@gmail.com)

**4.1.12 Bidding in e-tender:**

- i) The bidders must upload all the documents required as per the instant bidding documents (including Notice Inviting e-Tender). Any other document uploaded, which is not required as per the instant bidding documents (including Notice Inviting e-Tender), shall not be considered.
- ii) Details of cost of e-tender paper remitted should be entered by the participating bidder in the space provided in the e-tender as indicated hereunder:
  - a) Name of remitting bidder:
  - b) Tender No.:
  - c) Amount remitted:
  - d) Date of remittance:
  - e) PO/DD/BC No.:
- iii) Details of Earnest money remitted should be entered by the participating vendor/contractor in the space provided in the e-tender as indicated hereunder:
  - a) Name of remitting bidder:
  - b) Tender No.:
  - c) Amount remitted:
  - d) Date of remittance:
  - e) PO/DD/BC No.:

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- iv) **Certificate of MSME / Micro & Small Enterprises (MSEs) / DIC / SSI / National Small Industries Corporation (NSIC)** shall have to be submitted (uploaded) to get benefit.
- v) Unit of Measure (UOM) is indicated in the e-Tender platform. Rate to be quoted should be in Indian Rupees, as per UOM indicated in the e-Tender platform or in the bidding documents.
- vi) The bidders should quote their offered prices appropriately, only in the Price Bid link. Price indicated anywhere else, in any other form or manner, will not be considered for evaluation of Price Bid.

#### **4.2 Other Instructions related to e-Procurement:**

- 4.2.1** The process involves Electronic Bidding for submission of Technical and Commercial Bid.
- 4.2.2** The Techno-commercial Bid and the Price Bid shall have to be submitted online at <https://kopt.enivida.in>. Tenders will be opened electronically on specified date and time as given in the Bidding Document.
- 4.2.3** During the entire e-tender process, the vendors will remain completely anonymous to one another and also to everybody else.
- 4.2.4** Information about tenders / corrigendum uploaded and notices & correspondence with the bidder(s) shall be sent by email only during the process till finalization of tender by HDC, SMP, Kolkata. Hence, the intending bidders are required to ensure that their corporate e-mail ID provided is valid and updated at the time of registration of vendor with <https://kopt.enivida.in>. Vendors are also requested to ensure validity of their DSC (Digital Signature Certificate).
- 4.2.5** In all cases, an intending bidder should use their own ID and Password, along with Digital Signature, at the time of submission of their bid. It is mandatory that all bids are submitted with Digital Signature Certificate (DSC), otherwise the same will not be accepted by the system.
- 4.2.6** Addenda, Corrigenda and Queries & Clarifications (with respect to the instant e-Tender), if any, would be hosted in the e-tendering portal of RailTel.
- 4.2.7** No deviation/variation of the techno-commercial terms and conditions of the bidding documents will be considered by HDC, SMP, Kolkata. Submission of bid in the e-Tender platform by any bidder confirms their acceptance of the techno-commercial terms and conditions of the bidding documents.
- 4.2.8** HDC, SMP, Kolkata reserves the right to accept or reject any bid (in full or part) and to annul the bidding process and to reject all bids, at any time prior to contract award, without assigning any reason thereof and without thereby incurring any liability to the bidders.
- 4.2.9** Any order resulting from this open e-Tender shall be governed by the terms and conditions mentioned therein.
- 4.2.10** All electronic bids submitted during the e-Tender process shall be legally binding on the bidders. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by HDC, SMP, Kolkata will form a binding contract,

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

between HDC, SMP, Kolkata and the bidder, for execution of the work. Such successful bidder shall be called hereafter the 'CONTRACTOR'.

**4.2.11** The bids will be evaluated based on the filled-in Technical & Commercial formats and the requisite documents submitted (uploaded) by the bidders.

**4.2.12** The documents uploaded by bidder(s) will be scrutinized. During scrutiny, in case any of the information furnished by the bidder is found to be false, Earnest Money Deposit of such defaulting bidder(s) will be forfeited. Punitive action, including suspension and banning of business, can also be taken against such defaulting bidder(s).

**4.2.13** HDC, SMP, Kolkata, at its discretion, may extend the closing date & time of e-Tender, prior to the closing date & time of e-Tender mentioned in the Schedule of Tender (SoT). However, the closing date & time of e-Tender will not be extended, under any situation, after the due date is over.

**4.3 RailTel Tender Processing Fee ( Non refundable):**

**4.3.1** Mode of Payment: - E-payment Only through Debit Card / Credit Card or Net Banking.

Tender Processing Fee( TPF)- 0.1% of the estimated cost (Minimum ₹ 750.00 and Maximum ₹ 7,500.00 ) plus GST @18%.

Registration Charges: ₹ 2,000.00 + Applicable GST Per Year.

**4.4 Bid Document Fee ( Non refundable) and Earnest Money Deposit (EMD) :**

**4.4.1** **Original instrument** [*Banker's Cheque / Pay Order / Demand Draft* ] for **Bid Document Fee** ( Non refundable) and **Earnest Money Deposit (EMD) / Bid-securing Declaration**, as applicable, should reach this office physically before opening of Tender, failing which Techno-commercial bid will not be opened.

**4.4.2** **Bid Document Fee** (Non refundable) and **Earnest Money Deposit (EMD)** details or Document(s) for availing exemption of Bid Document Fee / Earnest Money Deposit or Bid-securing Declaration, as applicable, are to be treated as essential documents, which should be uploaded with the other essential documents.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **SECTION - V**

### **INSTRUCTIONS TO BIDDERS (ITB)**

#### **A. GENERAL**

##### **5.1 Definition and interpretations:**

- (a) the term “in writing” means communicated in written form (i.e. by mail, e-mail, fax, telex, etc.) and delivered against receipt;
- (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) “day” means calendar day; and
- (d) “procurement” means the entire work requirements, as specified in **Section VI : ‘Technical Specification & Scope of Work’**.

##### **5.2 Fraud and corruption**

**5.2.1** It is the policy of **Syama Prasad Mookerjee Port, Kolkata [SMPK] (Formerly Kolkata Port Trust)** to require that bidders, Contractors, Sub-contractors, and Consultants, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, SMP, Kolkata:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
  - (i) **“corrupt practice”** means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
  - (ii) **“fraudulent practice”** means a misrepresentation or omission of facts, in order to influence a public procurement process or the execution of a contract;
  - (iii) **“collusive practice”** means a scheme or arrangement between two or more bidders, designed to establish Bid Prices at artificial, non competitive levels;

And

  - (iv) **“coercive practice”** means harming, or threatening to harm, directly or indirectly, persons or their property to influence their participation in procurement process or affect the execution of a contract;\
- (b) will reject a proposal for award, if it determines that the bidder, recommended for award, has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the contract in question;

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



- (c) Will terminate contract, if it determines at any time that representatives of SMPK engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract;
- (d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, a contract;

And

- (e) will have the right to require that a provision be included in Bidding Documents and in contracts, requiring bidders, contractors, subcontractors, and consultants to permit SMPK to inspect their accounts and records and other documents relating to the bid submission and contract performance.

**5.2.2** Furthermore, bidders shall be aware of the provision stated in GCC.

### **5.3 Eligible bidders**

**5.3.1** A Bidder, and all parties constituting the Bidder, **should have the nationality of any country**. A Bidder shall be deemed to have nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of the country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or contractors for any part of the contract, including related services

**5.3.2** A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder and one or more parties:

- (a) Submit more than one bid in this bidding process.

Or

- (b) are or have been associated in the past, with a firm or any of its affiliates which have been engaged by SMP, Kolkata to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under the instant Bidding Documents.

**5.3.3** Participation by a Bidder in more than one bid shall result in the disqualification of all bids, in which such Bidder is involved.

**5.3.4** A Bidder that is under a declaration of ineligibility by SMP, Kolkata, in accordance with **ITB Clause No.5.2**, at the date of contract award shall be disqualified.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## 5.4 Authority in signing the bid / offer

- 5.4.1** In case the bid is submitted by a **Proprietorship Firm**, the same should be signed either by the **Proprietor** or other person(s), holding a valid **power of attorney / authorisation** from the proprietor, in connection with this bidding process. The signature of such power of attorney holder(s) / authorised person(s) should be attested by the proprietor. Such **power of attorney / authorisation** should be uploaded along with **Techno-commercial Bid**.
- 5.4.2** In case the bid is submitted by a **Partnership Firm**, the same should be signed either by the partner(s), holding valid **power of attorney** from the partners or other person(s), holding valid **authorisation** from such power of attorney holder(s), subject to approval of the partner(s) in the matter of giving such authorization, in connection with this bid. The signature of such **power of attorney holder(s) / authorised person(s)** should be attested by the **partners or power of attorney holder**, as the case may be. Such **power of attorney / authorisation** should be uploaded along with **Techno-commercial Bid**.
- 5.4.3** In case the bid is submitted by a **Limited Company**, the same should be signed by the person(s) holding valid **power of attorney / authorisation**, executed in his / their favour ( in connection with this bid) and the signature of such **power of attorney holder(s) / authorised person(s)** should also be attested, in accordance with the constitution of the Limited Company. Such **power of attorney / authorisation** should be uploaded along with **Techno-commercial Bid**.
- 5.4.4** Such **power of attorney holder(s) / authorised person(s)** should put his / their signature identical with the attested one, in the relevant documents submitted / uploaded, in connection with the instant bidding process [including “**Techno-commercial Bid**”]. In case of putting different signatures in different documents / offers, all such signatures should be attested by the same person in line with the above.

## **B. CONTENTS OF BIDDING DOCUMENTS**

### **5.5 Sections of Bidding Documents**

- 5.5.1** The contents of the **Bidding Documents** as detailed at “TABLE OF CONTENTS” should be read in conjunction with any addendum / corrigendum issued in accordance with **ITB Clause No. 5.7**.
- 5.5.2** The Employer (SMP, Kolkata) is not responsible for the completeness or correctness of the bidding documents and their Addenda, if they were not obtained directly from the source indicated in Notice Inviting e-Tender.
- 5.5.3** The bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents. Failure to furnish all information or documentation required by the Bidding Documents [considering all addenda / corrigenda issued] may result in the rejection of the bid.

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## 5.6 Clarifications, information, etc. for bidding

### 5.6.1 Location of Haldia Dock Complex

Haldia Dock Complex is located at the confluence of River Haldi & River Hooghly at Latitude 22°2' North & Longitude 88°6' East, at about 130 km upstream from Sandheads and 104 km downstream of Kolkata.

### 5.6.2 The location of the Site of Work

Residential Zone of Haldia Dock Complex, Haldia Township, Dist.: Purba Medinipur, West Bengal, Haldia-721607.

### 5.6.3 Access to the Site of Work

#### a) By Road:

National Highway (N.H.-116) connect Haldia with Kolaghat and State Highway connect Haldia with Mecheda.

#### b) By Rail:

S. E. Railway Branch Line connects Haldia Railway Station with the Panskura Railway Station / Mecheda Railway Station.

#### c) All-weather hard top roads, approachable from National Highway (N.H.-116), State Highway & Haldia Railway Station, exist right up to the area of Work.

### 5.6.4 A prospective bidder requiring any clarification of the instant Bidding Documents shall contact **Sr. Dy. Manager (P&E), HDC**, in writing, or raise their queries during the **Pre-bid meeting**.

The **prospective bidders** are requested to submit their queries / observations / suggestions / requests for clarification, in connection with the instant Bidding Documents, in advance, to enable **SMP, Kolkata** to prepare response / clarifications and make pre-bid meeting meaningful.

### 5.6.5 As indicated in the Schedule of Tender, pre-bid meeting will be conducted on-line / off-line on behalf of HDC, SMP, Kolkata. The purpose of this pre-bid meeting will be to clarify issues and to answer questions on any matter (in connection with the instant Bidding Documents only) that may be raised at that stage.

Authorised representative(s) of the prospective bidders will be allowed to attend the **Pre-bid meeting**, which will be held on the date, time & at the venue stipulated in the **Schedule of Tender (SoT)**.

The **designated representative(s)**, who will be deputed to attend the **pre-bid meeting**, should submit their authorization in this regard. The signature of such designated person(s) should be attested by the authorized signatory of the prospective bidders. Otherwise, the designated person should have to submit the proof of his identity through other means.

### 5.6.6 The prospective bidders are advised to attend the pre-bid meeting. However, non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**5.6.7** Unless otherwise notified, **all the queries / observations / suggestions / requests for clarification** (related to the instant Bidding Documents only) [including the **queries / observations / suggestions / requests for clarification raised during pre-bid meeting**], received till the date of **pre-bid meeting**, will be considered. **SMP, Kolkata's** response / clarifications (including description of queries / observations / suggestions / requests for clarifications, but without identifying its source), in this regard, will be communicated to all the known prospective bidders (i.e. who would **attend pre-bid meeting** or **submit queries / observations / suggestions or requested for clarification**), in writing, well in advance to the last date of submission of bids. The aforesaid **queries / observations / suggestions / requests for clarification** and **SMP, Kolkata's** response / clarifications will also be hosted in the websites, as specified in the **Notice Inviting e-Tender**.

Any modification to the Bidding Documents, which may become necessary as a result of the **SMP, Kolkata's response / clarifications**, so issued, shall be made through the issue of an addendum / corrigendum, pursuant to **ITB**.

**5.6.8** The Bidder shall be deemed to have **examined** thoroughly the instant Bidding Documents, in full, [considering all addenda / corrigenda issued (if any)], **visited the site & surroundings** and to have **obtained all necessary information in all the matters** whatsoever that might influence while carrying out the job as per the conditions of the instant **Bidding Documents** [considering all addenda / corrigenda issued (if any)] and to satisfy themselves to sufficiency of their bid, etc. If they shall have any issue to be clarified, the same should be brought to the notice of **SMP, Kolkata**, in writing, as set out in **ITB**.

The bidders are advised to acquaint themselves with the job involved at the site, like availability of labour, means of transport, communication facilities, laws and bye laws in force from Government of West Bengal & Government of India and other statutory bodies from time to time. The Bidder shall be deemed to have examined and collected all necessary information as to risk, contingencies and other circumstances, which may be necessary for preparing the Bid.

Visiting the site shall be at the bidder's own expense. Failure to visit to site will no way relieve the Contractor (successful Bidder) of any of their obligation in performing the work and liabilities & responsibilities thereof, in accordance of the contract.

**5.6.9** Particulars of Existing Works

Such information, as may be given in the specification as to the existing features & works, other than those now under construction, as part of the present Haldia Dock Complex, given without warranty of accuracy and neither the Trustees, nor the 'Engineer' will be liable for any discrepancies therein.

**5.6.10** Necessary Gate Pass / Dock Entry Permit, for entering into the Dock area,

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will be issued to the designated representative(s) of the prospective bidders, on chargeable basis [as per the extant “Scale of Rates” of SMP, Kolkata, available at <http://www.kolkataporttrust.gov.in> of **Syama Prasad Mookerjee Port, Kolkata (Formerly Kolkata Port Trust)**], to visit the site, for the purpose of inspection only, on receipt of a formal written request. The signature of such designated person(s) should be attested by the authorized signatory of the prospective bidders. Otherwise, the designated person(s) should have to submit proof of his/their identity through other means.

Such prospective bidder will be fully responsible for any injury (whether fatal or otherwise) to its designated representative(s), for any loss or damage to property, or for any other loss, damage, costs and expenses whatsoever caused, which, but for the granting of such permission, would not have arisen.

The prospective bidder will be liable to indemnify SMP, Kolkata against any loss or damage to the property of SMP, Kolkata or neighbouring property which may be caused due to any act of prospective bidder or their designated representative(s).

## **5.7 Amendment of Bidding Documents**

**5.7.1** At any time, prior to the last date for submission of bids, SMP, Kolkata may, for any reason whether at its own initiative or in response to the **queries/ observations/suggestions/requests for clarification**, amend and modify the bidding documents by issuing Addenda/Corrigenda. Such Addenda/Corrigenda will be hosted in the websites, as specified in the **Notice Inviting e-Tender**.

Any Addendum/Corrigendum, thus issued, shall be part of the bidding documents and shall be communicated, in writing, to all the known prospective bidders (i.e., who would attend Pre-bid Meeting or submit queries / observations / suggestions or request for clarification), in writing, well in advance to the last date of submission of bids.

**5.7.2** To give prospective bidders reasonable time to take the Addendum / Corrigendum into account in preparing their bids, SMP, Kolkata may, at their discretion, extend the last date for submission of the bids, prior to the closing date & time of e-Tendering.

## **C. PREPARATION OF BIDS**

### **5.8 Cost of bidding**

The Bidder shall bear all costs associated with the preparation and submission of their bid, and SMP, Kolkata shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

### **5.9 Language of Bid**

The Bid, as well as all correspondence and documents relating to the bid, exchanged by the Bidder and SMP, Kolkata, shall be written in the **English language only**. If the supporting documents and printed literature, that are part of the bid, are in

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

another language, they must be accompanied by an accurate translation of the relevant passages in the English language, in which case, for purposes of interpretation of the bid, such translation shall govern.

## **5.10 Documents comprising the Bid**

### **5.10.1** The Bid shall comprise of the following: -

#### **(a) Pre-qualification and Techno-commercial Bid:**

The Pre-qualification & Techno-commercial Bid comprises all documents [including the Bidding Forms (provided in these bidding documents), duly filled in, signed and stamped] required to be submitted as per the Notice Inviting e-Tender, Schedule of Tender (SoT), Instructions To Bidders (ITB) and any other relevant clause(s) of these bidding documents.

#### **(b) Price Bid:**

The Price Bid comprises the prices only and the same are to be submitted electronically, through the website of **RailTel [eNivida Portal (<https://kopt.enivida.in>)]** only.

## **5.11 Form of Tender**

The bidder shall have to submit (upload) the “**FORM OF TENDER**”. This form **must be completed without any alterations** to its format [as per Bidding Form-I], and no **substitutes shall be accepted**. All blank spaces shall be filled in with the information requested. Such **duly filled in “FORM OF TENDER”** should be uploaded.

## **5.12 Price Schedule**

**5.12.1** The Bidder shall quote (**through e-Nivida portal only**) a percentage (%) above / below {Less (-) or Excess (+)} / at per with the estimated amount (as a whole) shown in the ‘Price Schedule’ [Section – IX], without any condition or deviation. Price indicated anywhere else, in any other form or manner, will not be considered for evaluation.

**5.12.2** The Bidder should submit (upload) the Bidding Form IX: **PRICE SCHEDULE (including the estimated rates & amounts mentioned therein )** of the instant Bidding Documents, duly signed & stamped as token of acceptance.

## **5.13 Bid Prices**

**5.13.1** The percentage (%) [above / below / at par] is to be quoted by the Bidder **through e-Nivida portal**, considering the work requirements, as detailed in **Section VI (Technical Specification & Scope of Work)** and other terms & conditions of the Bidding Documents (considering all addenda / corrigenda issued).

**5.13.2** Except where otherwise expressly provided, the Contractor shall have to provide all materials, labour, plant and other things necessary in connection with the contract, although everything may not be fully specified, and although there may be errors and omissions in the specifications.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 5.13.3** The percentage (%) [above / below / at par] entered (electronically through e-Nivida Portal) by the Bidder, shall be based on the Price Schedule, which include, inter alia, all costs and expenses involved in or arising out of the following:
- (a) Supply, delivery, inspection, transportation (including insurance), handling, receipt and storage of all required materials [in line with **‘Technical Specification & Scope of Work’ (Section VI)**] and equipment at site.
  - (b) The provision, storage, transport, handling, use, distribution & maintenance of all materials, equipment, machinery and tools, including all costs, charges, dues, demurrage or other outlays involved in transportation.
  - (c) The provisions & maintenance of all their staff & labour and their payment, accommodation, transport, fares and other requirements.
  - (d) All required first aid, welfare and safety requirements.
  - (e) Damage caused to the work and /or construction, plant, materials and consumable stores caused by weather.
- 5.13.4** Tools, Tackles, lifting machineries, scaffolding, temporary lighting, different vehicular transport etc. required for execution of the whole work will have to be arranged by the Contractor, at their own risk, cost & arrangement, which may be considered, while submitting their rates in the offer.
- 5.13.5** Rates & amounts, shown in the **“PRICE SCHEDULE”** [ Section – IX], include all taxes & duties of Central/ State/ Local bodies [excluding Goods and Services Tax (GST)], as applicable, all incidental charges and charges for packing, forwarding, loading, handling, carrying to any lead, stacking, transportation, permits, overheads & profit, etc. necessary for the complete services as described in these Bidding Documents.
- GST, as applicable, shall be paid extra against proper invoice submitted by the Contractor.
- The contractor will be required to submit GST compliant invoice with all required details and also be required to file timely and proper return so as to enable SMP, Kolkata to get due credit against GST paid.
- In case of any failure on the above account, GST amount, even if paid by SMP, Kolkata, shall be recoverable from the Contractor.
- 5.13.6** All price(s), based on the quoted percentage, will remain firm during the validity period of the bid / offer, including any / all extension thereof, agreed by the bidder.
- However, changes **in statutory taxes & duties [other than GST] will be adjusted** (within the scheduled completion period), based on documentary evidence.
- 5.13.7** The Bidder should clearly understand that they shall be strictly required to

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conform to all terms & conditions of the instant Bidding Documents [considering all addenda / corrigenda (if any) issued], as contained in each of its clauses and **plea of “Customs Prevailing”** will not be, in any case, admitted as excuse on their part, for infringing any of the terms & conditions.

No request for change or variation in rates or terms & conditions of the contract shall be entertained on the ground that the successful Bidder has not understood the work envisaged in the instant contract.

#### **5.14 Currencies of Bid**

The Bidders should quote the prices in Indian Rupees (₹) only.

#### **5.15 Period of validity of bids**

**5.15.1** Bids shall remain valid for the period of **180 days** after the bid submission deadline date (considering extension thereof, if any) as prescribed in **ITB**. A bid, valid for a shorter period, shall be rejected by SMP, Kolkata, treating the same as non-responsive.

**5.15.2** In exceptional circumstances, prior to the expiration of the bid validity period, SMP, Kolkata may request the bidders to extend the period of validity of their bids. The request and the responses shall be made in writing.

A Bidder may refuse the request, without forfeiting their Earnest Money Deposit (EMD) or without considering their Bid-securing Declaration (if any). A Bidder granting the request shall not be required or permitted to modify its bid, except when option to do the same has been specifically granted by SMP, Kolkata, in writing.

#### **5.16 Earnest Money Deposit (EMD)**

**5.16.1** The intending bidders should upload Bid-securing Declaration, in lieu of EMD, as specified in the **Schedule of Tender (SoT)**, as all bidders are exempted from submission of **Earnest Money Deposit (EMD)**, in accordance with the procedure mentioned therein.

### **D. SUBMISSION AND OPENING OF BIDS (EXCEPTING PRICE BID)**

#### **5.17 Submission of bids**

**5.17.1** Bidders shall have to submit their bids [both **Pre-qualification & Techno-commercial Bid** and **Price Bid**] on-line **through eNivida Portal only**.

**5.17.2** The Bidder should submit (upload) the scanned copies of all the relevant and required documents, statements, filled up formats, certificates, etc. [in accordance with **ITB**], in the aforesaid portal, in support of their **Pre-qualification Criteria and Techno-commercial Bid**.

**5.17.3** Before scanning the aforesaid documents, all pages are to be signed by a person duly authorised to sign on behalf of the bidder, pursuant to ITB, and are to be embossed with their official seal, owing responsibility for their correctness / authenticity. All pages of the aforesaid documents should be serially marked.

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- 5.17.4** Any inter-lineation, erasures, or overwriting, in the aforesaid scanned & uploaded documents, shall be valid only if they are signed by the aforesaid authorised person.
- 5.17.5** The Bidder will have to produce the original documents or any additional documents, if asked for, to satisfy **Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata.**
- 5.17.6** The **Price Bid** comprised the prices only and the same are to be submitted electronically, through the website of **RailTel [eNivida Portal (<https://kopt.enivida.in>)]** only. *No hardcopy of Price Bid is required to be uploaded.*
- 5.18 Techno-commercial offer**
- 5.18.1** No techno-commercial deviation and variation will be considered by SMP, Kolkata, except where the Techno-commercial terms and conditions, will be found as impossible and irrelevant to the bidder.
- 5.18.2** If the Bidder deliberately gives wrong information or conceals any information / fact in their bid, which shall be favourable for acceptance of their bid, fraudulently, then the right to reject such bid at any stage of execution, without any financial liability, is reserved by SMP, Kolkata.
- 5.19 Priced offer**
- The Bidder should quote the percentage appropriately in the PRICE BID, electronically, through the website of **RailTel [eNivida Portal (<https://kopt.enivida.in>)]** only. *Price indicated anywhere else, in any other form or manner, would not be considered for evaluation.*
- 5.20 Deadline for submission of bids**
- 5.20.1** Bids must be submitted within the closing date & time **indicated in the Schedule of Tender (SOT).**
- 5.20.2** SMP, Kolkata may, at its discretion, *extend the deadline for the submission of bids, prior to the closing date & time of e-Tendering*, by amending the Bidding Documents, in accordance with **ITB**, in which case all rights and obligations of SMP, Kolkata and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 5.21 Late Bids**
- This e-Procurement System would not allow any late submission of bid, after the closing date & time, as per the **Schedule of Tender (SoT)** or extension, if any.
- 5.22 Withdrawal of bids**
- 5.22.1** A Bidder may withdraw, substitute, or modify their bid on the e-Procurement System, before the closing date and time specified, but not beyond.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**5.22.2** No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified in the “**FORM OF TENDER**” or any extension thereof. Modification / Withdrawal of the bid sent through any other means shall not be considered by SMP, Kolkata.

**5.22.3** Withdrawal of bid during the interval between such closing time on due date and expiring of the bid validity period, may result in disqualification from bidding for any contract with HDC, SMPK for a period of three years from the date of notification, in line with ‘Bid-securing Declaration’.

**5.23 Bid opening [excepting Price Bid]**

**5.23.1** The bids [**excepting Price Bids**], will be opened at the date & time, indicated in the **Schedule Of Tender (SOT)**.

**5.23.2** The on-line bid-opening event may be viewed by the bidders at their remote end, by logging on to the eNivida Portal of RailTel.

**E. EVALUATION OF BIDS**

**5.24 Confidentiality**

**5.24.1** Information relating to the evaluation of bids and recommendation of contract award shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the contract award.

**5.24.2** Any attempt by a Bidder to influence SMP, Kolkata in the examination, evaluation and comparison of the bids, or contract award decisions may result in the rejection of their bid and forfeiture of EMD, if any.

**5.24.3** Notwithstanding **ITB Clause No. 5.24.2**, from the time of bid opening to the time of contract award, if any Bidder wishes to contact SMP, Kolkata on any matter related to the bidding process, they should do so in writing.

**5.25 Clarification of bids**

To assist in examination, evaluation & comparison of the bids and qualification of the bidders, the Employer (SMP, Kolkata) may, at their discretion, ask any bidder for a clarification of their bid. The Employer (SMP, Kolkata) may also ask any bidder to withdraw any terms/conditions mentioned by them in their offer, which are not in conformity with the terms & conditions specified in the bidding documents. In case any bidder fails to submit required clarification within the time stipulated by the Employer (SMP, Kolkata), in this regard, the tender would be processed in absence of the clarifications, which may result in disqualification of the corresponding bidder for the instant tender. Any clarification submitted by a bidder, which is not in response to a request by the Employer (SMP, Kolkata), shall not be considered. The Employer’s request for clarification and the response shall be in writing.

No change in the prices or substance of the bid shall be sought, offered or permitted, nor will the bidder be permitted to withdraw their bid before expiry of the validity period of the bid.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **5.26 Deviations, reservations and omissions**

During the evaluation of bids, the following definitions apply:

- (a) “Deviation” is a departure from the requirements specified in the bidding documents;
- (b) “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the bidding documents; and
- (c) “Omission” is the failure to submit part or all of the information or documentation required in the bidding documents.

## **5.27 Responsiveness of bids**

**5.27.1** Responsiveness of a bid would be determined on the basis of the contents of the bid itself, and clarification(s) in accordance with **ITB**.

**5.27.2** A substantially responsive bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

- (a) if accepted, would
  - i) affect in any substantial way the scope, quality, or performance of the work specified in the Contract; or
  - ii) limit in any substantial way, inconsistent with the Bidding Documents, SMP, Kolkata’s rights or the bidder’s obligations under the proposed contract; or
- (b) if rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

**5.27.3** Bidders shall not contain the following information / conditions to consider them responsive:

- (a) Either direct or indirect reference leading to reveal the prices of the bids in the Techno-commercial offers;
- (b) Adjustable prices, other than the provisions stated in **ITB**.

**5.27.4** If a bid is not substantially responsive to the requirements of the bidding documents, it shall be rejected by SMP, Kolkata and may not subsequently be made responsive by the bidder, by correction of the material deviation, reservation, or omission.

## **5.28 Nonconformities, errors and omissions**

**5.28.1** During examination, evaluation & comparison of the bids and qualification of the bidders, the Employer (SMP, Kolkata) may, at their discretion, ask any bidder for submitting any document(s) [in case of shortfall in required documents (relating to capacity or otherwise)]. In case any bidder fails to submit required documents within the time stipulated by the Employer (SMP, Kolkata), in this regard, the tender would be processed in absence of the documents, which may result in disqualification of the corresponding

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

bidder for the instant tender.

Any document submitted by a bidder, which is not in response to a request by the Employer (SMP, Kolkata), shall not be considered. The Employer's request for submission of further document(s) shall be in writing.

**5.28.2** SMP, Kolkata shall examine the bids [including the further documents / clarifications received in accordance with **ITB**] to confirm that all documents requested in **ITB** have been provided and to determine the completeness of each document submitted.

**5.28.3** Provided that a bid is substantially responsive, SMP, Kolkata may waive any nonconformities or omissions in the bid that do not constitute a material deviation.

## **5.29 Examination of Pre-qualification Criteria**

**5.29.1** At first, the contents of the documents, submitted in support of the Pre-qualification Criteria [including the further documents / clarifications received in accordance with **ITB**] will be scrutinized and evaluated.

**5.29.2** SMP, Kolkata may, at their discretion, seek any other detail(s)/document(s), in subsequent course, to ascertain and get confirmed about the competence of the bidder. In case any bidder fails to submit required detail(s)/document(s) within the time stipulated by the Employer (SMP, Kolkata), in this regard, the tender would be processed in absence of the documents, which may result in disqualification of the corresponding bidder for the instant tender. While evaluating Pre-qualification Criteria, regard would be paid to National Defence and Security considerations of the Indian Government.

**5.29.3** In case it is found that the Pre-qualification Criteria has not been fulfilled by the bidder or otherwise their participation has not been found acceptable to SMP, Kolkata, the respective bid will be treated as non-responsive and "Price Bid" of the respective Bidder will not be considered further.

## **5.30 Examination of Techno-commercial offer**

**5.30.1** After scrutiny of the **Pre-qualification Criteria, Techno-commercial Bids** of the Pre-qualified bidders [as indicated above] will be scrutinized & evaluated.

**5.30.2** SMP, Kolkata shall examine the bid to confirm that all terms and conditions specified in the '**Technical Specification & Scope of Work**' (Section VI), **General Conditions of Contract** (Section VII) and **Special Conditions of Contract** (Section VIII) have been accepted by the bidder without any material deviation or reservation or omission.

**5.30.3** If on examination of the "**Techno-commercial Bid**" of pre-qualified bidders, it is found that they have not accepted all Techno-commercial terms & conditions of the Bidding Documents [considering all addenda / corrigenda, issued], "**Price Bid**" part of such bidder(s) will not be considered. Decision of SMP, Kolkata on this matter shall be final.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**5.30.4** The evaluation is also subject to compliance of revised 'Public Procurement (Preference to Make in India), Order 2017' dated 16.09.2020, issued by Government of India, Ministry of Commerce and Industry, Department of Promotion of Industry and Internal Trade (Public Procurement Section), vide No. P – 45021/2/2017-PP (BE– II) dated September 16, 2020, pursuant to Rule 153 (iii) of the General Financial Rules 2017.

Bidders are, accordingly, advised to go through the same including subsequent amendment, if any, thereof to appreciate its implication in the instant tender and act accordingly. In case the aforesaid 'Preference to Make in India' order is found applicable, necessary documents, in this regard, shall be submitted by the concerned Bidder.

### **5.31 Opening of Price Bid**

**PRICE BIDS** of the bidders, who qualify in the "Pre-qualification & Techno-commercial Bid", will only be considered for evaluation. Such **PRICE BIDS** will be opened on a later date, upon due intimation to the concerned bidders at their address furnished by them in their bid.

The on-line price-bid opening event may be viewed by the bidders at their remote end, by logging on to the e-Procurement System. A copy of the price-bid opening record shall be made available on the e-Procurement System.

### **5.32 Comparison & Evaluation of Price-Bid and selection of Successful Bidder**

**5.32.1** While evaluating the Price Bids, the percentage (%) [above / below/ at par] quoted by the bidders shall be taken into account and accordingly 'TOTAL PRICE' [considering all items of the "Price Schedule"], will be arrived at. Selection of the successful bidder will be made on the basis of overall lowest offer, thus arrived, subject to acceptance of all terms & conditions of the instant Bidding Documents.

Evaluation will be done based on the quoted percentage (%) only and no GST will be added, during evaluation.

No additional amount [except applicable GST] would be paid by SMPK to the Contractor.

**5.32.2** In case it is found that the quoted **percentage (%) [above / below/ at par]** is same for two or more bidders and their bids become the lowest, the respective bidders will be given chance to submit their fresh Price Bid, subject to the condition that the revised "**TOTAL PRICE** [considering all items of the "**Price Schedule**"] arrived, considering the fresh **percentage (%) [above / below / at par]**, must be less than the "**TOTAL PRICE**" arrived earlier.

**5.32.3** The MSE's registered with NSIC / DIC shall not be eligible to get any benefit other than exemption from payment of EMD & Cost of Bidding Document as per New Public Procurement Policy as notified by the Govt. of India, Ministry of Micro Small & Medium Enterprises (MSME) in the Gazette of India vide no. 503, dated 26.03.2012, as splitting of the work can not be done, it being a composite work.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 5.32.4** It is not obligatory on the part of SMP, Kolkata to accept the lowest bid. They reserve the right to accept a tender in full or in part and / or reject a tender without assigning any reason thereof.
- 5.32.5** In the event of acceptance of tender in part, the rate(s) against each of the item(s) constituting the order shall be identical to the rate(s) for the corresponding item(s), based on the percentage quoted in the Price Bid and tender terms & conditions shall also remain unaltered. Irrespective of whether order is placed on part or, on the whole, no plea for subsequent withdrawal or the amendment will be entertained.
- 5.33 SMPK's right to accept any bid and to reject any or all bids**
- 5.33.1** SMP, Kolkata reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.

**F.**

**AWARD OF CONTRACT**

- 5.34** Subject to **ITB Clause No. 5.33.1**, SMP, Kolkata shall award the contract to the Bidder whose offer has been determined to be the lowest evaluated bid [as per **ITB Clause No. 5.32**] and is substantially responsive to the Bidding Documents.
- 5.35 Notification of award**
- Prior to the expiration of the period of bid validity or extended validity in accordance with **ITB**, SMP, Kolkata shall notify the **Successful Bidder**, in writing, that their bid has been accepted. The notification letter (hereinafter called the "**Letter of Acceptance**") will be treated as "**Order Letter**" and will constitute the formation of the contract. Such order letter shall specify the "**Contract Price**" in line with **SCC Clause No. 8.4.4 a)**.
- 5.36 Signing of contract agreement**
- 5.36.1** After placement of order, **contract agreement** [as per the form furnished in **Section- XI**] should be executed between **Syama Prasad Mookerjee Port, Kolkata** and the **Contractor (Successful Bidder)**. In this respect, within a week of receipt of intimation regarding acceptance of their bid, the successful bidder shall have to submit, at their cost, required **Stamp Paper** [Non-judicial Stamp Paper of worth not less than **₹50.00**] & **dummy papers**.
- 5.36.2** The **contract agreement form & Contract Documents** should be signed by the authorized persons of the Contractor, authorized in this respect.
- 5.36.3** Two sets of executed **Contract Agreement**, duly signed by authorised person of SMP, Kolkata & authorized person of the Contractor (Successful Bidder), will be kept under SMP, Kolkata's custody, after affixing the Common Seal of SMP, Kolkata.
- One set of such **executed Contract Agreement** will be handed over to the Contractor for their record & future reference.
- 5.36.4** Total process of executing contract agreement should be completed within 21 days of issuance of "Letter of Acceptance" by SMP, Kolkata. Until such contract agreement is executed, the other documents referred to the

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

definition of the term “Contract” [SCC Clause No. 8.4.1 a)], shall collectively be the contract.

**5.37 Security Deposit and / Performance Guarantee**

- 5.37.1** Within 28 (**twenty-eight**) days of issuance of “**Letter of Acceptance**” by SMP, Kolkata, the Successful Bidder shall provide the **Security Deposit / Performance Guarantee** in accordance with the **Special Conditions of Contract (SCC)**.
- 5.37.2** Failure of the successful bidder to submit the above-mentioned **Security Deposit / Performance Guarantee** or sign the contract agreement shall constitute sufficient grounds for the annulment of the award, including forfeiture of the **EMD**, if any.
- 5.37.3** All costs, charges & expenses, including Stamp Duty, shall be borne by the Successful Bidder.
- 5.37.4** No interest / charge, of whatsoever nature, shall be paid by SMP, Kolkata on the amount of **Security Deposit / Performance Guarantee**, held by them, at any stage.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **SECTION - VI**

### **TECHNICAL SPECIFICATION & SCOPE OF WORK**

#### **A. Scope of Work:**

##### 6.1 Scope of Work includes-

- 6.1.1 Supply, Installation, Testing & Commissioning of following outdoor type Diesel Generator Sets, alongwith Acoustic Enclosures & all accessories like Base Frame, Silencer, Exhaust Piping, Fuel Tank, Fuel Piping (with Valves), Battery for Starting, Battery Charging Dynamo / Alternator, Control Panel, Engine Instrument Panel, Control Cable, etc.  
:
  - i) 1010 kVA (11 kV) DG Set at Substation-3.
  - ii) 500 kVA (415 V) DG Set for Guest House, Port House & DC Bungalow.
  - iii) 250 kVA (415 V) DG Set for Port Hospital.
- 6.1.2 Design, Supply, Installation, Testing & Commissioning of
  - i) Microprocessor / PLC based Auto Mains Failure (AMF) panel, with distribution cubicle switchboard [1600 A, 24 Way LT Distribution Panel, with 1250 A ACB Bus Coupler in between], including all accessories.
  - ii) Microprocessor / PLC based Auto Mains Failure (AMF) panel, with distribution cubicle switchboard [1200 A, 38 Way LT Distribution Panel, with 800 A ACB Bus Coupler in between], including all accessories.
- 6.1.3 Supply and laying (including end termination) of
  - i) 11 kV grade, 1 Core, XLPE insulated, galvanised steel armoured stranded aluminium conductor, power cable, from DG Set [1010 kVA] to HT (11 kV) panel to Main HT panel.
  - ii) 1.1 kV grade, 1 Core, XLPE insulated, galvanised steel armoured stranded copper conductor, power cable, from DG Sets [500 kVA & 250 kVA] to AMF panel to Main Load distribution panel.
- 6.1.4 Supply & Laying (including end termination) of 1.1 kV grade, 3 ½ Core, XLPE insulated, galvanised steel armoured, aluminium conductor, power cable.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



- 6.1.5 Supplying & laying of heavy, galvanized, mild steel tubes (including sockets), as required.
- 6.1.6 Supply & installation of Outdoor Junction Box [double door], fabricated from SS316 grade sheet steel.
- 6.1.7 Internal wiring of the Panel Room and Covered Shed.
- 6.1.8 Providing Earthing Stations for Neutral Earthing of DG Sets, non-current carrying metal parts and Lightning Spikes.
- 6.1.9 In connection with the instant work, the site & working areas need to be kept free from surplus materials, rubbish, offensive materials, etc. and the same are to be disposed off by the Contractor.
- 6.2 Scope of Work for Civil Works-
  - 6.2.1 Making suitable RCC foundation for installation of acoustic enclosures (inbuilt with D G sets), Covered Shed for the Diesel Generator Sets (including structure for fixing Exhaust Pipeline), RCC Cable Trench (with RCC cover), Panel Room (with trench & chequered plate), PCC pathway, Chain link fencing, etc.
  - 6.2.2 The major scope of work shall be:-
    - (i) Earth work in excavation in foundation.
    - (ii) Earth work in excavation in foundation trenches.
    - (iii) Dismantling cement brick work.
    - (iv) Supplying and laying polythene sheet.
    - (v) Provide and build brick work in foundation and plinth etc..
    - (vi) Providing and building of brick work in cement and sand mortar.
    - (vii) M/s. Tor reinforcement (TATA/SAIL/RINL or equivalent).
    - (viii) Providing and laying of ordinary cement concrete mix.
    - (ix) Hire and labour charges for shuttering.
    - (x) Providing and laying of cement plaster to exterior surfaces.
    - (xi) Supplying and fixing colour coated trapezoidal profile sheet conforming to IS:15965 of TATA / Bhushan / JSW make.
    - (xii) Providing and applying synthetic distemper to interior wall, ceiling with a coat.
    - (xiii) Provide and apply one coat of ready mixed zinc chromate yellow primer.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- (xiv) Provide and lay paint on steel work.
  - (xv) Applying two coats of protective and decorative acrylic exterior emulsion paint.
  - (xvi) Supply, fit and fix single socketed 110 mm. dia. of 3.00 M long UPVC pipe (Type A).
- 6.2.3 All the items of works as detailed above shall have to be carried out as per specification and as detailed in the “Bill of Quantities”.
- 6.2.4 The scope of work also includes all other ancillary and appurtenant works as set forth in the attached Bill of Quantities in accordance with specifications for materials and workmanship as per this tender, relevant BIS codes, specifications as detailed in M.O.R.T.H Specifications and PWD, West Bengal’s Schedule of Rates for Road & Bridge Works and Building Works (Latest editions).

**B. General Requirements :**

- 6.3 Before commencement of execution, ‘General Arrangement Drawings’, as well as detailed Drawings, shall have to be got approved by the ‘Engineer’.
- 6.4 The electrical works will be executed to comply with the General Specifications for Electrical works and conforming to the Indian Electricity Act & rules, BIS and direction of the Engineer.
- 6.5 The electrical work shall be carried out by a Contractor, having **valid Electrical Contractor’s Licence** issued by the competent authority [under relevant rules of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, as amended upto date], under the direct supervision of a person having a valid **Supervisor’s Certificate of Competency (SCC)**, issued by the appropriate statutory authority, against the relevant parts, for carrying out such type of job [i.e. Wiring for systems not-exceeding 650 V, Alternating Current (A.C.) Apparatus upto 650 V and Underground cables upto 11000 V ]
- 6.6 The skilled workmen engaged by the Contractor for the electrical work must possess a valid Workman Permit (W.P.), issued or recognised by the competent authority [under relevant rules of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, as amended upto date], against the relevant parts, for carrying out such work.
- 6.7 The skilled workmen engaged by the Contractor for cable laying related electrical work [cable laying and jointing] must possess a valid Workman Permit (W.P.), issued or recognised by the competent authority [under relevant rules of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, as amended upto date], against the relevant parts, for carrying out such work.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 6.8 The Contractor shall be liable to submit the list of aforesaid Licence / Workman Permit holder, along with the attested copies of the of the Licence / Workman Permit, during execution.
- 6.9 The entire job should be executed in accordance with the requirements of following Acts and rules, including latest amendments:
- a) Indian Electricity Rules – 1956
  - b) Electricity Laws (Amendment) Ordinance, 1997
  - c) Central Electricity Authority Rules, 1977
  - d) Central Electricity Authority Regulations, 1979
  - e) Indian Electricity Act, 2003
  - f) Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010
- 6.10 The supply, installation and commissioning of all items required for this work should be complied with the above Acts & Rules and relevant Code of Practice of the **Bureau of Indian Standard**, including **National Electrical Code (NEC)** and **National Building Code (NBC)** of India, if not specified otherwise.
- 6.11 The Contractor shall engage qualified / experienced / skilled personnel to carry out the works in all respects at their own cost. The Contractor will engage suitable qualified / experienced & licensed engineering supervisor for the electrical work and suitable skilled personnel, with required permit, for doing the erection work.
- 6.12 All materials required for the entire work and apparatus used therein, shall conform to relevant specifications of the Bureau of Indian Standard (BIS) or International Electrotechnical Commission (IEC), as applicable, if not specified otherwise in this Bidding Document.
- All materials should be inspected before installation. Only accepted materials will be allowed for installation. Necessary consent should be obtained from the 'Engineer' or his representative, before using any material / equipment/ apparatus.
- Major items like Diesel Generator Set, AMF Panel (including LT Distribution Panel), cable, etc. may be inspected at factory before despatch.
- Nothing in this specification shall be construed to relieve the Contractor of their responsibility for providing the equipment, with all accessories, in accordance with applicable statutory regulations and safety codes in force, from the safety angle.
- 6.13 The Contractor holds responsibility for executing the entire job as per relevant specifications. If any item is left out within the schedule of work but if it is considered essential for the completion of the job, the Contractor shall have to carry out the items as extra / substituted item.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 6.14 The Contractor should use calibrated measuring & testing instruments [ having Valid Calibration Certificate] and should also ensure revalidation of such calibration as and when required. In this regard, initially the Contractor shall have to submit a list of measuring and testing instruments (mentioning the period of validity of Calibration Certificates) to be used. The photocopies of the Calibration Certificates (including the revalidations) of the said measuring and testing instruments, shall have to be submitted to the 'Engineer'.

Calibration Certificate of instruments / equipment, used for testing purpose, should be issued by an NABL accredited Laboratory. For testing equipment where NABL accreditation is not available, calibration certificate from educational institutions like IITs, NITs, J.U., C.U., B.H.U. only can be accepted, provided they demonstrate traceability.

- 6.15 In connection with aforesaid work, transportation and handling of all materials, should be done by the Contractor at their own risk, cost and arrangement.
- 6.16 In connection with the aforesaid work, all materials, will be under the custody of the Contractor, till installation / fixing / commissioning of the same.
- 6.17 The Contractor must make their own arrangements for delivery of all materials, as well as for careful and proper unloading at HDC's site. The responsibility for preventing damage / deterioration to the materials during transit, delivery, unloading at the designated point shall rest with the Contractor. All transit risk will be to Contractor's account.
- 6.18 The Contractor shall arrange all necessary labour, tools, tackles, lifting machineries, scaffolding, temporary lighting, different vehicular transport, equipment (with fuel & operator), etc., required for satisfactory execution of the entire work, at their own risk, cost and expense. Special tools, which would be required during execution of the work, shall also have to be arranged by the Contractor, at their own risk, cost and expense.
- 6.19 The Contractor shall have to make arrangements, at their own risk & cost, for transportation of materials from the point of issue of stores to site of work, if any.
- 6.20 Electricity and water, if required, will be provided on chargeable basis.
- 6.21 All practical steps shall be taken to prevent danger to persons employed from the risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris of materials as to render it unsafe.
- 6.22 The Contractor shall provide necessary barriers, warning signals and other safety measures, to avoid accidents. They shall also indemnify HDC, SMP, Kolkata, against claims for compensation arising out of negligence in this respect.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 6.23 All necessary personnel safety equipment, as per relevant statutory provisions, should be kept available for the use of the persons employed (directly or indirectly on the instant work) on the site and the Contractor should take adequate steps to ensure proper use of safety equipment by those concerned.
- 6.24 The ordinary business and work of HDC, SMP, Kolkata & others, as being carried out on & in the vicinity of the site, shall be continued during installation, testing & commissioning and maintenance. The execution of the work shall be conducted in such a way as to avoid interference with traffic of every kind by land and with any other work in progress in the vicinity.
- 6.25 Inspection / acceptance, in no way shall absolve the Contractor from supplying material as per standards / codes and other obligations under the contract.
- 6.26 Any materials brought for work which is not matching with the relevant specification will be rejected and the rejected materials shall be removed from site on the same day.
- 6.27 A register (Site Work Register with Hindrance Record) is required to be maintained by the Contractor on daily basis with details of works carried out on that particular day, where details regarding engagement of labourers, equipment, receipt of materials and cause of hindrance, if any, shall be recorded jointly [ by the representatives of the Engineer & the Contractor].

Representative(s) of the Contractor shall have to check the register for any instructions of 'Engineer' or his authorized representative and sign the same for compliance with the instructions recorded therein.

Any instruction issued by the 'Engineer' or his authorized representative, which has been entered in the Site Work Register, shall be deemed to have been legally issued.

This Site Work Register (s) shall be the property of HDC, SMPK and shall be returned to the representative of the 'Engineer' in good condition, after the completion of the work.

- 6.28 The Contractor shall maintain a Site Order Book at their site office. All orders and instructions issued to them from time to time by the 'Engineer' or his representative will be recorded in the Site Order Book. The authorized representative of the Contractor shall promptly sign each entry as token of having received such orders.

Any order or instruction issued by the 'Engineer' or his authorized representative, which has been entered in the Site Order Book, shall be deemed to have been legally issued.

This Site Order Book(s) shall be the property of HDC, SMPK and shall be returned to the representative of the 'Engineer' in good condition, after the completion of

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

the work. Photocopy of the same may be retained by the Contractor, for their record.

- 6.29 Relevant aspects of following Rules / Code of Practices should also be followed and complied with:
- a) Indian Factories Act
  - b) Dock Workers (Safety, Health & Welfare) Act, 1987
  - c) The Workmen's Compensation Act, 1923
  - d) The Minimum Wages Act, 1948
  - e) The Contract Labour (Regulation & Abolition) Act, 1970
  - f) Other Local Regulations.
- 6.30 If during execution of work any damage takes place in the property of HDC, the same will have to be mended good by the contractor at their risk, cost and arrangement. Otherwise the same will be repaired / replaced by HDC, either departmentally or through outside agency and the cost of repairing / replacement will be **recovered from the Contractor, along with overhead charges @19.25%.**
- 6.31 No project surplus material will be taken over by HDC, SMP, Kolkata, after completion of the work.

**C. Detailed Technical Specification:**

**6.32 1010 kVA (11kV) Diesel Generator Set:**

**6.32.1 General**

This work includes design, manufacture, testing at the Contractor's works, inspection, packing, delivery to site, erection, testing and commissioning of 01 no. 1010 kVA outdoor Diesel Generator Set with all accessories at 11kV Substation-3 of Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata . The Diesel Generator Set (Engine-Alternator Set) should be factory assembled, factory tested and capable of delivering not less than 1010 kVA, at 0.8 Power Factor.

The Diesel Generator Set, comprising of Diesel Engine, coupled & aligned with AC Alternator on a common base frame [complete with Anti-Vibration Mounts (AVM Pad)], should be provided with all standard accessories as per updated standards & technology, viz. fuel tank, exhaust flexible piping, fuel piping (with valves & other fittings for supply & return lines), fuel transfer pump (with hose pipe & clip ), lead-acid batteries for starting, residential grade silencer, suitable electronic governor , battery charging dynamo / alternator (with manual

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

control panel), Engine Instrument panel, copper conductor control cable, etc.

The Generator shall have Brushless excitation system with Automatic voltage regulators. Except where specified herein otherwise, all material, equipment and construction shall conform to the Indian Electricity Act and Rules and following Standards with latest revisions

- Diesel Engine : BS:5514
- Alternator : BS:5000 , IS:4722, IS: 5422, IEC - 60034

The DG shall be complete with common base frame for mounting on a foundation block and shall include adequate number of foundation bolts & anti-vibration pads, as required. Alignment shims, as required, shall also be provided.

The DG Set shall also have engine protection unit and sensors for winding & bearing temperature monitoring. The DG Set shall be complete with acoustic enclosure as per CPCB norms and standards. DG sets shall also have standard instrument panel, with lube-oil pressure gauge & temperature gauge, including safeties against over speed, low lube-oil pressure & high temperature conforming to specifications and with emergency stop buttons.

Necessary approval of the installation from statutory authorities shall be taken, if required. The exhaust shall be discharged through silencer and stack at a sufficient height complying the pollution control board requirements. DG set including stack height, acoustics, air emission and fuel oil installation shall meet the requirement given by gazette notification of Ministry of Environment & Forest, CPCB guidelines, all statutory requirements of Govt. of India and State Pollution Board Guidelines.

Critical speed of the machine shall not be lesser than 120% of the normal speed.

All couplings shall be capable of withstanding the maximum generator sudden short circuit torque.

The fuel tank is to be provided with drain plug, air vent, inlet & outlet connection, level indicator and provision for cleaning. A hand operated fuel transfer pump, with 5 m length hosepipe, should be supplied by the Contractor.

Necessary ducting, piping, valves, drains, etc. shall be provided.

Maintenance and erection tools & tackles for all the equipment shall be provided by the Contractor.

The engine alternator sets shall be tested at factory, before dispatch to site.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

#### 6.32.2 **Diesel Engine**

The Diesel Engine should be confirming to BS 5514/ISO 3046.

The Diesel Engine shall be of stationary type and directly coupled to the Generator. The engine shall be capable of driving the generator at 10% overload at the rated speed for one hour, in any specified 12 hrs of continuous operation.

The engine shall be air cooled / water cooled (with separately or machine mounted radiator fans).

Electrical starting arrangement complete with starting DC motor, starter, batteries and battery charger shall be provided. The electric starting system suitable for minimum six (6) starts shall be used. No external power shall be used for starting of the engine.

An efficient heavy duty residential type silencer, suitably optimised to meet noise emission standards laid down by MoEF / CPCB for the exhaust, shall be provided. For silencer there shall be Insertion loss of 25 dBA at 1 m from exhaust pipe under free field condition. A test certificate to this effect shall be furnished.

The exhaust pipe line shall be of suitable diameter for fixing the residential grade silencer with suitable supports at suitable intervals with all its accessories such as bends, flanges, couplings etc. (including rain cap at the end to prevent the water entering inside). The silencer shall be mounted so that its weight is not supported by the engine.

The exhaust pipe line shall be with thermal insulation with Lightly Resin Bonded (LRB) mattresses, covered with wire mesh and clad with aluminium sheet.

The diesel engine shall be of four stroke cycle multi-cylinder, air-cooled / water-cooled, turbo charged with after cooler, developing required BHP @ 1500 rpm under NTP condition of BS 5514 with an over load capacity of 110% for one hour in any specified 12 hrs of continuous operation.

The Engine should have standard integral set-mounted radiator system, designed and tested for 50°C ambient temperature.

#### **Diesel Engine Constructional Features**

Diesel engine shall be mounted on vibration dampening system and shall be complete with integral air intake through dry type air filters and exhaust systems, metering facility, speed regulation system, fuel injection system, lube oil system, primary cooling system along with necessary filters, silencers, ducts, piping and fittings, valves, instruments, etc. as required.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



The generating unit shall be complete with all auxiliaries and its performance, torsional vibration, materials and workmanship, etc. shall be in accordance with IS-10000 or equivalent. The engine shall be properly balanced so as to transmit only small unbalanced forces to the foundation.

**6.32.3 Fuel Systems / Fuel Tank:**

Codes and standard :: IS:3977

The diesel oil system, as provided, shall be complete with duplex type filters, hoses, piping, fittings, relief valves, supports, control and instrumentation and all other accessories to make it complete.

It should contain pressure-time (PT) fuel system with Electronic Step Timing Control (ESTC) injectors, which smoothly stabilise Engine speed under load with A1 class Electronic governing. It should also contain Dual fuel filter system which is a pre filter including water separator & Water In Fuel (WIF) sensor and main filter.

Daily fuel service tank of minimum capacity of 990 Litre, fabricated from M.S. sheet with inlet & outlet connections, air vent tap, drain plug, level switch, level indicator (gauge, marked in Litre), M.S. fuel piping from tank to engine (with valves, unions, reducers), flexible hose connection and floor mounting pedestals, twin fuel filters, fuel injectors, etc.. The location of the tank shall depend on standard Manufacturer's Design.

The fuel tank shall be painted with oil resistant paint. All pipe joints shall be brazed/ welded.

**6.32.4 Lubrication :**

Lubrication shall be positive pressure type lubricating for all moving parts. No moving parts shall be required lubrication by hand either prior to the starting of the Engine or while it is in operation. Lubrication oil shall conform to relevant IS (with latest amendment). Temperature & Pressure gauges shall be fitted to the lubricating system.

Automatic pressure lubrication shall be provided by a shaft driven gear type pump through an oil cooler and fin mesh filters to the end bearing, camshaft bearings, camshaft chain and gear drives, governor, air starting, distribution, auxiliary drive gears etc.

If pre-lubrication is required before starting of the DG set, then one electrically operated and one standby Diesel Engine operated lube oil pump shall also be provided for the purpose.

All necessary accessories like pressure gauges, temperature & oil level indicators, pressure relief valves, bypass valves, pressure switches for

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alarm & control shall be provided together with all interconnecting piping, fittings, supports, valves, etc.

6.32.5 **Cooling System**

Totally air cooled is preferable. However, in case jacket water cooling system is offered, same shall be in closed cycle and shall have radiator located in front of the engine with a fan driven mechanically from the engine shaft. Forced water circulation by means of pump driven by the engine shaft shall be employed. As an alternative to radiator located in front of the engine with a fan driven mechanically from the engine shaft, separately located radiator (which will be located outside the DG room) with motor driven fan directly fed from alternator terminals, through DG Control & relay Panel. The radiator tube shall be of copper with sufficient transfer area.

6.32.6 **Governing System**

The governor shall be A1 type as per BS-5514.

The governor shall have necessary characteristics to maintain the speed substantially constant even with sudden variation in load. However, a tripping shall be provided even if speed exceeds the maximum permissible limit.

A mechanical over speed trip device shall be provided to automatically shut-off fuel in case the speed exceeds 110% of the rated value.

6.32.7 **Generator**

Alternator, conforming to IS/IEC 60034-1 and BS 2613/5000, IS 4722 (with latest amendment) should be capable of generating 1010 kVA at 0.8 PF, 11 kV, 3 Ph, 50 Hz, AC system, while operating at 1500 r.p.m. and suitable for direct coupling with the above diesel engine.

The generator shall be rated for 11kV, 3 phase, 50 Hz supply. The power factor shall be 0.8 (lag). It shall be mounted on a common base frame together with the prime mover.

The generator shall be totally enclosed air-cooled type.

In the stator winding six nos. resistor temperature detectors shall be provided. Space heaters suitable for operation on 1 phase, 240V AC shall also be provided.

The generator shall be provided with complete excitation system with automatic voltage regulator (AVR).

The generator shall be provided with two (2) grounding terminals with clamps suitable for connection to the grounding grid.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Providing Earthing pits & necessary earthing connection ( using proper GI Flats) for the Body of the Diesel Generator Set, is under the scope of the Contractor.

The alternator shall be copper wound of totally enclosed [IP 23 protection] , screen protected type, with Class 'H' insulation (limited to temperature rise of class H), designed & constructed to withstand tropical conditions. The alternator shall be brushless revolving field type & self regulated through AVR.

It should contain 3 Phase reconnectable windings, with 12 terminals brought out for connection. It should have better motor starting capability and best in class efficiency. It should contain impregnation on all wound components for better mechanical strength.

It should have compact design with sealed bearings for longer life and lesser maintenance.

6.32.8 **Combustion System**

Suitable thermal insulation together with jackets shall be provided on all exposed hot pipes and equipment to limit the surface temperature to 600°C.

6.32.9 **Battery and Charger**

The battery shall conform to the requirements of IS: 7372. A suitable battery charger, using semiconductor rectifier, shall be provided to recharge the battery.

Battery charger of suitable rating [provided with suitable ammeter & voltmeter] shall be of semiconductor type, with automatic boost cum trickle selection [with auto cut off facility], for charging from AC mains. The charger shall have necessary arrangement for controlling charging current, during charging. The battery & battery charger shall also feed the control supply to the control panel. The capacity of the battery & battery charger should be those considered accordingly.

The aforesaid Battery Charger shall be provided by the Contractor, in addition to the existing dynamo of the Engine.

The battery for starting the engine shall be capable of performing six (6) normal starts without recharging. In any case, continuous cranking for at least one minute shall be possible. The charger shall be protected by a suitable current limiting device.

AC & DC wirings of Battery Charger, by suitable copper conductor, is under the scope of the Contractor.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

#### 6.32.10 **Air Intake and Exhaust System**

The air intake and exhaust system shall be provided with:

- i) Air intake filter and silencer.
- ii) Exhaust gas driven turbocharger.
- iii) Charge air cooler.
- iv) Exhaust gas silencer.
- v) Necessary exhaust pipe, supports, hangers, expansion joints and insulation.

Exhaust piping of adequate length , using adequate size M.S. Pipe, insulation, aluminium cladding for residential silencers , SS flexible bellows, Lightning Arrestor, Aviation light (with power backup) , etc. should be provided by the Contractor, alongwith the Diesel Generator Set.

Exhaust stack, shall be supported on iron structure [ to be fabricated by the Contractor , under Part-C ( Preparatory Civil Work) of the Price Schedule].

Detailed Technical Specification of the exhaust system has been given separately.

#### 6.32.11 **Earthing**

Complete earthing of the Diesel Generator Set, including Lightning Arrestor, shall be provided by the Contractor as per relevant Standard. Following earth pits shall be provided by the Contractor:

- i) 02 nos. Earth pit , duly interconnected, using GI Plate : For non-current carrying metal parts of the DG Set / Body of the DG Set.
- ii) 02 nos. Earth pit , duly interconnected, using GI Pipe : For Lightning Arrestor of the Exhaust System.

Suitable size GI / Copper flat should be used for connecting the equipment / structure with the Earth Grid, made of 02 nos. Earth pit , duly interconnected. Detailed Technical Specification of the earth pits have been given separately.

#### 6.32.12 **Acoustic Enclosure**

Acoustic & weather proof enclosure should have arrangement for fresh air intake for cooling of the engine & alternator, extraction, discharging hot air in to the atmosphere, as per specifications.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

The enclosure should have following features:

- i)** The acoustic enclosure shall be designed and manufactured confirming to relevant standards suitable for out door installation exposed to weather conditions, and to limit overall noise level to 75 dB (A) at a distance of 1 m from the enclosure, as per CPCB norms under free field conditions.
- ii)** The construction should be such that it prevents entry of rain water splashing into the enclosure and allows free & quick flow of rain water to the ground in the event of heavy rain.
- iii)** The outside cover of the enclosure shall be fabricated from the CRCA sheet of thickness not less than 1.6 mm . The inside cover should have perforated CRCA sheet (powder coated) / GI sheet/ aluminium sheet of thickness not less than 0.6 mm. A structural / sheet metal base frame , painted in black, shall be provided. The complete enclosure shall be of modular construction.
- iv)** The enclosure shall be provided with suitable size & number of hinged type doors along the length of the enclosure on each side for easy access inside the acoustic enclosure for inspection, operation and maintenance purpose. Sufficient space will be provided inside the enclosure on all sides of the D.G. set for inspection, easy maintenance & repairs.
- v)** The hinged doors shall be made from not less than 1.6 mm thick CRCA sheet and will be made air tight with neoprene rubber gasket and heavy duty locks.
- vi)** The acoustic enclosure should be suitable for cable connection/connection through bus-trunking. Such arrangements on acoustic enclosure should be water proof & dust-proof conforming to IP-65 protection.
- vii)** It should contain 11 tank pre-treatment process and UV resistant powder coating of all parts to withstand extreme environment.
- viii)** High quality noise absorbent and fire-retardant grade acoustic insulation material [Rockwool- minimum 100 mm thick , 64 kg/m<sup>3</sup>] complying to IS 8183 should be used.
- ix)** It should have base lifting for easy handling at customer site.
- x)** It should be designed to have optimum serviceability.
- xi)** The inside of enclosure should be provided with suitable LED luminaires controlled by a 5A switch, for adequate lighting during servicing, etc. of the DG Set. The power supply to this luminaire

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should be arranged in such a way that it can remain energized under all conditions.

- xii) It should have air inlet louvers specially designed to operate at rated load.
- xiii) It should be made on special purpose CNC machines for consistency in quality and workmanship.
- xiv) It should use special hardware for longer life.
- xv) It should have flush styling - no projections.
- xvi) It should have fluid drains for lube oil and fuel.

The Contractor should provide details of specification, with a copy of certificate issued by the designated agencies as per Environment Act , alongwith the drawings , for approval.

#### 6.32.13 **General Requirements**

- a) The Engine-Alternator set shall be prime duty type.
- b) Normal output voltage shall be  $11000\text{ V} \pm 5\%$ . Frequency shall be  $50\text{ Hz} \pm 3\%$ . Output wave form shall be sinusoidal at all load conditions. Alternator shall be of brushless type, provided with AVR, suitable for voltage regulation of  $\pm 0.5\%$  or better, at all load conditions and with prime mover speed drop up to 4% of nominal speed. Alternator shall be provided with radio frequency suppressor and in-built frequency rollover protection.
- c) All Exposed moving parts (like fan blades, etc.) shall be provided with suitable guards / covering to avoid the chances of accidents.
- d) All exposed metal parts shall be suitably finished to prohibit corrosion under climatic conditions prevailing at site.
- e) Provision shall be made for earthing of all non-current carrying metal parts of the equipment. Lugs of suitable size shall be provided wherever earth connection to the apparatus are necessary. Earthing work shall be carried out as per IE rules / IS specifications (with latest amendment).
- f) All control cables shall be provided by the Contractor, which would be laid by the Contractor in underground trench / on wall / in pipe / in existing trench, as per site requirement.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

6.32.14 **Guaranteed Technical Particulars of Diesel Generator Set:**

Rating in kVA	1010
Duty	Prime Power
Rated Voltage of Generator	11000 V
Generator continuous outputs rating	859 kW
Rated frequency	50 Hz
Number of phases	3 phase 3 wire
Winding Connections	Wye
Power factor	0.8 Lag
Voltage Variation	± 5 %
Frequency Variation	± 3 %
Overload capacity for one hour, in every 12 hour of continuous running at rated load.	10%
One (1) minute over load	50% of normal rated current, with the field set for normal rated load excitation.
No. of Cylinder	12
RPM	1500
Site output in kVA	1010
No. of Silencer	2
Silencer Type	Residential
Governor Type	Electronic-A1
Fuel System	<b>Pressure-time (PT) fuel system.</b>
Fuel Tank Capacity	<b>990 Litre</b>
Engine Cooling System	Air cooling / water cooling (with separately or machine mounted radiator fans).
Type of Starting	<b>Battery Starting System (Electric)</b>
Type of Battery (for starting)	<b>SMF VRLA type.</b>
Type of neutral	Resistance earthed to limit the earth fault within 10A.

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Insulation Class of Generator	Class H
Type of insulation	
(a) Armature winding	Suitable for 11000 V
(b) Field winding	Suitable for 11000 V
(c) Connections	Suitable for 11000 V
(d) Core Insulation	Suitable for 11000 V
Temperature rise at maximum Continuous Rating over 40°C.	
(a) Armature winding (by resistance)	100°C
(b) Field winding (by resistance)	100°C
(c) Core and mechanical parts in contact with adjacent insulation (by thermometer)	80°C
Type of enclosure of Generator ( Degree of protection)	IP 23
Excitation system	Separately Excited, Brushless type rotating armature.
Temperature detection	
(a) Type of temperature detector	Platinum resistance type
(b) Number of temperature detectors	Minimum two / phase of the Generator, between the coils of the stator winding. Two on bearings.
Terminal box	
(c) Line side	01 no.
(d) Neutral side	01 no.
(e) WTD,BTD & Space Heaters	01 no.
(f) CT terminals	01 no.
Type of Terminal box enclosure ( Degree of protection)	IP 54

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Terminals shall be suitable for	Connection of 3 runs 1C X 300 mm <sup>2</sup> , 11 kV Aluminium Armoured XLPE cable.
Terminal box fault withstand capability.	To withstand terminal fault level for 3.0 sec.
Anti condensation heater	To be provided with fuse and Thermostatic control.

#### 6.32.15 **Inspection & Testing at Manufacturer's Works**

Inspection and testing shall be carried out based on latest revision of the relevant standard, approved drawing & QAP. SMPK shall have right to carry out stage inspection and factory visit to review the manufacturing progress. However, manufacturer need not hold any manufacturing activity for witnessing SMPK's stage inspection. All routine tests shall be carried out during final inspection at Manufacturer's Works.

All major items / equipments i.e. engine & alternator in assembled condition, associated electrical control panels etc. shall be offered for inspection & testing at factory / manufacturers works. The Successful Bidder shall give a notice of minimum one week for carrying out such tests. The representative of SMPK shall witness such inspection & testing on mutually agreed date.

DG set will be tested on load of unity power factor for the rated kW rating. During testing, the D.G. set shall be operated for a period of 12 hours on the rated KW at DG set's KW rating including one hour on 10% overload after continuous run of the 12 Hours. During testing all controls / operations safeties will be checked and proper record will be maintained. Any defect/ abnormality noticed during testing shall be rectified. The testing will be declared successful only when no abnormality / failure is noticed during the testing. The DG set will be cleared for dispatch to site only when the testing is declared successful by the representative of SMPK.

In addition to the above, following tests shall be carried out at Manufacturer's Works:

- i ) Fuel consumption tests , by using flow meters.
- ii ) Insulation Resistance Test.
- iii ) High voltage withstand test.
- iv ) Functional and operation test.
- v ) Mechanical test on components.

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Copies of all documents of routine and type test certificates of the equipment, carried out at the manufacturers premises shall be furnished to SMPK.

*Fuel (HSD) required for testing at Manufacturer's Works shall be provided by the Contractor.*

6.32.16 **Installation, Testing and Commissioning**

The Diesel Generator set, complete with its acoustic enclosure and all equipment, accessories / associated items, to be installed on the cement concrete (RCC) foundation. Making RCC foundation has been considered separately, under Civil Work.

Following tests would be carried out as per IS, by the Contractor, before acceptance of the same, at site, in presence of the representative(s) of the 'Engineer':

Type Test Certificate & Factory Test Certificate will be verified at site, before conducting acceptance tests at site.

Following tests to check the performance of the DG set (to meet the requirements of specifications) shall be carried out at site after installation:

The engine shall be run for at least 15 minutes no load and then the engine shall be run continuously for six hours at available system loads (not exceeding full rated load).

The set will be tested with an overload of 10% (if available) for one hour. The over load test may be taken at any stage during the full load period and need not be at the end of six hours of full load test.

During the full rated load (or maximum available load) test half hourly readings of the stationary coil temperature are to be taken. The rise in temperature should not be more than the value stipulated as per relevant clauses of insulation given in IS - 4722 - 1958. The fuel consumption should be within 5% of the manufacturers stipulated ratings.

Necessary, fuel (HSD) will be provided by HDC. Other consumables such as coolant, lube oil, etc. shall have to be provided by the Contractor.

Immediately after the load test / over-load test [if available], the insulation resistance between the stationary coil & the frame would be measured with 500 V Insulation Resistance Tester.

The Automatic and manual regulation of the alternator at no load, half load and full load [or maximum available load] are to be noted

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for the nominal voltage of 230 V between phase & neutral, at power factor 0.8. All the arrangements for all the test shall be the responsibility of the Successful Bidder.

In addition to the above, following tests shall be carried out at site, before commissioning:

- i ) Insulation resistance of the Generator.
- ii ) Testing of Controls : All the safety controls and protective device of the D.G. set shall be tested for correct calibration and operation.
- iii ) Functional Test: Performance of incoming switch / circuit breaker (including DG Control Panel) , starting arrangement for the engine, safety features, instruments & control panel, etc., shall be verified.

**6.32.17 Trial Run/ Running-in-Period**

After successful testing of the DG Set, a trial run at available load will be carried out for 120 Hours or 15 days whichever is earlier. The DG Set will be operated and a log of all relevant parameters will be maintained during this period. The arrangement of staff for trial run / running-in-period will be made by the Successful Bidder. However, diesel shall be provided by HDC, SMPK. The Contractor will be free to carry out necessary adjustments, during this period. The DG Set will be said to have successfully completed the trial run, if no break-down or abnormal / unsatisfactory operation of any component of the entire installation included in the scope of work of the contract, occurs during this period. After this the DG Set will be made available for beneficial use. After the DG Set has operated without any major break-down / trouble, it shall be taken over by HDC, SMPK . This date of taking over of the DG Set, after trouble free operation during the trial run/ running-in period, shall be the date of acceptance / taking over.

**6.33 Indoor type HT (11kV ) Panel [ VCB & NGR , suitable for 1010 kVA (11 kV) DG Set]**

6.33.1 This includes, Design, fabrication, supply, installation, testing and commissioning of indoor HT panel 12 kV, 630 Amps, 3 phase, 50 Hz, 26.3 kA VCB for 3sec.

**6.33.2 Incoming Feeder with PT:**

This includes supply of Vacuum Circuit Breaker, suitable for 12kV, 26.3 kA, 630A, 500 MVA, 3 Phase, 50 Hz, comprising proper housing of breaker, safety shutters, isolating plugs and socket, Cassette type VCB trolley with 3 nos. Vacuum Interrupters with safe aligning finger type, isolating contacts suitable for vertical / horizontal isolation and horizontal

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

draw out. Necessary control Protection and metering circuits are completely assembled, wired and enclosed in a weather and dust proof cubicle. 01No. (one) Breaker handling trolley shall be provided.

6.33.3 The HT Panel shall be made of sheet steel enclosure [fabricated out of CRCA sheet of 2 mm thick] , dust and vermin proof, suitable for indoor use. This shall be suitable to receive power at 11 kV, 50 Hz, 3 phase AC from 1010 kVA (11kV) Diesel Generator Set, with all equipment fittings & accessories for efficient & trouble-free operation, including the following:

- a) Self-tripping mechanism with numerical relay with IDMT, over current, earth fault and Instantaneous protection, including TVM, MFM and all others panel's indications lamps.
- b) Incoming & outgoing cable entry boxes shall be provided for the required cable entry [03 nos. 1C X 300 mm<sup>2</sup>, 11 kV (E) grade, XLPE cable].
- c) Insulation level
  - i) 1.2/50 microsecond Impulse withstand :: 75 kV peak voltage
  - ii) One minute power frequency withstand :: 28 kV rms voltage
- d) Rated current
  - i) Continuous
    - Bus bar :: 630 A
    - Incoming/outgoing circuit breaker :: 630 A
  - i) Short time current for 3 seconds :: 26.3 kA rms
- e) Circuit breaker
  - i) Rated breaking capacity :: 25 kA / 3 Sec. Symmetrical.
  - ii) Rated making capacity :: 62.5 kA
  - iii) Total breaking time :: 7 cycles (maximum)
  - iv) Operating sequence :: As per IS/IEC
  - v) Type of charging :: Manual as well as motorized mechanism with 230V AC operated motor

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- i) Shunt trip coil :: 48 V DC
- ii) Closing coil :: 48 V DC
- f) Busbar chamber with Copper busbars, heat shrinkable PVC sleeved/ powder coated with colour code. The busbars shall be of high conductive electrolyte copper.
- g) 230 V AC space heaters with ON-OFF switch and thermostat.
- h) 1 phase, resin cast (with fuse unit), draw out type, line connected PT [ Ratio:  $(11000/\sqrt{3})$  V /  $(110/\sqrt{3})$  V; Accuracy: 0.5/3P] of 100 VA burden, to meet with auxiliary power requirement of metering & protection.
- i) Epoxy cast resin CTs with 15VA burden, STR of 25 kA for 1 sec, metering accuracy class 0.5 and protection accuracy 5P20 and having of CTR 200-100/1-1A (**to be finalised during detail engineering**).
- j) The Trivector meters shall be digital type and it should display Amps, Volts, kVA, kW, kWhr, kVAR, PF and MD etc. The meter shall provide with external port for remote monitoring.
- k) The Multi-Function Meter (MFM) shall be digital type and it should display Ampere, Volt, kVA, kW, kWhr, kVAR, PF, Frequency, etc. The meter shall provide with external port for remote monitoring.
- l) Breaker ON-OFF LED indicating lamp.
- m) Circuit trip/healthy indicating LED lamp with pushbutton.
- n) Breaker spring charged LED lamp indication.
- o) Numerical relays consist of IDMTL + Inst 3 O/C + Inst E/F relay. Trip circuit supervision & master trip. All relays shall be SCADA enabled with event/data logging features.
- p) Operating handle, spring charging handle & other required accessories shall be supplied.
- q) Suitable LED lamp for panel internal illumination shall be provided with 240V AC source.
- r) Hooter for tripping.
- s) 48 V DC external supply shall be provided for control circuit of complete breaker operation.
- t) Bus bar support insulator: Non hygroscopic, track resistant, high strength insulator.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- u) Thermostat controlled space-heaters to be provided in bus bar, CB and Cable compartments.

6.33.4 Outgoing Feeder (without PT):

Technical Specification same as Incoming feeder but without PT.

Numerical relays consist of IDMTL + Inst 3 O/C + Inst E/F relay.

Trip circuit supervision & master trip. All relays shall be SCADA enabled with event/data logging features.

The Multi-Function Meter (MFM) shall be digital type and it should display Ampere, Volt, kVA, kW, kWhr, kVAR, PF, Frequency, etc. The meter shall provide with external port for remote monitoring.

Epoxy cast resin CTs with 15VA burden, STR of 25 kA for 1 sec, metering accuracy class 0.5 and protection accuracy 5P20 and having of CTR 200-100/1-1A **(to be finalised during detail engineering)**.

6.33.5 Neutral Isolator with Neutral Grounding Resistor (NGR) Panel:

The Equipment and accessories covered by this specification shall be designed, manufactured and tested in compliance with the following latest relevant standards in order that specific aspects under working conditions are taken care of:

IEEE-32 for Resistance rating & temp is concerned

IS-2147 for the type of enclosure.

The NGR Panel shall be made of sheet steel enclosure [fabricated out of CRCA sheet of 2 mm thick] , dust and vermin proof, suitable for indoor use. Free standing, Floor mounting, Indoor type, Panel shall be provided with louvered sheets provided on outside and covered with fine mesh to make the unit vermin proof.

11 kV, 100A, vacuum contactors shall be used for the D.G. Set Neutral Isolation. The Neutral Grounding resistors shall be provided in the neutral earthing conductor to limit the fault current to 100A in the event of a line to ground fault.

The resistance shall be of Punched Stainless Steel material and rated 70A for 10 sec.

The top of the resistor portion will have a perforated sheet to let out the heat dissipated by the NGR during fault conditions.

Foundation holes will be provided in the bottom channel base of the unit for grouting the panel to foundation. The cable entry shall be from bottom through removable type Gland Plate.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

The grids will be of punched out of SS steel grade ASTM-A240-304. Grids thus made will be assembled on to a threaded MS rods having interleaving porcelain separators as inter grid insulation. The Inter grid connection is by SS hardware. The resistance will be assembled in the form of banks and the number of banks will be stacked one above the other in the Resistance compartment.

The panel shall comprise the following components:

- i) 1 no. 11 kV, SP, 630A Vacuum contactor rated suitably with auxiliary contacts.
- ii) 1 no. 11 kV Epoxy Cast Resin CT, Ratio: 70 A / 1A, 5P10, 15 VA for E/F Relay.
- iii) 3 nos. 11 kV Epoxy Cast Resin CT, Ratio: 70 A / 1A, 15VA, PS class for Differential Protection.
- iv) 1 set of 70 A rated Aluminium Busbar.
- v) 1 set of LED panel Lamp, Panel Heater and Control Fuses.
- vi) Sets of Punched SS Grid Resistor unit of rating 70 A, 10 Sec, with a Maximum Temperature rise of 375 °C.
- vii) Sets of Green & Red Indicating Lights for Isolator ON / OFF. Sets of CT & Control Terminals

**Guaranteed Technical Particulars of the Resistance Grid :**

- |       |  |    |               |
|-------|--|----|---------------|
| i)    | Type of Grid                           | :: | ASTM-A240-304 |
| ii)   | Duty Rating                            | :: | 10 Second     |
| iii)  | Rated voltage                          | :: | 11 kV         |
| iv)   | Rated Current                          | :: | 70 A          |
| v)    | Type of Cooling                        | :: | Air Natural   |
| vi)   | Type of enclosure                      | :: | IP-42 (Panel) |
| vii)  | Maximum Temperature rise of Resistor.  | :: | 375 °C.       |
| viii) | Maximum Temperature rise of Enclosure. | :: | 55 °C.        |

6.33.6 Necessary approval of the drawing of VCB panel shall be obtained from 'Engineer' before fabrication. Panel shall be connected with earthing as per IER.

**6.33.7 Earthing**

Complete earthing of the **Indoor type HT (11kV ) Panel [ VCB & NGR, suitable for 1010 kVA (11 kV) DG Set]**, including NGR, shall be provided by the Contractor as per relevant Standard. Following earth pits shall be provided by the Contractor:

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



- i) 02 nos. Earth pit , duly interconnected, using Copper Plate : For NGR.
- ii) 02 nos. Earth pit , duly interconnected, using GI Pipe : For non-current carrying metal parts of the **Indoor type HT Panel**.

Suitable size GI / Copper flat should be used for connecting the equipment / structure/ NGR with the Earth Grid, made of 02 nos. Earth pit , duly interconnected. Detailed Technical Specification of the earth pits have been given separately.

6.33.8 Adequate length of insulating mat (width 1 m) for electrical purpose (at least Class – A, as per relevant IS) shall be provided by the Contractor.

6.33.9 Bilingual Danger Notice Plates of size 200 mm X 150 mm, made from mild steel, at least 1.6 mm thick and vitreous enamelled white, with letters, figures and the conventional skull and cross-bones in signal red colour on the front side. The rear side of the plate shall also be enamelled. Other details shall be as per IS 2551 (1982) [with latest amendment].

6.33.10 Installation

This includes installations, testing and commissioning of VCBs , NGR , contactors, etc.

**The Indoor type HT (11kV ) Panel** shall be erected by using suitable size of M.S. channel foundation bolts including grouting of the bolts. Each panel shall be connected with separate and distinct Earthing. After installation of panel, necessary test and trial are to be carried out for proper functioning of safety, devices, relay etc. and before charging VCBs all the tests required under relevant ISS & IEC shall be carried out. The work includes all labour & materials required for installation & commissioning of VCB & NGR Panel and shall be done as directed by the representative of the ‘Engineer’.

6.34 **Indoor type LT Panel for 1010 kVA (11kV) Diesel Generator Control**

6.34.1 One local control panel with provision for local starting shall be provided, which shall incorporate all controls required for starting, monitoring, regulating and stopping DG set. It shall be equipped with all necessary instrumentation to provide adequate surveillance of DG set under all operating conditions including ‘Standby’. The local control panel shall be of robust construction, floor mounting, free standing type made of 2.0 mm thick cold rolled sheet steel (CRCA). Neoprene gaskets shall be provided between all openings & joints. The control panels shall have IP-52 degree of protection as per IS: 13947 Part-I.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



The control panel shall be of unit type construction, compact and neat, provided with hinged door with locking arrangement.

All cables shall have bottom entry. Separate cable chamber shall be provided in the control panel for all incoming and outgoing cables. Enough space shall be provided in the control panel for easy access during maintenance and repairs.

Aluminium bar of adequate dimension shall be provided for earth connection complete with nuts and bolts as required for external connection to earth grid, to be provided by the Contractor.

CT shorting links, test terminal blocks etc. shall be provided. All the equipment mounted inside the control panel shall be identified by lamicoid labels/ stencilling by paint.

Panel shall be provided with panel illumination lamp (operated by the door switch) and thermostat-controlled space heater. Control panel shall be completed with all accessories and wiring for safe and trouble free operation of the system.

Bilingual Danger Notice Plates of size 200 mm X 150 mm, made from mild steel, at least 1.6 mm thick and vitreous enamelled white, with letters, figures and the conventional skull and cross-bones in signal red colour on the front side. The rear side of the plate shall also be enamelled. Other details shall be as per IS 2551 (1982) [with latest amendment].

6.34.2 The control panel should consist of the following parts (minimum requirement):

- i ) Power Command Controller
- ii ) Aluminium bus bars of suitable capacity, with incoming / outgoing terminals
- iii ) Indicating lamps for 'Load ON' and 'Set Running'
- iv ) Instrument fuses duly wired and ferruled
- v ) Starting switch with key.
- vi ) Lube oil pressure gauge.
- vii ) Battery charging Ammeter.
- viii ) Stop push button or lever.
- ix ) Water temperature indicator.
- x ) Radiator water level indicator.
- xi ) Hour Meter cum RPM indicator.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

The Engine should have Safety Control Auto Cut-off for 'low lube oil pressure', 'high water temperature' and 'over speed', with audio warning & visual lamp indication on control panel.

#### 6.34.3 **Tripping and Alarms**

Any one or more of the following defects shall cause the alarm or running diesel generator to be tripped. In case of tripping, re-start shall be prevented until the fault(s) are removed and manual resetting is done. Separate indicators shall be provided for each of the following in local control panel:

- i) Fail to start (Alarm).
- ii) Overload (Alarm).
- iii) Lube oil pressure inadequate (Trip) .
- iv) Over Speed (Trip).
- v) Abnormal voltage (under and over voltage) (Alarm).
- vi) Charger ON/OFF (Alarm).
- vii) Fuel level low in day tank (Alarm and Trip).
- viii) High lube oil temperature (Trip).
- ix) Low air pressure in receiver (Alarm).
- x) Alternator stator temperature high (Alarm).
- xi) Electrical protective relays operated (Trip).
- xii) DC control supply failure (alarm).
- xiii) Excitation failure due to tripping of field breaker or failure to build up voltage (trip).
- xiv) Engine trip due to generator fault (trip).
- xv) Voltage out of limit (alarm).
- xvi) Ground fault on the system (alarm).

#### 6.34.4 **Indication and Annunciation**

Necessary pressure switches, level switches, thermostats, flow switches, auxiliary relays, etc., required for the above alarm & annunciation system, shall have to be provided by the Contractor.

#### 6.34.5 **Instruments**

Following minimum instruments shall be mounted on each engine:

- i) Thermometers for lube oil temperature.
- ii) Pressure gauges for lube oil system, fuel oil system, air starting system.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- iii) Differential pressure gauges across strainers and filters.
- iv) Speed indicator Exhaust pyrometers with temperature switch.
- v) Level switches for alarm and trip in day fuel oil tank.

#### 6.34.6 **Earthing**

Complete earthing of the LT Panel for 1010 kVA (11kV) Diesel Generator Control, shall be provided by the Contractor as per relevant Standard. 02 nos. Earth pit, duly interconnected, using GI Pipe shall be provided by the Contractor for non-current carrying metal parts of the **Indoor LT Panel**.

Suitable size GI / Copper flat should be used for connecting the equipment / structure with the Earth Grid, made of 02 nos. Earth pit, duly interconnected. Detailed Technical Specification of the earth pits have been given separately.

6.34.7 Adequate length of insulating mat (width 1 m) for electrical purpose (at least Class – A, as per relevant IS) shall be provided by the Contractor.

#### 6.34.8 **Installation**

This includes installations, testing and commissioning of all components of the LT Panel for 1010 kVA (11kV) Diesel Generator Control.

The LT Panel shall be erected by using suitable size of M.S. channel foundation bolts including grouting of the bolts of the panel. The panel shall be connected with separate and distinct Earthing. After installation of the LT panel, necessary test and trial are to be carried out for proper functioning of safety, devices, relay etc. and all the tests required under relevant standard shall be carried out. The work includes all labour & materials required for installation & commissioning of LT Panel and shall be done as directed by the representative of the 'Engineer'.

### 6.35 **500 kVA (415 V) Diesel Generator Set:**

#### 6.35.1 **General**

The Diesel Generator Set (Engine-Alternator Set) should be factory assembled, factory tested and capable of delivering not less than 500 kVA, at 0.8 Power Factor. The Diesel Generator Set, comprising of Diesel Engine, coupled & aligned with AC Alternator on a common base frame [complete with Anti-Vibration Mounts (AVM Pad)], should be provided with all standard accessories, viz. fuel tank, exhaust flexible piping, fuel piping (with valves & other fittings for supply & return lines), fuel transfer pump (with hose pipe & clip), lead-acid batteries for starting, Hospital grade silencer, suitable electronic governor, auto start / stop & auto load sharing facility, battery charging dynamo / alternator

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

(with manual control panel), Engine Instrument panel, copper conductor control cable (with suitable glands) from Genset to AMF panel, etc.

The diesel engine shall be of four stroke cycle multi-cylinder, water cooled, turbo charged with after cooler, developing required BHP @ 1500 rpm under NTP condition of BS 5514 with an over load capacity of 110% for one hour in any specified 12 hrs of continuous operation.

The DG Set shall also have engine protection unit and sensors for winding & bearing temperature monitoring. The DG Set shall be complete with acoustic enclosure as per CPCB norms and standards. DG sets shall also have standard instrument panel, with lube-oil pressure gauge & temperature gauge, including safeties against over speed, low lube-oil pressure & high temperature conforming to specifications and with emergency stop buttons.

The integral fuel tank is to be provided with drain plug, air vent, inlet & outlet connection, level indicator and provision for cleaning. A hand operated fuel transfer pump, with 5 m length hosepipe, should be supplied by the Contractor.

DG Set (500 kVA capacity) should be type tested for Noise and Emission norms/standards, as per CPCB.

The engine alternator sets shall be tested at factory, before dispatch to site.

#### 6.35.2 **General Requirements:**

- a) The engine and alternator shall be assembled on a common base frame. Alternator shall be directly coupled to the engine by means of flexible couplings. The alternator shall be provided with its own exciter. When separate units are provided for this purpose, they shall be driven by the alternator shaft itself.
- b) The Engine-Alternator set shall be prime duty type. The set may be idle for a period, except for routine test periodically.
- c) The set shall be capable of taking 10% overload for a period of one hour during any 12 hours period, while operating continuously at full rated load.
- d) Normal output voltage shall be 415 volts with  $\pm 2.5\%$  manual adjustment at all conditions of load with coarse & fine controls. Frequency shall be 50 Hz  $\pm 3\%$ . Output wave form shall be sinusoidal at all load conditions. Alternator shall be of brushless type, provided with AVR, suitable for voltage regulation of  $\pm 2.5\%$  or better, at all load conditions and with prime mover speed drop

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

up to 4% of nominal speed. Alternator shall be provided with radio frequency suppressor and in-built frequency rollover protection.

- e) All Exposed moving parts (like fan blades, etc.) shall be provided with suitable guards / covering to avoid the chances of accidents.
- f) All exposed metal parts shall be suitably finished to prohibit corrosion under climatic conditions prevailing at site.
- g) Provision shall be made for earthing of all non-current carrying metal parts of the equipment. Lugs of suitable size shall be provided wherever earth connection to the apparatus are necessary. Earthing work shall be carried out as per IE rules / IS specifications (with latest amendment).
- h) All control cables shall be provided by the Contractor, which would be laid by the Contractor in underground trench / on wall / in pipe / in existing trench, as per site requirement.

#### 6.35.3 **Control Panel:**

Control panel should be manufactured out of not less than 1.6 mm thick CRCA sheet and is powder coated for weather-proof and long-lasting finish. The control panel should consist of the following parts:

- i ) Power Command Controller
- ii ) Aluminium bus bars with suitable capacity with incoming / outgoing terminals
- iii ) Indicating lamps for 'Load ON' and 'Set Running'
- iv ) Instrument fuses duly wired and ferruled

#### 6.35.4 **Power Command**

The Diesel Generator should have Power Command control system, which is a microprocessor-based generator set monitoring, metering & control system (with LCD display) designed to meet the demands of today's engine driven generator sets with following functionalities:

- i ) Intuitive operator interface which includes backlit LCD display with tactile feel soft-switches & generator set status LED lamps.
- ii ) Digital AVR for shunt or PMG excitation with torque matching.
- iii ) Digital electronic governing with temperature compensation and smart starting.
- iv ) SAE J1939 interface to Full Authority Electronic (FAE) engines.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- v ) Remote start-stop
- vi ) Engine metering: Oil pressure, Coolant temperature, Battery voltage, Engine speed.
- vii ) AC Alternator metering: L-L Voltage and L-N Voltage, Current (1 and 3 phase), Volt-Amperes (phase and total) and Frequency.
- viii ) Engine protection: Low lube oil pressure, High / Low coolant temperature, Over speed, Battery Over / Under / Weak Volts, Fail to crank / start, Sensor failure.
- ix ) AC Alternator protection: Over / Under voltage, Over / Under frequency, Over current, Short circuit and Loss of AC sensing.
- x ) Data logging: Engine hours, Control hours, Engine starts and up to 10 recent fault codes.
- xi ) Configurable glow plug control.
- xii ) Configurable cycle cranking.
- xiii ) 12 and 24 Volt DC operation.
- xiv ) Sleep mode.
- xv ) Programmable I/Os (4 inputs and 2 outputs), expandable with AUX101/102 modules.
- xvi ) Modbus interface (RS485 RTU).
- xvii ) In Power compatible (PC based service tool).

#### 6.35.5 **Thyristor Controlled Static Battery Charger :**

Battery charger of suitable rating [provided with suitable ammeter & voltmeter ] shall be of semiconductor type, with automatic boost cum trickle selection [with auto cut off facility], for charging from AC mains. The aforesaid Battery Charger shall be provided by the Contractor, in addition to the existing dynamo , the Engine.

AC & DC wirings of Battery Charger, in recess / surface armoured cable of copper conductor, is under the scope of the Contractor.

#### 6.35.6 **Microprocessor Based AMF Controller:**

The AMF panel power command control is a microprocessor based generator set monitoring & control system, mounted in the Genset control panel. The control provides simple operator interface to the indication and an LCD hour counter. The integration of all function in to a single control system should provide enhanced reliability & performance, with following components / control / display:

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

i) **CONTROL SYSTEM**

The standard control system includes all the functions necessary to locally or remotely start & stop and to protect the generator set.

ii) **KEY SWITCH – OFF AND MANUAL/AUTO**

In the OFF mode, the generator set is immediately shut down (if running) and cannot be started. It also resets any faults. In this mode, all power is removed from the control and its outputs.

In MANUAL / AUTO model, the control is powered. The manual start push button and remote start input become enabled.

iii) **MANUAL START BUTTON**

This button will initiate a Genset start sequence when the control is in manual / auto mode. This button is locked out when the engine is running.

iv) **ENGINE FAULT INDICATION**

The common Engine fault indicator panel should have following indications:

- a) Fail to start.
- b) Over speed, under speed.
- c) Low oil pressure.
- d) High engine temperature.
- e) Battery charging alternator fail.

v) **LCD ENGINE HOUR COUNTER**

The control includes an LCD engine hour counter. The counter will increment whenever the engine is running.

vi) **FUNCTIONS: CONTROL / PROTECTION**

**Remote Start** – When in Manual / Auto mode, the control accepts a ground signal from remote devices to automatically start the generator set.

**Engine Starting** – The control system supports automatic engine starting, which included solid state outputs for starter control and fuel solenoid control. The start disconnect is achieved by monitoring main alternator output frequency – Low lube oil Pressure Shutdown and High Engine water temperature shutdown.

**Starting Sequence** – in the Manual / Auto mode, the crank cycle is repeated upto 3 times, if starting is still unsuccessful a Fail to

Start fault is generated. If the engine starts, the crank cycle is terminated at crank disconnect frequency of 20 Hz. – Under speed Shutdown, Fail to Start, Shutdown after 3 attempts, Battery charging alternator fail warning.

**Functions incorporated in Microprocessor based AMF module-**

- Supply failure timer.
- Restoration timer.
- 3 impulse automatic engine start / stop logic.
- Mains / generator voltage & frequency sensing.

**Features of controller -**

- Water temperature / Lube oil pressure / engine speed
- Voltage / ampere / frequency / kVA
- Running – hour counter
- No. of starts
- Fault indication (LED type)
- Over / under speed
- Fails to start
- Low oil pressure
- High engine temperature
- Under / over voltage
- Over current
- Combined meter for kW / Power Factor / kVA
- Electronic KWH meter (counter display)
- Current transformers

**Relay** – Earth Fault Relay (Electronic type).

**Indications (LED)**

- DG ON, Load on DG
- Mains ON, Load on Mains, Battery Charger ON

**Push Buttons (AMF module by pass mode)**

- Generator contactor close / trip
- Mains contactor close / trip (If provided)
- Fault accept /reset.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



#### 6.35.7 **Diesel Engine :**

Diesel Engine shall be Radiator Cooled and capable of developing required BHP at 1500 r.p.m., to deliver specified continuous alternator output at 0.8 lagging power factor. The Diesel Engine should be confirming to BS 5514/ISO 3046.

The exhaust pipe line shall be of suitable diameter for fixing the hospital grade silencer with suitable supports at suitable intervals with all its accessories such as bends, flanges, couplings etc. (including rain cap at the end to prevent the water entering inside).

The exhaust pipe line shall be with thermal insulation with Lightly Resin Bonded (LRB) mattresses, covered with wire mesh and clad with aluminium sheet.

Engine shall be of six in-line cylinders with four strokes and shall be of reciprocating compression ignition (Diesel) type, multi cylinder with electronic fuel governor suitable for the above generating set.

Engine should have a well-designed air handling system with dry type replaceable paper element air cleaner, having restriction indicator and optimised turbocharger for increased altitude capabilities.

Engine should also contain Spin on lube oil filter, Plate type lube oil cooler, Electrical starter motor with soft start engagement feature, Battery charging alternator and 2 X 12 V DC Batteries.

The Engine should have standard integral set-mounted radiator system, designed and tested for 50°C ambient temperature.

#### 6.35.8 **Engine Instrument Panel and Safety Controls:**

The Engine Instrument Panel shall comprise of the following:

- i ) Starting switch with key.
- ii ) Lube oil pressure gauge.
- iii ) Battery charging Ammeter.
- iv ) Stop push button or lever.
- v ) Water temperature indicator.
- vi ) Radiator water level indicator.
- vii ) Hour Meter cum RPM indicator.

The Engine should have Safety Control Auto Cut-off for 'low lube oil pressure', 'high water temperature' and 'over speed', with audio warning & visual lamp indication on control panel.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**6.35.9 Speed & Governing**

The Engine shall be fitted with governing system as per relevant BS specification ( with latest amendment).

**6.35.10 Engine Start**

Engine shall be cold and self starting type. The starter battery shall conform relevant Indian Standard and of sufficient capacity, to meet the Engine starting and control gear requirements.

**6.35.11 Quietness of Operation**

The set shall have minimum vibration, noise under all conditions of load. The set shall be properly dynamically balanced.

**6.35.12 Silencer**

An efficient heavy duty hospital type silencer, suitably optimised to meet stringent noise emission standards laid down by MoEF / CPCB for the exhaust, shall be provided. For silencer there shall be Insertion loss of 25 dBA at 1 m from exhaust pipe under free field condition. A test certificate to this effect shall be furnished.

**6.35.13 Alternator :**

Alternator , conforming to IS/IEC 60034-1 & BS 5000/IS 4722 ( with latest amendment), should be capable of generating 500 kVA at 0.8 PF, 415 V, 3 Ph, 50 Hz, AC system, while operating at 1500 r.p.m. and suitable for direct coupling with the above diesel engine.

The alternator shall be copper wound of totally enclosed [IP 23 protection], screen protected type, with Class 'H' insulation (limited to temperature rise of class H), designed & constructed to withstand tropical conditions. The alternator shall be brushless revolving field type & self regulated through AVR.

It should contain 3 Phase reconnectable windings, with 12 terminals brought out for connection. It should have better motor starting capability and best in class efficiency. It should contain impregnation on all wound components for better mechanical strength.

It should have compact design with sealed bearings for longer life and lesser maintenance.

**6.35.14 Air Intake and Exhaust System**

The air intake and exhaust system shall be provided with:

- i) Air intake filter and silencer.
- ii) Exhaust gas driven turbocharger.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- iii) Charge air cooler.
- iv) Exhaust gas silencer.
- v) Necessary exhaust pipe, supports, hangers, expansion joints and insulation.

Exhaust piping of adequate length, using adequate size M.S. Pipe, insulation, aluminium cladding for hospital type silencers, SS flexible bellows, Lightning Arrestor, etc. should be provided by the Contractor, alongwith the Diesel Generator Set.

Exhaust stack, shall be supported on iron structure [ to be fabricated by the Contractor, under Part-C ( Preparatory Civil Work) of the Price Schedule].

Detailed Technical Specification of the exhaust system has been given separately.

#### 6.35.15 **Earthing**

Complete earthing of the Diesel Generator Set, including Lightning Arrestor, shall be provided by the Contractor as per relevant Standard. Following earth pits shall be provided by the Contractor:

- i) 02 nos. Earth pit, duly interconnected, using GI Plate : For non-current carrying metal parts of the DG Set / Body of the DG Set.
- ii) 02 nos. Earth pit, duly interconnected, using Copper Plate : For Neutral of the DG Set.
- iii) 02 nos. Earth pit, duly interconnected, using GI Pipe : For Lightning Arrestor of the Exhaust System.

Suitable size GI / Copper flat should be used for connecting the equipment / structure with the Earth Grid, made of 02 nos. Earth pit, duly interconnected. Detailed Technical Specification of the earth pits have been given separately.

#### 6.35.16 **Acoustic Enclosure**

The enclosure shall be fabricated out of not less than 1.6 mm thick CRCA sheet duly powder coated and the enclosure should have following features:

- i) It shall be specially designed to meet stringent MoEF/ CPCB norms of 75 dBA @ 1m at 75% load under free field conditions.
- ii) The acoustic enclosure should be made of CRCA sheets (1.6 mm thick) and a structural / sheet metal base frame painted in black.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- iii) High quality noise absorbant and fire-retardant grade acoustic insulation material [Rockwool- minimum 100 mm thick , 64 kg/m<sup>3</sup>] complying to IS 8183 should be used.
- iv) It should have base lifting for easy handling at customer site.
- v) It should be designed to have optimum serviceability.
- vi) It should have air inlet louvers specially designed to operate at rated load.
- vii) It should be made on special purpose CNC machines for consistency in quality and workmanship.
- viii) It should contain 11 tank pre-treatment process and UV resistant powder coating of all parts to withstand extreme environment.
- ix) It should use special hardware for longer life.
- x) It should have flush styling - no projections.
- xi) It should have fluid drains for lube oil and fuel.
- xii) It should have fuel filling arrangement inside the enclosure.

The Contractor should provide details of specification, with a copy of certificate issued by the designated agencies as per Environment Act, alongwith the drawings, for approval.

#### 6.35.17 **Lubrication :**

Lubrication shall be positive pressure type lubricating for all moving parts. No moving parts shall be required lubrication by hand either prior to the starting of the Engine or while it is in operation. Lubrication oil shall conform to relevant IS (with latest amendment). Necessary lubricating oil filter shall be provided for operation at normal conditions for a period of 250 hours, without any necessity of replacement and cleaning. Temperature & Pressure gauges shall be fitted to the lubricating system.

#### 6.35.18 **Fuel Systems / Fuel Tank:**

The fuel tank shall have minimum capacity of 690 litre. The tank shall have level indicator and filling inlet with removable filter.

It should contain pressure-time (PT) fuel system with Electronic Step Timing Control (ESTC) injectors, which smoothly stabilise Engine speed under load with A1 class Electronic governing. It should also contain Dual fuel filter system which is a pre filter including water separator & Water In Fuel (WIF) sensor and main filter.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**6.35.19 Operating Conditions:**

The Engine & Alternator shall be capable of delivering the specified output, under the site conditions.

**6.35.20 Inspection & Testing at Manufacturer's Works**

Inspection and testing shall be carried out based on latest revision of the relevant standard, approved drawing & QAP. SMPK shall have right to carry out stage inspection and factory visit to review the manufacturing progress. However, manufacturer need not hold any manufacturing activity for witnessing SMPK's stage inspection. All routine tests shall be carried out during final inspection at Manufacturer's Works.

All major items / equipment i.e. engine & alternator in assembled condition, associated electrical control panels etc. shall be offered for inspection & testing at factory / manufacturers works. The Successful Bidder shall give a notice of minimum one week for carrying out such tests. The representative of SMPK shall witness such inspection & testing on mutually agreed date.

DG set will be tested on load of unity power factor for the rated kW rating. During testing, the D.G. set shall be operated for a period of 12 hours on the rated kW at DG set's kW rating including one hour on 10% overload after continuous run of the 12 Hours. During testing all controls / operations safeties will be checked and proper record will be maintained. Any defect/ abnormality noticed during testing shall be rectified. The testing will be declared successful only when no abnormality / failure is noticed during the testing. The DG set will be cleared for dispatch to site only when the testing is declared successful by the representative of SMPK.

In addition to the above, following tests shall be carried out at Manufacturer's Works:

- i ) Fuel consumption tests , by using flow meters.
- ii ) Insulation Resistance Test.
- iii ) Functional and operation test.
- iv ) Mechanical test on components.

Copies of all documents of routine and type test certificates of the equipment, carried out at the manufacturers premises shall be furnished to SMPK.

Fuel (HSD) required for testing at Manufacturer's Works shall be provided by the Contractor.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

#### 6.35.21 Installation, Testing and Commissioning

The Diesel Generator set, complete with its acoustic enclosure and all equipment, accessories / associated items, to be installed on the cement concrete (RCC) foundation. Making RCC foundation has been considered separately, under Civil Work.

Following tests would be carried out as per IS, by the Contractor, before acceptance of the same, at site, in presence of the representative(s) of the 'Engineer':

Type Test Certificate & Factory Test Certificate will be verified at site, before conducting acceptance tests at site.

Following tests to check the performance of the DG set (to meet the requirements of specifications) shall be carried out at site after installation:

The engine shall be run for at least 15 minutes no load and then the engine shall be run continuously for six hours at available system loads (not exceeding full rated load).

The set will be tested with an overload of 10% (if available) for one hour. The over load test may be taken at any stage during the full load period and need not be at the end of six hours of full load test.

During the full rated load (or maximum available load) test half hourly readings of the stationary coil temperature are to be taken. The rise in temperature should not be more than the value stipulated as per relevant clauses of insulation given in IS - 4722 - 1958. The fuel consumption should be within 5% of the manufacturers stipulated ratings.

Necessary, fuel (HSD) will be provided by HDC. Other consumables such as coolant, lube oil, etc. shall have to be provided by the Contractor.

Immediately after the load test / over-load test [if available], the insulation resistance between the stationary coil & the frame would be measured with 500 V Insulation Resistance Tester.

The Automatic and manual regulation of the alternator at no load, half load and full load [or maximum available load] are to be noted for the nominal voltage of 230 V between phase & neutral, at power factor 0.8. All the arrangements for all the test shall be the responsibility of the Successful Bidder.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

In addition to the above, following tests shall be carried out at site, before commissioning:

- i ) Insulation resistance of the Generator.
- ii ) Testing of Controls : All the safety controls and protective device of the D.G. set shall be tested for correct calibration and operation.
- iii ) Functional Test: Performance of incoming switch / circuit breaker (including DG Control Panel) , starting arrangement for the engine, safety features, instruments & control panel, etc., shall be verified.

6.35.22 **Trial Run/ Running-in-Period**

After successful testing of the DG Set, a trial run at available load will be carried out for 120 Hours or 15 days whichever is earlier. The DG Set will be operated and a log of all relevant parameters will be maintained during this period. The arrangement of staff for trial run / running-in-period will be made by the Successful Bidder. However, diesel shall be provided by HDC, SMPK. The Contractor will be free to carry out necessary adjustments, during this period. The DG Set will be said to have successfully completed the trial run, if no break-down or abnormal / unsatisfactory operation of any component of the entire installation included in the scope of work of the contract, occurs during this period. After this the DG Set will be made available for beneficial use. After the DG Set has operated without any major break-down / trouble, it shall be taken over by HDC, SMPK . This date of taking over of the DG Set, after trouble free operation during the trial run/ running-in period, shall be the date of acceptance / taking over.

6.36 **Auto Mains Failure Panel, with LT Distribution Panel**

6.36.1 **Construction:**

The indoor Floor Mounted Auto Mains Failure (AMF) panel, with Power Distribution Panel shall be of multi-cubicle or multi box factory-built air-insulated type, totally enclosed with doors for access to the interior, dust & vermin proof and suitable for use in tropical climate. The Panel Board should be fabricated from CRCA Sheet (minimum 2 mm thick), duly painted (with Siemens grey powder coating paint). Other construction requirements are given below:

**THICKNESS OF CRCA SHEET:**

FRAME	::	2.5 mm
DOORS	::	2.0 mm
COVERS	::	2.0 mm
GLAND PLATE	::	3.0 mm

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## DEGREE OF PROTECTION : **IP-52/54** OF IS-2147, 1966

The panel should be spacious for easy maintenance and shall have sufficient working space for making connections of cables, wires, etc. All doors & joints shall be suitably gasketed to make it dust & vermin proof. All doors shall be provided with concealed type hinges and captive screws, suitably earthed with 2.5 mm<sup>2</sup> copper conductor flexible cable.

Boards shall be easily extendible on both sides, by the addition of the vertical section after removing the end covers.

A completely enclosed bus bar compartment shall be provided for running horizontal and vertical Tinned Copper bus bars. Bus bar chamber shall be completely enclosed with metallic portions. Bolted covers shall be provided for access to horizontal and vertical bus bars and all joints for repair and maintenance, which shall be feasible without disturbing feeder compartment.

A separate compartment shall be provided for power and control cable. Door of compartment shall be hinged. Cable compartment shall have no communication with bus bar chamber. The panels shall be designed to facilitate cable entry from the bottom through entry holes of removable gland plates provided at the bottom of the cubicle.

The aforesaid Panel Board should be CPRI / ERDA approved. Necessary supporting document, alongwith type test certificate, should be submitted by the Contractor. The design & drawing of the Panel Board should be got approved from the 'Engineer', prior to manufacture.

The Panel Board shall be provided with LED indication lamps, electrolytic grade copper tinned busbar (for 3 Phases and Neutral), connecting arrangements for incoming & outgoing connections (as required) and supply & fixing of necessary Controllers, Air Circuit Breakers, Switch – Disconnecter – Fuse Units, MCCBs , MCBs, Energy Meters, Multi-Function Meters, CTs, etc. (including necessary connection with suitable sizes of 1.1 kV grade copper wires / aluminium cables, with lugs).

### 6.36.2 **Auto Mains Failure (AMF) Panel:**

*The AMF Panel shall be comprised of*

- i) One no. 415 V, 4 Pole 1250A, 50 kA Air Circuit Breaker (draw out type ACB with castle key) for incomer from DG Set The ACBs should have microprocessor release, with O/L, S/C & E/F protection.
- ii) Two nos. 415 V , 4 Pole 1250A, 50 kA Air Circuit Breaker (draw out type ACB with castle key) as Incomer- I & Incomer-II from

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



Mains. The ACBs should have microprocessor release, with O/L, S/C & E/F protection. Necessary Current Transformers, Auxiliary contacts, under voltage release, door interlocking, indication lamps, etc. should be provided in the incomer panels. Necessary control wiring for automatic changeover the power from Mains to Alternator and Alternator to Mains {against 02 incomers} shall be under the scope of the Contractor.

- iii) One no. 415 V, 4 Pole 1250A, 50 kA Air Circuit Breaker (draw out type ACB with castle key) as Bus Coupler / Bus Sectionalizer.
- iv) 0-500 V digital type Voltmeter (LED) with selector switch and protective fuses.
- v) 0-800 A digital type Ammeter (LED) with selector switch and current transformer of class-I, 15V A burden.
- vi) Frequency meter.
- vii) Power Factor Meter.
- viii) Load Manager.
- ix) kWh meter (LED), including Current Transformer of 800-400/5A rating, Class-I, 15V A burden.
- x) Pilot lamp for ON & OFF for “Set ON”, Load ON”, MCCB Trip (LEDs) for Mains and Alternator.
- xi) Suitable knock outs for receiving LT Single Core / 3 ½ Core Cables.
- xii) HRC fuses for instruments and control circuits .
- xiii) Audio Visual annunciation & tripping for LLOP, HWT and over speed. The hooter used for alarm purpose shall work on 24V DC supply and shall be of heavy duty type.
- xiv) Push button switches for Start, Stop, Acknowledge, reset and tripping of MCCB with necessary solenoid switches, wiring etc.
- xv) Auto / Manual Selector.
- xvi) Bilingual Danger Notice Plates of size 200 mm X 150 mm, made from mild steel, at least 1.6 mm thick and vitreous enamelled white, with letters, figures and the conventional skull and cross-bones in signal red colour on the front side. The rear side of the plate shall also be enamelled. Other details shall be as per IS 2551 (1982) [ with latest amendment]

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

### 6.36.3 LT Distribution Panel

The LT Distribution Panel shall be comprised of

- i) Six nos. 415 V, 4 Pole 400A, Switch Disconnecter Fuse Unit (SDFU), with HRC Fuses.
- ii) Four nos. 415 V, 4 Pole 200A, Switch Disconnecter Fuse Unit(SDFU), with HRC Fuses.
- iii) Four nos. 415 V, 4 Pole 125A, Moulded Case Circuit Breaker (MCCB).
- iv) Six nos. 415 V, 4 Pole 63A, Miniature Circuit Breaker (MCB).
- v) 0-500V digital type Voltmeter (LED) with selector switch and protective fuses.
- vi) 0-800A digital type Ammeter (LED) with selector switch and current transformer of Class-I, 15 VA burden.
- vii) Frequency meter.
- viii) Power Factor Meter.
- ix) kWh meter (LED), including Current Transformer of 800-400/5A rating, Class-I, 15V A burden.
- x) Suitable knock outs for receiving LT Single Core / 3 ½ Core Cables.
- xi) HRC fuses for instruments and control circuits .
- xii) Bilingual Danger Notice Plates of size 200 mm X 150 mm, made from mild steel, at least 1.6 mm thick and vitreous enamelled white, with letters, figures and the conventional skull and cross-bones in signal red colour on the front side. The rear side of the plate shall also be enamelled. Other details shall be as per IS 2551 (1982) [ with latest amendment]

### 6.36.4 Rubber Mat, Fire Bucket, First Aid Box, Shock treatment Chart:

- a) Adequate length of insulating mat (width 1 m) for electrical purpose (atleast Class – A, as per relevant IS) shall be provided by the Contractor, at the electrical Panel Room.
- b) Fire Extinguisher (ISI marked) suitable, for dealing with electric fire, shall be provided by the Contractor at the Panel Room.
- c) Fire Buckets (as per relevant IS), filled with clean dry sand and ready for immediate use for extinguishing fires, shall be provided by the Contractor, which should be conspicuously marked & kept

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

(atleast 02 nos. per room, kept on a suitable stand) in Panel Room, in convenient situation.

- d) First Aid Boxes, conspicuously marked & equipped with required contents, shall be provide by the Contractor in the Panel Rooms, so as to be readily accessible during all working hours.
- e) Instructions, in English or Hindi and Bengali, for restoration of persons suffering from electric shock, shall be provided by the Contractor for fixing in a conspicuous place in the Panel Room.

#### 6.36.5 **Earthing**

Complete earthing of the Auto Mains Failure Panel, with LT Distribution Panel, shall be provided by the Contractor as per relevant Standard. 02 nos. Earth pit , duly interconnected, using GI Pipe shall be provided by the Contractor for non-current carrying metal parts of the AMF-cum-LT Panel.

Suitable size GI / Copper flat should be used for connecting the equipment / structure with the Earth Grid, made of 02 nos. Earth pit, duly interconnected. Detailed Technical Specification of the earth pits have been given separately.

#### 6.36.6 **Installation**

This includes installations, testing and commissioning of all components of the AMF-cum-LT Panel.

The AMF-cum-LT Panel shall be erected by using suitable size of M.S. channel foundation bolts including grouting of the bolts of the panel. The panel shall be connected with separate and distinct Earthing. After installation of the AMF-cum-LT Panel, necessary test and trial are to be carried out for proper functioning of safety, devices, relay etc. and all the tests required under relevant standard shall be carried out. The work includes all labour & materials required for installation & commissioning of AMF-cum-LT Panel and shall be done as directed by the representative of the 'Engineer'.

### 6.37 **250 kVA (415 V) Diesel Generator Set:**

#### 6.37.1 **General**

The Diesel Generator Set (Engine-Alternator Set) should be factory assembled, factory tested and capable of delivering not less than 250 kVA, at 0.8 Power Factor. The Diesel Generator Set, comprising of Diesel Engine, coupled & aligned with AC Alternator on a common base

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

frame [complete with Anti-Vibration Mounts (AVM Pad)], should be provided with all standard accessories, viz. fuel tank , exhaust flexible piping, fuel piping (with valves & other fittings for supply & return lines), fuel transfer pump (with hose pipe & clip ), lead-acid batteries for starting, Hospital grade silencer, suitable electronic governor , auto start / stop & auto load sharing facility, battery charging dynamo / alternator (with manual control panel), Engine Instrument panel, copper conductor control cable (with suitable glands) from Genset to AMF panel, etc.

The diesel engine shall be of four stroke cycle multi-cylinder, water cooled, turbo charged with after cooler, developing required BHP @ 1500 rpm under NTP condition of BS 5514 with an over load capacity of 110% for one hour in any specified 12 hrs of continuous operation.

The DG Set shall also have engine protection unit and sensors for winding & bearing temperature monitoring. The DG Set shall be complete with acoustic enclosure as per CPCB norms and standards. DG sets shall also have standard instrument panel, with lube-oil pressure gauge & temperature gauge, including safeties against over speed, low lube-oil pressure & high temperature conforming to specifications and with emergency stop buttons.

The integral fuel tank is to be provided with drain plug, air vent, inlet & outlet connection, level indicator and provision for cleaning. A hand operated fuel transfer pump, with 5 m length hosepipe, should be supplied by the Contractor.

DG Set (250 kVA capacity) should be type tested for Noise and Emission norms/standards, as per CPCB.

The engine alternator sets shall be tested at factory, before dispatch to site.

#### 6.37.2 **General Requirements:**

- a) The engine and alternator shall be assembled on a common base frame. Alternator shall be directly coupled to the engine by means of flexible couplings. The alternator shall be provided with its own exciter. When separate units are provided for this purpose, they shall be driven by the alternator shaft itself.
- b) The Engine-Alternator set shall be prime duty type. The set may be idle for a period, except for routine test periodically.
- c) The set shall be capable of taking 10% overload for a period of one hour during any 12 hours period, while operating continuously at full rated load.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- d) Normal output voltage shall be 415 volts with  $\pm 2.5\%$  manual adjustment at all conditions of load with coarse & fine controls. Frequency shall be 50 Hz  $\pm 3\%$ . Output wave form shall be sinusoidal at all load conditions. Alternator shall be of brushless type, provided with AVR, suitable for voltage regulation of  $\pm 2.5\%$  or better, at all load conditions and with prime mover speed drop up to 4% of nominal speed. Alternator shall be provided with radio frequency suppressor and in-built frequency rollover protection.
- e) All Exposed moving parts (like fan blades, etc.) shall be provided with suitable guards / covering to avoid the chances of accidents.
- f) All exposed metal parts shall be suitably finished to prohibit corrosion under climatic conditions prevailing at site.
- g) Provision shall be made for earthing of all non-current carrying metal parts of the equipment. Lugs of suitable size shall be provided wherever earth connection to the apparatus are necessary. Earthing work shall be carried out as per IE rules / IS specifications (with latest amendment).
- h) All control cables shall be provided by the Contractor, which would be laid by the Contractor in underground trench / on wall / in pipe / in existing trench, as per site requirement.

#### 6.37.3 **Control Panel:**

Control panel should be manufactured out of not less than 1.6 mm thick CRCA sheet and is powder coated for weather-proof and long-lasting finish. The control panel should consist of the following parts:

- i ) Power Command Controller
- ii ) Aluminium bus bars with suitable capacity with incoming / outgoing terminals
- iii ) Indicating lamps for 'Load ON' and 'Set Running'
- iv ) Instrument fuses duly wired and ferruled

#### 6.37.4 **Power Command**

The Diesel Generator should have Power Command control system, which is a microprocessor-based generator set monitoring, metering & control system (with LCD display) designed to meet the demands of today's engine driven generator sets with following functionalities:

- i ) Intuitive operator interface which includes backlit LCD display with tactile feel soft-switches & generator set status LED lamps.
- ii ) Digital AVR for shunt or PMG excitation with torque matching.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- iii ) Digital electronic governing with temperature compensation and smart starting.
- iv ) SAE J1939 interface to Full Authority Electronic (FAE) engines.
- v ) Remote start-stop
- vi ) Engine metering: Oil pressure, Coolant temperature, Battery voltage, Engine speed.
- vii ) AC Alternator metering: L-L Voltage and L-N Voltage, Current (1 and 3 phase), Volt-Amperes (phase and total) and Frequency.
- viii ) Engine protection: Low lube oil pressure, High / Low coolant temperature, Over speed, Battery Over / Under / Weak Volts, Fail to crank / start, Sensor failure.
- ix ) AC Alternator protection: Over / Under voltage, Over / Under frequency, Over current, Short circuit and Loss of AC sensing.
- x ) Data logging: Engine hours, Control hours, Engine starts and up to 10 recent fault codes.
- xi ) Configurable glow plug control.
- xii ) Configurable cycle cranking.
- xiii ) 12 and 24 Volt DC operation.
- xiv ) Sleep mode.
- xv ) Programmable I/Os (4 inputs and 2 outputs), expandable with AUX101/102 modules.
- xvi ) Modbus interface (RS485 RTU).
- xvii ) In Power compatible (PC based service tool).

#### 6.37.5 **Thyristor Controlled Static Battery Charger :**

Battery charger of suitable rating [provided with suitable ammeter & voltmeter] shall be of semiconductor type, with automatic boost cum trickle selection [with auto cut off facility], for charging from AC mains. The aforesaid Battery Charger shall be provided by the Contractor, in addition to the existing dynamo, the Engine.

AC & DC wirings of Battery Charger, in recess / surface armoured cable of copper conductor, is under the scope of the Contractor.

#### 6.37.6 **Microprocessor Based AMF Controller:**

The AMF panel power command control is a microprocessor based generator set monitoring & control system, mounted in the Genset control

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

panel. The control provides simple operator interface to the indication and an LCD hour counter. The integration of all function in to a single control system should provide enhanced reliability & performance, with following components / control / display:

i) **CONTROL SYSTEM**

The standard control system includes all the functions necessary to locally or remotely start & stop and to protect the generator set.

ii) **KEY SWITCH – OFF AND MANUAL/AUTO**

In the OFF mode, the generator set is immediately shut down (if running) and cannot be started. It also resets any faults. In this mode, all power is removed from the control and its outputs.

In MANUAL / AUTO model, the control is powered. The manual start push button and remote start input become enabled.

iii) **MANUAL START BUTTON**

This button will initiate a Genset start sequence when the control is in manual / auto mode. This button is locked out when the engine is running.

iv) **ENGINE FAULT INDICATION**

The common Engine fault indicator panel should have following indications:

- a) Fail to start.
- b) Over speed, under speed.
- c) Low oil pressure.
- d) High engine temperature.
- e) Battery charging alternator fail.

v) **LCD ENGINE HOUR COUNTER**

The control includes an LCD engine hour counter. The counter will increment whenever the engine is running.

vi) **FUNCTIONS: CONTROL / PROTECTION**

**Remote Start** – When in Manual / Auto mode, the control accepts a ground signal from remote devices to automatically start the generator set.

**Engine Starting** – The control system supports automatic engine starting, which included solid state outputs for starter control and fuel solenoid control. The start disconnect is achieved by monitoring main alternator output frequency – Low lube oil

Pressure Shutdown and High Engine water temperature shutdown.

**Starting Sequence** – in the Manual / Auto mode, the crank cycle is repeated upto 3 times, if starting is still unsuccessful a Fail to Start fault is generated. If the engine starts, the crank cycle is terminated at crank disconnect frequency of 20 Hz. – Under speed Shutdown, Fail to Start, Shutdown after 3 attempts, Battery charging alternator fail warning.

**Functions incorporated in Microprocessor based AMF module-**

- Supply failure timer.
- Restoration timer.
- 3 impulse automatic engine start / stop logic.
- Mains / generator voltage & frequency sensing.

**Features of controller -**

- Water temperature / Lube oil pressure / engine speed
- Voltage / ampere / frequency / kVA
- Running – hour counter
- No. of starts
- Fault indication (LED type)
- Over / under speed
- Fails to start
- Low oil pressure
- High engine temperature
- Under / over voltage
- Over current
- Combined meter for kW / Power Factor / kVA
- Electronic KWH meter (counter display)
- Current transformers

**Relay** – Earth Fault Relay (Electronic type).

**Indications (LED)**

- DG ON, Load on DG
- Mains ON, Load on Mains, Battery Charger ON

**Push Buttons (AMF module by pass mode)**

- Generator contactor close / trip
- Mains contactor close / trip (If provided)
- Fault accept /reset.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



#### 6.37.7 **Diesel Engine :**

Diesel Engine shall be Radiator Cooled and capable of developing required BHP at 1500 r.p.m., to deliver specified continuous alternator output at 0.8 lagging power factor. The Diesel Engine should be confirming to BS 5514/ISO 3046.

The exhaust pipe line shall be of suitable diameter for fixing the hospital grade silencer with suitable supports at suitable intervals with all its accessories such as bends, flanges, couplings etc. (including rain cap at the end to prevent the water entering inside).

The exhaust pipe line shall be with thermal insulation with Lightly Resin Bonded (LRB) mattresses, covered with wire mesh and clad with aluminium sheet.

Engine shall be of six in-line cylinders with four strokes and shall be of reciprocating compression ignition (Diesel) type, multi cylinder with electronic fuel governor suitable for the above generating set.

Engine should have a well-designed air handling system with dry type replaceable paper element air cleaner, having restriction indicator and optimised turbocharger for increased altitude capabilities.

Engine should also contain Spin on lube oil filter, Plate type lube oil cooler, Electrical starter motor with soft start engagement feature, Battery charging alternator and 2 X 12 V DC Batteries.

The Engine should have standard integral set-mounted radiator system, designed and tested for 50°C ambient temperature.

#### 6.37.8 **Engine Instrument Panel and Safety Controls:**

The Engine Instrument Panel shall comprise of the following:

- i ) Starting switch with key.
- ii ) Lube oil pressure gauge.
- iii ) Battery charging Ammeter.
- iv ) Stop push button or lever.
- v ) Water temperature indicator.
- vi ) Radiator water level indicator.
- vii ) Hour Meter cum RPM indicator.

The Engine should have Safety Control Auto Cut-off for 'low lube oil pressure', 'high water temperature' and 'over speed', with audio warning & visual lamp indication on control panel.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**6.37.9 Speed & Governing**

The Engine shall be fitted with governing system as per relevant BS specification ( with latest amendment). .

**6.37.10 Engine Start**

Engine shall be cold and self starting type. The starter battery shall conform relevant Indian Standard and of sufficient capacity, to meet the Engine starting and control gear requirements.

**6.37.11 Quietness of Operation**

The set shall have minimum vibration, noise under all conditions of load. The set shall be properly dynamically balanced.

**6.37.12 Silencer**

An efficient heavy duty hospital type silencer, suitably optimised to meet stringent noise emission standards laid down by MoEF / CPCB for the exhaust, shall be provided. For silencer there shall be Insertion loss of 25 dBA at 1 m from exhaust pipe under free field condition. A test certificate to this effect shall be furnished.

**6.37.13 Alternator :**

Alternator, conforming to IS/IEC 60034-1 & BS 5000/IS 4722 (with latest amendment), should be capable of generating 250 kVA at 0.8 PF, 415 V, 3 Ph, 50 Hz, AC system, while operating at 1500 r.p.m. and suitable for direct coupling with the above diesel engine.

The alternator shall be copper wound of totally enclosed [IP 23 protection], screen protected type, with Class 'H' insulation (limited to temperature rise of class H), designed & constructed to withstand tropical conditions. The alternator shall be brushless revolving field type & self regulated through AVR.

It should contain 3 Phase reconnectable windings, with 12 terminals brought out for connection. It should have better motor starting capability and best in class efficiency. It should contain impregnation on all wound components for better mechanical strength.

It should have compact design with sealed bearings for longer life and lesser maintenance.

**6.37.14 Air Intake and Exhaust System**

The air intake and exhaust system shall be provided with:

- i) Air intake filter and silencer.

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- ii) Exhaust gas driven turbocharger.
- iii) Charge air cooler.
- iv) Exhaust gas silencer.
- v) Necessary exhaust pipe, supports, hangers, expansion joints and insulation.

Exhaust piping of adequate length, using adequate size M.S. Pipe, insulation, aluminium cladding for hospital type silencers , SS flexible bellows, Lightning Arrestor, etc. should be provided by the Contractor, alongwith the Diesel Generator Set.

Exhaust stack, shall be supported on iron structure [ to be fabricated by the Contractor , under Part-C ( Preparatory Civil Work) of the Price Schedule].

Detailed Technical Specification of the exhaust system has been given separately.

#### 6.37.15 **Earthing**

Complete earthing of the Diesel Generator Set, including Lightning Arrestor, shall be provided by the Contractor as per relevant Standard. Following earth pits shall be provided by the Contractor:

- i) 02 nos. Earth pit , duly interconnected, using GI Plate : For non-current carrying metal parts of the DG Set / Body of the DG Set.
- ii) 02 nos. Earth pit , duly interconnected, using Copper Plate : For Neutral of the DG Set .
- iii) 02 nos. Earth pit , duly interconnected, using GI Pipe : For Lightning Arrestor of the Exhaust System.

Suitable size GI / Copper flat should be used for connecting the equipment / structure with the Earth Grid, made of 02 nos. Earth pit , duly interconnected. Detailed Technical Specification of the earth pits have been given separately.

#### 6.37.16 **Acoustic Enclosure**

Acoustic & weather proof enclosure should have arrangement for fresh air intake for cooling of the engine & alternator, extraction, discharging hot air in to the atmosphere, as per specifications.

The enclosure should have following features:

- i) The acoustic enclosure shall be designed and manufactured confirming to relevant standards suitable for out door installation

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exposed to weather conditions, and to limit overall noise level to 75 dB (A) at a distance of 1 m from the enclosure, as per CPCB norms under free field conditions.

- ii) The construction should be such that it prevents entry of rain water splashing into the enclosure and allows free & quick flow of rain water to the ground in the event of heavy rain.
- iii) The outside cover of the enclosure shall be fabricated from the CRCA sheet of thickness not less than 1.6 mm . The inside cover should have perforated CRCA sheet (powder coated) / GI sheet/ aluminium sheet of thickness not less than 0.6 mm. A structural / sheet metal base frame , painted in black, shall be provided. The complete enclosure shall be of modular construction.
- iv) The enclosure shall be provided with suitable size & number of hinged type doors along the length of the enclosure on each side for easy access inside the acoustic enclosure for inspection, operation and maintenance purpose. Sufficient space will be provided inside the enclosure on all sides of the D.G. set for inspection, easy maintenance & repairs.
- v) The hinged doors shall be made from not less than 1.6 mm thick CRCA sheet and will be made air tight with neoprene rubber gasket and heavy duty locks.
- vi) The acoustic enclosure should be suitable for cable connection/connection through bus-trunking. Such arrangements on acoustic enclosure should be water proof & dust-proof conforming to IP-65 protection.
- vii) It should contain 11 tank pre-treatment process and UV resistant powder coating of all parts to withstand extreme environment.
- viii) High quality noise absorbent and fire-retardant grade acoustic insulation material [Rockwool- minimum 100 mm thick , 64 kg/m<sup>3</sup>] complying to IS 8183 should be used.
- ix) It should have base lifting for easy handling at customer site.
- x) It should be designed to have optimum serviceability.
- xi) The inside of enclosure should be provided with suitable LED luminaires controlled by a 5A switch, for adequate lighting during servicing, etc. of the DG Set. The power supply to this luminaire should be arranged in such a way that it can remain energized under all conditions.

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- xii) It should have air inlet louvers specially designed to operate at rated load.
- xiii) It should be made on special purpose CNC machines for consistency in quality and workmanship.
- xiv) It should use special hardware for longer life.
- xv) It should have flush styling - no projections.
- xvi) It should have fluid drains for lube oil and fuel.

The Contractor should provide details of specification, with a copy of certificate issued by the designated agencies as per Environment Act , alongwith the drawings , for approval.

**6.37.17 Lubrication :**

Lubrication shall be positive pressure type lubricating for all moving parts. No moving parts shall be required lubrication by hand either prior to the starting of the Engine or while it is in operation. Lubrication oil shall conform to relevant IS (with latest amendment). Necessary lubricating oil filter shall be provided for operation at normal conditions for a period of 250 hours, without any necessity of replacement and cleaning. Temperature & Pressure gauges shall be fitted to the lubricating system.

**6.37.18 Fuel Systems / Fuel Tank:**

The fuel tank shall have minimum capacity of 450 litre. The tank shall have level indicator and filling inlet with removable filter.

It should contain pressure-time (PT) fuel system with Electronic Step Timing Control (ESTC) injectors, which smoothly stabilise Engine speed under load with A1 class Electronic governing. It should also contain Dual fuel filter system which is a pre filter including water separator & Water In Fuel (WIF) sensor and main filter.

**6.37.19 Operating Conditions:**

The Engine & Alternator shall be capable of delivering the specified output, under the site conditions.

**6.37.20 Inspection & Testing at Manufacturer's Works**

Inspection and testing shall be carried out based on latest revision of the relevant standard, approved drawing & QAP. SMPK shall have right to carry out stage inspection and factory visit to review the manufacturing progress. However, manufacturer need not hold any manufacturing

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activity for witnessing SMPK's stage inspection. All routine tests shall be carried out during final inspection at Manufacturer's Works.

All major items / equipment i.e. engine & alternator in assembled condition, associated electrical control panels etc. shall be offered for inspection & testing at factory / manufacturers works. The Successful Bidder shall give a notice of minimum one week for carrying out such tests. The representative of SMPK shall witness such inspection & testing on mutually agreed date.

DG set will be tested on load of unity power factor for the rated kW rating. During testing, the D.G. set shall be operated for a period of 12 hours on the rated kW at DG set's kW rating including one hour on 10% overload after continuous run of the 12 Hours. During testing all controls / operations safeties will be checked and proper record will be maintained. Any defect/ abnormality noticed during testing shall be rectified. The testing will be declared successful only when no abnormality / failure is noticed during the testing. The DG set will be cleared for dispatch to site only when the testing is declared successful by the representative of SMPK.

In addition to the above, following tests shall be carried out at Manufacturer's Works:

- i ) Fuel consumption tests , by using flow meters.
- ii ) Insulation Resistance Test.
- iii ) Functional and operation test.
- iv ) Mechanical test on components.

Copies of all documents of routine and type test certificates of the equipment, carried out at the manufacturers premises shall be furnished to SMPK.

Fuel (HSD) required for testing at Manufacturer's Works shall be provided by the Contractor.

#### **6.37.21 Installation, Testing and Commissioning**

The Diesel Generator set, complete with its acoustic enclosure and all equipment, accessories / associated items, to be installed on the cement concrete (RCC) foundation. Making RCC foundation has been considered separately, under Civil Work.

Following tests would be carried out as per IS, by the Contractor, before acceptance of the same, at site, in presence of the representative(s) of the 'Engineer':

Type Test Certificate & Factory Test Certificate will be verified at site, before conducting acceptance tests at site.

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Following tests to check the performance of the DG set (to meet the requirements of specifications) shall be carried out at site after installation:

The engine shall be run for at least 15 minutes no load and then the engine shall be run continuously for six hours at available system loads (not exceeding full rated load).

The set will be tested with an overload of 10% (if available) for one hour. The over load test may be taken at any stage during the full load period and need not be at the end of six hours of full load test.

During the full rated load (or maximum available load) test half hourly readings of the stationary coil temperature are to be taken. The rise in temperature should not be more than the value stipulated as per relevant clauses of insulation given in IS - 4722 - 1958. The fuel consumption should be within 5% of the manufacturers stipulated ratings.

Necessary, fuel (HSD) will be provided by HDC. Other consumables such as coolant, lube oil, etc. shall have to be provided by the Contractor.

Immediately after the load test / over-load test [if available], the insulation resistance between the stationary coil & the frame would be measured with 500 V Insulation Resistance Tester.

The Automatic and manual regulation of the alternator at no load, half load and full load [or maximum available load] are to be noted for the nominal voltage of 230 V between phase & neutral, at power factor 0.8. All the arrangements for all the test shall be the responsibility of the Successful Bidder.

In addition to the above, following tests shall be carried out at site, before commissioning:

- i ) Insulation resistance of the Generator.
- ii ) Testing of Controls : All the safety controls and protective device of the D.G. set shall be tested for correct calibration and operation.
- iii ) Functional Test: Performance of incoming switch / circuit breaker (including DG Control Panel) , starting arrangement for the engine, safety features, instruments & control panel, etc., shall be verified.

#### 6.37.22 **Trial Run/ Running-in-Period**

After successful testing of the DG Set, a trial run at available load will be carried out for 120 Hours or 15 days whichever is earlier. The DG Set will be operated and a log of all relevant parameters will be maintained

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during this period. The arrangement of staff for trial run / running-in-period will be made by the Successful Bidder. However, diesel shall be provided by HDC,SMPK. The Contractor will be free to carry out necessary adjustments , during this period. The DG Set will be said to have successfully completed the trial run, if no break-down or abnormal / unsatisfactory operation of any component of the entire installation included in the scope of work of the contract, occurs during this period. After this the DG Set will be made available for beneficial use. After the DG Set has operated without any major break-down / trouble, it shall be taken over by HDC,SMPK . This date of taking over of the DG Set, after trouble free operation during the trial run/ running-in period, shall be the date of acceptance / taking over.

6.38 **Auto Mains Failure Panel, with LT Distribution Panel**

6.38.1 **Construction:**

The indoor Floor Mounted Auto Mains Failure (AMF) panel, with Power Distribution Panel shall be of multi-cubicle or multi box factory-built air-insulated type, totally enclosed with doors for access to the interior, dust & vermin proof and suitable for use in tropical climate. The Panel Board should be fabricated from CRCA Sheet (minimum 2 mm thick), duly painted (with Siemens grey powder coating paint). Other construction requirements are given below:

**THICKNESS OF CRCA SHEET:**

FRAME	::	2.5 mm
DOORS	::	2.0 mm
COVERS	::	2.0 mm
GLAND PLATE	::	3.0 mm

**DEGREE OF PROTECTION : IP-52/54 OF IS-2147, 1966**

The panel should be spacious for easy maintenance and shall have sufficient working space for making connections of cables, wires, etc. All doors & joints shall be suitably gasketed to make it dust & vermin proof. All doors shall be provided with concealed type hinges and captive screws, suitably earthed with 2.5 mm<sup>2</sup> copper conductor flexible cable.

Boards shall be easily extendible on both sides, by the addition of the vertical section after removing the end covers.

A completely enclosed bus bar compartment shall be provided for running horizontal and vertical Tinned Copper bus bars. Bus bar chamber shall be completely enclosed with metallic portions. Bolted covers shall be provided for access to horizontal and vertical bus bars and all joints for

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



repair and maintenance, which shall be feasible without disturbing feeder compartment.

A separate compartment shall be provided for power and control cable. Door of compartment shall be hinged. Cable compartment shall have no communication with bus bar chamber. The panels shall be designed to facilitate cable entry from the bottom through entry holes of removable gland plates provided at the bottom of the cubicle.

The aforesaid Panel Board should be CPRI / ERDA approved. Necessary supporting document, alongwith type test certificate, should be submitted by the Contractor. The design & drawing of the Panel Board should be got approved from the 'Engineer', prior to manufacture.

The Panel Board shall be provided with LED indication lamps, electrolytic grade copper tinned busbar (for 3 Phases and Neutral), connecting arrangements for incoming & outgoing connections (as required) and supply & fixing of necessary Controllers, Air Circuit Breakers, Switch – Disconnecter – Fuse Units, MCCBs , MCBs, Energy Meters, Multi-Function Meters, CTs, etc. (including necessary connection with suitable sizes of 1.1 kV grade copper wires / aluminium cables, with lugs).

#### 6.38.2 **Auto Mains Failure (AMF) Panel:**

*The AMF Panel shall be comprised of*

- i) One no. 415 V, 4 Pole 800A, 50 kA Air Circuit Breaker (draw out type ACB with castle key) for incomer from DG Set The ACBs should have microprocessor release, with O/L, S/C & E/F protection.
- ii) Two nos. 415 V , 4 Pole 800A, 50 kA Air Circuit Breaker (draw out type ACB with castle key) as Incomer- I & Incomer-II from Mains. The ACBs should have microprocessor release, with O/L, S/C & E/F protection. Necessary Current Transformers, Auxiliary contacts, under voltage release, door interlocking, indication lamps, etc. should be provided in the incomer panels. Necessary control wiring for automatic changeover the power from Mains to Alternator and Alternator to Mains {against 02 incomers} shall be under the scope of the Contractor.
- iii) One no. 415 V, 4 Pole 800A, 50 kA Air Circuit Breaker (draw out type ACB with castle key) as Bus Coupler / Bus Sectionalizer.
- iv) 0-500 V digital type Voltmeter (LED) with selector switch and protective fuses.

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- v) 0-800 A digital type Ammeter (LED) with selector switch and current transformer of class-I, 15V A burden.
- vi) Frequency meter.
- vii) Power Factor Meter.
- viii) Load Manager.
- ix) kWh meter (LED), including Current Transformer of 800-400/5A rating, Class-I, 15V A burden.
- x) Pilot lamp for ON & OFF for “Set ON”, Load ON”, MCCB Trip (LEDs) for Mains and Alternator.
- xi) Suitable knock outs for receiving LT Single Core / 3 ½ Core Cables.
- xii) HRC fuses for instruments and control circuits .
- xiii) Audio Visual annunciation & tripping for LLOP, HWT and over speed. The hooter used for alarm purpose shall work on 24V DC supply and shall be of heavy duty type.
- xiv) Push button switches for Start, Stop, Acknowledge, reset and tripping of MCCB with necessary solenoid switches, wiring etc.
- xv) Auto / Manual Selector.
- xvi) Bilingual Danger Notice Plates of size 200 mm X 150 mm, made from mild steel, at least 1.6 mm thick and vitreous enamelled white, with letters, figures and the conventional skull and cross-bones in signal red colour on the front side. The rear side of the plate shall also be enamelled. Other details shall be as per IS 2551 (1982) [with latest amendment]

#### 6.38.3 **LT Distribution Panel**

The LT Distribution Panel shall be comprised of

- i) Six nos. 415 V, 4 Pole 400A Moulded Case Circuit Breaker (MCCB).
- ii) Six nos. 415 V, 4 Pole 250A Moulded Case Circuit Breaker (MCCB).
- iii) Four nos. 415 V, 4 Pole 125A Moulded Case Circuit Breaker (MCCB).
- iv) Twelve nos. 415 V, 4 Pole 63A, Miniature Circuit Breaker (MCB).
- v) Six nos. 415 V, 4 Pole 32A, Miniature Circuit Breaker (MCB).
- vi) 0-500V digital type Voltmeter (LED) with selector switch and protective fuses.

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- vii) 0-800A digital type Ammeter (LED) with selector switch and current transformer of Class-I, 15 VA burden.
- viii) Frequency meter.
- ix) Power Factor Meter.
- x) kWh meter (LED), including Current Transformer of 800-400/5A rating, Class-I, 15V A burden.
- xi) Suitable knock outs for receiving LT Single Core / 3 ½ Core Cables.
- xii) HRC fuses for instruments and control circuits.
- xiii) Bilingual Danger Notice Plates of size 200 mm X 150 mm, made from mild steel, at least 1.6 mm thick and vitreous enamelled white, with letters, figures and the conventional skull and cross-bones in signal red colour on the front side. The rear side of the plate shall also be enamelled. Other details shall be as per IS 2551 (1982) [with latest amendment].

6.38.4 Rubber Mat, Fire Bucket, First Aid Box, Shock treatment Chart:

- a) Adequate length of insulating mat (width 1 m) for electrical purpose (atleast Class – A, as per relevant IS) shall be provided by the Contractor, at the electrical Panel Room.
- b) Fire Extinguisher (ISI marked) suitable, for dealing with electric fire, shall be provided by the Contractor at the Panel Room.
- c) Fire Buckets (as per relevant IS), filled with clean dry sand and ready for immediate use for extinguishing fires, shall be provided by the Contractor, which should be conspicuously marked & kept (atleast 02 nos. per room, kept on a suitable stand) in Panel Room, in convenient situation.
- d) First Aid Boxes, conspicuously marked & equipped with required contents, shall be provide by the Contractor in the Panel Rooms, so as to be readily accessible during all working hours.
- e) Instructions, in English or Hindi and Bengali, for restoration of persons suffering from electric shock, shall be provided by the Contractor for fixing in a conspicuous place in the Panel Rooms.

6.38.5 **Earthing**

Complete earthing of the Auto Mains Failure Panel, with LT Distribution Panel, shall be provided by the Contractor as per relevant Standard. 02 nos. Earth pit , duly interconnected, using GI Pipe shall be provided by the Contractor for non-current carrying metal parts of the AMF-cum-LT Panel.

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Suitable size GI / Copper flat should be used for connecting the equipment / structure with the Earth Grid, made of 02 nos. Earth pit, duly interconnected. Detailed Technical Specification of the earth pits have been given separately.

6.38.6 **Installation**

This includes installations, testing and commissioning of all components of the AMF-cum-LT Panel.

The AMF-cum-LT Panel shall be erected by using suitable size of M.S. channel foundation bolts including grouting of the bolts of the panel. The panel shall be connected with separate and distinct Earthing. After installation of the AMF-cum-LT Panel, necessary test and trial are to be carried out for proper functioning of safety, devices, relay etc. and all the tests required under relevant standard shall be carried out. The work includes all labour & materials required for installation & commissioning of AMF-cum-LT Panel and shall be done as directed by the representative of the 'Engineer'.

6.39 **Exhaust Pipe line for DG Sets**

- 6.39.1 The D.G. Exhaust Pipe line should be designed as per IS 6533 and made of MS Pipes of suitable Outer Diameter [as per IS 3589 , having wall thickness not less than 4.85 mm], CS flanges, heavy class long radius bends, elbows & reducers, along with necessary nut, bolt, washers & U-clamps, etc., as required. Welding to be done as per best engineering practise. The pipeline should be complete in all respect (including rain shed), duly painted finished with one primary coat, followed by two secondary coats of heat resistant heatex paint, by first allowing previous coat to get fully dry to a thickness of minimum 25 microns per coat. The upper most end is to be closed by welding a MS wire mesh [minimum 10 gauge, having 25 mm X 25 mm openings] to stop entry of any bird into the pipeline.

The Exhaust Pipeline shall be supported on independent structure, for which design & drawing shall be got approved from the 'Engineer'. *Supply & Erection of independent structure has been considered separately, under Preparatory Civil Work[ Part-C of the Price Schedule].*

- 6.39.2 *Exhaust Stack Height:* In order to dispose exhaust above building height, minimum exhaust stack height should be as follows:-

For DG set up to 1000 kVA

$$H = h + 0.2 \times (\text{kVA})^{1/2}$$

Where,

H = Total height of stack in meter.

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h = Height of the building in meters where the generator set is to be installed.

kVA = Total generator capacity of the set in kVA.

For DG set above 1000 kVA

30 m High or 3 m above the building height, which ever is higher.

- 6.39.3 Exhaust pipe size shall be sufficient to ensure that the exhaust back pressure does not exceed the maximum limitations specified by the engine / generator set manufacturer.
- 6.39.4 The Exhaust Pipeline [including the bends/ flanges] is to be insulated by fixing Thermal insulation by LRB (Lightly Resin Bonded) mattresses of thickness not less than 75 mm [Density 150 kg / m<sup>3</sup> (minimum)], with embedded chicken wire mesh, cladding by aluminium sheets (minimum 0.6 mm thick).
- Appropriate size steel screws & washers should be used for fixing aforesaid thermal insulation. Cladding to be done in such a manner that it shall protect direct entry of rainwater into the insulation done. Workmanship of work should be good to ensure proper finishing having, regular diameter all over.
- 6.39.5 (a) Exhaust system should create minimum back pressure.
- (b) Number of bends should be kept minimum and smooth bends should be used to minimize back pressure.
- (c) Exhaust piping inside the Acoustic Enclosure should be insulated to avoid heat input to the Acoustic Enclosure.
- (d) When tail end is horizontal, 45 Degree downward cut should be given at the end of the pipe to avoid rain water entry into exhaust piping.
- (e) When tail end is vertical, there should be rain trap to avoid rain water entry. If rain cap is used, the distance between exhaust pipe and rain cap should be higher than diameter of pipe. Horizontal run of exhaust piping should slope downwards away from engine to the condensate trap.
- 6.39.6 The DG Exhaust Pipeline should have Lightning Spike, alongwith down conductor of 50 mm X 6 mm GI flat, mounted on suitable out door type insulator. The down conductor should be connected with Earth Grid, made of 02 nos. Earth pit , duly interconnected, using GI Pipe.
- 6.39.7 In case Exhaust Stack Height exceeds 30 m, suitable Aviation light (with power backup) shall be provided by the Contractor.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

#### 6.40 Earthing :

- 6.40.1 Provision shall be made for earthing of all non current carrying metal parts and Neutral of the DG Set as per IE rules / IS specifications (with latest amendment, if any).

For earthing NGR / Neutral of the DG Sets, 02 nos. Copper Plate Electrode (duly interconnected) will be used against each DG Set.

For earthing of all non current carrying metal parts of the DG Set, 02 nos. GI Plate Electrode (duly interconnected) will be used against each DG Set.

For earthing of all non current carrying metal parts of the AMF Panel (including LT Panel) DG Control Panel, Feeder Pillers, Junction Boxes, etc. and Lightning Spikes, 02 nos. GI Pipe Electrode (duly interconnected) will be used against each equipment / structure.

- 6.40.2 Copper Plate Earthing:

Earthing Stations, using copper plate of size 600 mm X 600 mm X 3.15 mm [ to be buried in ground in a depth of 2 m from ground level, with alternate layer of charcoal & salt] and 40 mm diameter perforated GI pipe funnelling to be provided. Construction of suitable size Brick Masonry Inspection Chamber [ with removable RCC Cover (75 mm thick) with handle], is under the scope of the Contractor.

A tentative drawing is attached for reference.

- 6.40.3 GI Plate Earthing:

Earthing Stations, using copper plate of size 600 mm X 600 mm X 6.3 mm [to be buried in ground in a depth of 2 m from ground level, with alternate layer of charcoal & salt] and 40 mm diameter perforated GI pipe funnelling to be provided. Construction of suitable size Brick Masonry Inspection Chamber [with removable RCC Cover (75 mm thick) with handle], is under the scope of the Contractor.

A tentative drawing is attached for reference.

- 6.40.4 GI Pipe Earthing:

Earth Electrode should be made of 3 m long Medium Galvanised Mild Steel Tubes (as per IS:1239) of nominal bore 50 mm. The tube shall have perforated hole of 10 mm diameter at a cross distance of 75 mm. 260 mm long G.I. Plate of size 50 mm X 6 mm (with 4 nos. 10 mm dia tap hole, bend to shape of pipe) to be welded at 100 mm below the top of tube for connection of Earth Strip. G.I. Funnel / Cap to be provided on top of the tube. Two earth electrodes are to be interconnection to from one earth

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

grid, which will provide a common ground for Street Light Poles / Feeder Pillar Boxes.

Earth Electrode to be driven in the Earth Pit filled up with alternate layer of Charcoal and Salt. Earth Pit should be provided with suitable size Brick Masonry Inspection Chamber with removable RCC Cover (75 mm thick) with handle.

Excavation of earth, back filling, masonry work and interconnection of earthing electrodes (with 50 mm X 6 mm G.I. Flat), shall be within the Scope of Work.

- 6.40.5 All connection of the G. I. Flats / G. I. Wire, with the Earth Electrode & Earth Grid, should be made by welding & welding point should be covered by black Bitumen Paint.
- 6.40.6 Entire earthing should be done in accordance with the relevant Indian Standard (IS) issued by Bureau of Indian Standard, Indian Electricity Rules & Act and Code of Practice. Colour of insulation of the copper wire, to be used for earthing purpose, will have to be preferably GREEN.
- 6.40.7 All necessary work (including supply of aforesaid cable & other required materials), for providing aforesaid earthing connection, is under the scope of the Contractor.

6.41 **STATUTORY CLEARANCE(S)**

Approval/ clearance of the complete installation shall be obtained by the contractor from CPCB/ State Pollution Control Boards/ Local Bodies/ Central Electricity Authority (CEA)/ other licensing authorities wherever required. However, application shall be made by SMPK and any statutory fee, as applicable, shall be paid by SMPK directly to the Authorities concerned.

6.42 **Civil Preparatory Work**

- 6.42.1 Construction of the RCC foundation, Covered Shed for 1010 kVA (11kV) DG Set, 500 kVA (415V ) DG Set & 250 kVA (415V ) DG Set (including structure for fixing Exhaust Pipeline), Panel Room for 500 kVA DG Set, RCC Cable Trench, PCC Pathway, Chain Link Fencing, etc. shall be carried out by the Contractor as per latest standard norms and in line with 'Detailed Technical Specification (Civil)' & 'General Requirements (Civil Works)', as given under D (Clause Nos. 6.50 to 6.52) & E (Clause No. 6.53 to 6.57), respectively.
- 6.42.2 The layout plan, foundation drawing (along with all required details) should be submitted by the Contractor for approval of the 'Engineer', before commencement of the construction work at site.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 6.43 The type / model of the fans / light fittings should be selected based on the following guidelines. However, Technical Specifications (minimum requirement) must be fulfilled. In case of non availability of a particular type / model, equivalent type / model may be selected based on the Technical Specifications (minimum requirement) indicated against the relevant item. Prior written consent is to be obtained from the 'Engineer' or his representative, before supply of the selected type / model of fans / light fittings.

Sl. No.	Items	Type / Model	Technical Specifications (minimum requirement)
i)	Ceiling Fan [Sweep : 1400 mm]	Summer Breeze (Orient)	Speed : 275 rpm – 325 rpm Air Delivery: $\geq 260$ m <sup>3</sup> /minute Power input : $\leq 80$ W
		SS-390 (Havells)	
		High Speed (Crompton)	
ii)	Ceiling Fan [Sweep : 1200 mm]	Summer Breeze (Orient)	Speed : 350 rpm – 400 rpm Air Delivery: $\geq 225$ m <sup>3</sup> /minute Power input : $\leq 75$ W
		SS-390 (Havells)	
		High Speed (Crompton)	
iii)	Exhaust Fan [Sweep: 300 mm]	Heavy Duty Exhaust (Orient)	Speed : 1375 rpm – 1425 rpm Air Delivery: $\geq 1800$ m <sup>3</sup> /hour Power input : $\leq 80$ W Blade : Metallic (Four Blade)
		VENTILAIR DB (Havells)	
iv)	Heavy Duty (Industrial) Wall Fan [Sweep: 450 mm]	TURBO FORCE WALL (Havells)	Speed : 1400 rpm – 1500 rpm Power input : $\leq 100$ W Blade : Metallic (Three Blade)
		Thunderstorm (Orient)	
v)	1 X 4 ft (approx.) LED tube light fittings	Batten : IGP161LT8-16 (Crompton)	[Box Type]
		Batten : TMC 501 P 1 x T- LED 22W P3241 (Philips)	

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Sl. No.	Items	Type / Model	Technical Specifications (minimum requirement)
		Batten : BLRB-DB 118 (Bajaj)	
		Batten : WIO921208 (Wipro)	
vi)	4 ft (approx.) LED tube lamp	Lamp & driver : LTT8-20 (Crompton)	Lamp: LED tubular lamp with Al body & PC Diffuser Material & in-built driver.
	System wattage of luminaire: $\leq$ 22 W	Lamp & driver : 18W865 T8 (Philips)	Luminous flux: $\geq$ 2100 lumen
		Lamp & Driver : BLRB 21W CWc (Bajaj)	Correlated Colour Temperature (CCT): 5700K - 6500 K
		Lamp & Driver : LL13-181-65SE (Wipro)	
vii)	1 X 4 ft (approx.) Integrated LED Batten	LCTLN-20-CDL (Crompton)	Integrated LED Batten (PC) with efficient Diffuser Material & in-built driver.
	System wattage of luminaire: $\leq$ 20 W	Philips Astra Line 20W 4 Ft Straight Linear LED Tube Light (White) (Philips)	Correlated Colour Temperature (CCT): 5700K - 6500 K
		LL20-221-XXX-65-NE3 (Wipro)	
		BCLSB 20WH (Bajaj)	
viii)	1 X 2 ft (approx.) Integrated LED Batten	LCTLN-10-CDL (Crompton)	Integrated LED Batten (PC) with efficient Diffuser Material & in-built driver.
	System wattage of luminaire: $\leq$ 10 W	Philips Astra Line 10W 2 Ft Straight Linear LED Tube Light (White) (Philips)	Correlated Colour Temperature (CCT): 5700K - 6500 K
		LL20-111-XXX-65-NE3 (Wipro)	
		BCLSB 10WH (Bajaj)	
ix)	10W-12W Bulkhead surface / wall	BIBWP 10W LED (Bajaj)	Housing: Die Cast Aluminium alloy housing.
		LBHE-10-CDL	Inbuilt driver, upto 5 kV

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Sl. No.	Items	Type / Model	Technical Specifications (minimum requirement)
	mounted LED light fittings (IP 65).	(Crompton)	surge protection.
		LW07-141-XXX-57-XX (Wipro)	IP65 protected System Efficacy: 100LPW Correlated Colour Temperature (CCT): 5700K - 6500 K
x)	Outdoor / Street light type LED Light fittings. [IP 66] System wattage of luminaire: ≤ 30 W	BRP046 LED 30 CW MR S1 PSU GR- (Philips)	Housing: Pressure die-cast Aluminium body. Drivers should have in-built protection against high voltage surge, open circuit & short circuit.
		LSTS-30-CDL-M (Wipro)	Correlated Colour Temperature (CCT): 5000 - 6500 K Luminous flux: ≥ 3000 lumen Power Factor: >0.95
		A02557M0X0 (LT)	Colour Rendering Index (CRI): 70 Side entry mounting for 38 mm - 50 mm OD pipe bracket.

#### 6.44 Outdoor Junction Box ::

The outdoor Junction Box shall be pedestal type (with top canopy), IP 65 compliant and dust, damp, vermin & weather proof, fabricated from SS316 grade sheet (2 mm thick), angle & flat [duly painted (with Siemens Grey / Smoke Grey powder coating)]. It shall be provided with double door / shutter, handle with lock and key system. The Junction Box shall be designed in such a way that it should be spacious for easy maintenance.

The design & drawing of the Junction Box should be got approved from the Engineer, prior to manufacture.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

The Junction Box shall be provided with PVC/XLPE sleeved (with colour code) electrolytic grade copper tinned busbar (for 3 Phases and Neutral) and supply & fixing of necessary Switch-Disconnecter - Fuse Units, etc. (including necessary connection with suitable sizes of 1.1 kV grade copper wires / aluminium cables, with lugs) . The Junction Box shall be provided with following busbar & Switch-Disconnecter - Fuse Units:

Incomer / Outgoing:

TPN, 415 V (AC), 400 A, Switch-Disconnecter - Fuse Unit [including HRC Fuse Links] :: 02 no.

R-Y-B, ON, OFF Indication Lamp (220 V – 240 V) :: 01 set.

Busbar :

PVC/XPLE sleeved (with colour code), 400 A Electrolytic grade copper tinned busbar (for 3 Phases) and 200 A Electrolytic grade copper tinned busbar (for Neutral) :: 01 set

R-Y-B, ON, OFF Indication Lamp (220 V – 240 V) :: 01 set.

All the aforesaid component shall be mounted in the Power Distribution Panel by means of suitable zinc/cadmium passivated hardware. The Power Distribution Panel shall be completed in all respect with detachable gland plate at both the ends (2 nos. incoming to each SDFU as well as 1 no. outgoing from Busbar), interconnection using necessary PVC insulated (1.1 kV grade), single core, flexible (stranded) copper wire / busbar. The Power Distribution Panel shall be provided with 02 nos. SS Terminal for earthing and arrangement for terminating 02 no. 3½ C X 240 mm<sup>2</sup> Aluminium cable (incoming) & 02 no. 3½ C X 240 mm<sup>2</sup> Aluminium cable (outgoing) from Busbar (common for 2 nos. SDFU outgoing).

The outdoor Junction Box should be erected on the RCC foundation and the same should be fixed with the foundation bolts / grouted in the aforesaid RCC foundation.

6.45 Supply of Single Core 11 kV grade, Cross Linked Polyethylene (XLPE) Aluminium Cable (FRLS) :

The cables should be generally compliance with IS 7098 (Part-II) [with latest amendment, if any] with following specifications:

- (i) Conductor materials: Aluminium .
- (ii) Shape: Stranded Compacted Shaped.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

(iii) Insulation: Cross Linked Polyethylene (XLPE).

(iv) Armouring: Single layer, Aluminium flat / round strip.

6.46 Supply of Single Core 1.1 kV grade, Cross Linked Polyethylene (XLPE) Copper Cable (FRLS) :

The cables should be generally compliance with IS 7098 (Part-I) [with latest amendment, if any] with following specifications:

(i) Conductor materials: Copper .

(ii) Shape: Stranded Compacted Shaped.

(iii) Insulation: Cross Linked Polyethylene (XLPE).

(iv) Armouring: Single layer, Aluminium flat / round strip.

6.47 Supply of 3 ½ Core, 1.1 kV grade, Cross Linked Polyethylene (XLPE) Aluminium Cable (FRLS) :

The cables should be generally compliance with IS 7098 (Part-I) [with latest amendment, if any] with following specifications:

(i) Conductor materials: Aluminium.

(ii) Shape: Stranded Compacted Shaped.

(iii) Insulation: Cross Linked Polyethylene (XLPE).

(iv) Armouring: Single layer, Galvanised steel flat / round strip.

6.48 Laying of 3 ½ Core 1.1 kV grade, XLPE Cable:

6.48.1 Before laying of Cables, cable routes should be checked properly to avoid interference with the existing cables, structures, heat sources, drains, pipelines, etc., as far as possible and minor adjustments to be done to suit the field conditions, wherever deemed necessary, without any extra cost. Considering above, cable routes should be carefully measured to ascertain the exact requirement of cable for a particular feeder. Sufficient lengths to be kept for the final connections of the cables to the terminal of the equipment.

6.48.2 Programme for Road Crossing, wherever required (for Casing Pipe laying etc.), shall have to be coordinated through the authorized representative of the Dy. Manager (P&E), TSEM, in advance, for having due clearance of Road Blockage. Such clearance will be given within 7 (seven) days from the date of receipt of request from the Contractor.

6.48.3 In case of Road or Rail Crossing, cable should be laid inside the pipes. Where cables enter into pipe sleeves, adequate beds of sand should be given so that the cables do not slack and get damaged by pipe ends.

6.48.4 When cables pass through foundation walls, or other underground structures, if necessary, ducts or opening shall have to be provided, by the

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Contractor. However, shall it become necessary to cut holes in the existing foundations or structures, the contractor should obtain permission from Dy. Manager (P&E), TSEM, before cutting is done. Cutting, if necessary and mending good of any cut portion should be done by contractor at his cost and risk.

- 6.48.5 Cables should be handled carefully during installation to prevent mechanical injury to the cables. During laying of cables, Cable Drum Lifting Jacks, sufficient number of Cable Rollers and other materials, etc. as necessary, should be used to avoid any mechanical injury to the cables. Ends of cables leaving trenches should be coiled and provided with a protective pipe or cover, until such times, the final terminations to the equipment are completed.
- 6.48.6 After laying of the cables in the trench and before placement of protective covering, an Insulation Test should be carried out for each length of cable in presence of the representative of Sr. Dy. Manager (P&E), HDC. After re-filling the trench with soil, rammed and levelled, Insulation Test of the cable should also be carried out in presence of the representative of Sr. Dy. Manager (P&E), HDC.
- 6.48.7 All cables should be identified close to their termination points by Cable Number / Equipment Number, which will be punched on Aluminium strip/ PVC Strip (approx. 2 mm thick) securely fastened to the cable and wrapped around it. Type and size of the cable also to be punched on the straps.
- 6.48.8 Each underground cable should be provided with Identification Tags (made of Aluminium / PVC) securely fastened every 30 m of its underground length, with at least one tag at each end before the cable enters the ground.

Concrete Cable Markers are to be placed at every 30 m of the cable route and at cable joint locations. Size & other details / identifications should be engraved on the said Cable Markers.
- 6.48.9 All temporary ends of cables must be protected against dirt and moisture to prevent damage to the insulation. For this purpose, ends of the cables should be covered with PVC insulating tape.
- 6.48.10 Where splices or terminations are required in circuit, it is required to measure insulation resistance of each length of cable before splicing and / or terminating. It is required to repeat measurement after splices and / or terminations are completed. Before energizing, the insulation resistance of every cable shall have to be measured.

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It is required to measure the Insulation Resistance of directly buried cables, before Cable Trenches are back-filled.

- 6.48.11 Directly buried cables should be laid in underground Cable Trenches to be excavated by the Contractor. Width of the Cable Trench should be such that all cables shall be correctly spaced and arranged. The 1.1 kV grade cables should be laid in trenches at a depth of 0.75 m.

6.48.12 **Placing & Protection of cables in trench:**

For 3 ½ C cable, above 35 mm<sup>2</sup>

Before cables are placed, the bottom of the trenches should be filled with a layer (approx. 100 mm) of sand at the bottom of the trench, duly levelled. After laying of the cable on the sand bed bricks should be placed at both sides of the cable. The cable inside the brick walls to be covered with sand at the bottom of the trench, up to the height of wall. Bricks should also be used as protective top covering and to be placed on the top of the protective brick walls [16 no. bricks would be used in 01 m cable laying work]. Rest of the trench should be re-filled with soil, rammed and levelled.

For 3 ½ C / 4C cable, upto 35 mm<sup>2</sup>

Before cables are placed, the bottom of the trenches should be filled with a layer (approx. 100 mm) of sand at the bottom of the trench, duly levelled. After laying of the cable on the sand bed the same is to be covered with sand and bricks should also be used as protective top covering [8 no. bricks would be used in 01 m cable laying work]. Rest of the trench should be re-filled with soil, rammed and levelled.

- 6.48.13 The bricks, to be used for protective top covering & side wall, should be of class designation 10.0 (as per latest version of IS: 1077, 1992). Dimensions [non-modular size (230 mm. x 110 mm. x 70 mm)] and tolerances of the bricks should be as per latest version of IS: 1077, 1992.

6.48.14 Cable Termination of 1.1 kV grade, XLPE Cable :

Termination of XLPE aluminium conductor power cables shall be by means of compression method using brass compression gland and aluminium lugs [including supply of materials, as required], tapes, anticorrosive paste & jointing materials.

6.48.15 Straight Through cable jointing of 1.1 kV grade, XLPE Cable:

Additional length (loop) of 5 m (approx.) cable should be kept at each end of the cables near the straight through cable joints. It is required to measure the insulation resistances of the cables before and after straight

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through cable jointing. This scope includes supply of all required materials including complete straight through cable jointing kits, with ferrules and all other accessories.

Heat Shrinkable type straight through Cable Jointing Kits, suitable for XLPE insulated 1.1 kV grade LT cables, are to be used.

6.49 **GI Pipe laying work:**

Laying of Galvanized Mild Steel Tubes should be done wherever necessary, such as at Road Crossing, Railway Crossing, Drains, Culverts or any similar concrete structure, etc. The scope includes cutting of road, railway crossing, excavating of trenches, etc. Re-filling the trench after laying the Galvanized Mild Steel Tubes to be done by the Contractor. The Galvanized Mild Steel Tubes may also be laid by boring process, as per site requirement.

The depth of the laying should be matched with the underground cable trench, as far as possible.

Cutting of Galvanized Pipe to required length and threading, bending, jointing by Socket as required, supply and fixing of support clamps / brackets should be under the scope of Contractor.

6.50 **LIST OF PREFERRED MAKES /BRANDS:**

Sl. No.	Items	Manufactures / Makes / Brands
i)	Engine	CUMMINS / KIRLOSKAR/ GREAVES COTTON/ MAHINDRA/ ASHOK LEYLAND / CATERPILLAR / MTU
ii)	Alternator	KIRLOSKAR / STAMFORD / LEROY SOMER / CATER PILLAR / CROMPTON GREAVES / TDPS
iii)	Microprocessor for AMF panel / DG Controller	DEEP SEA/ WOODWORD / JAKSON
iv)	MCB, RCCB, MCB Type Isolator, Changeover Switch , MCCB, Contactor, Time Switch, Switch – Disconnecter – Fuse Unit	L&T / LEGRAND / SIEMENS / SCHNEIDER / ABB

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<b>Sl. No.</b>	<b>Items</b>	<b>Manufactures / Makes / Brands</b>
<b>v)</b>	Vacuum Circuit Breaker (VCB)	SIEMENS / SCHNEIDER / ABB
<b>vi)</b>	Air Circuit Breaker (ACB)	SIEMENS / SCHNEIDER / ABB / L&T
<b>vii)</b>	HT Isolators	PENTAGON / ESSEN / CROMPTON
<b>viii)</b>	Current Transformer (CT), Potential Transformer(PT)	KAPPA / KALPA / INSTRANS / SCHNEIDER / JYOTI / PRAGATHI
<b>ix)</b>	Air Circuit Breaker (ACB)	L&T / SIEMENS / SCHNEIDER / ABB
<b>x)</b>	MCCB / MCB Enclosure or Distribution Board	L&T / LEGRAND / SIEMENS / SCHNEIDER / ABB/HENSEL
<b>xi)</b>	PVC insulated (1.1 kV grade) single / multi-core copper flexible conductor.	FINOLEX / HAVELLS / RPG / UNIFLEX / MESCAB / RR KABLES/ POLYCAB
<b>xii)</b>	Telephone cable, LAN Cable	FINOLEX / HAVELLS / MESCAB / POLYCAB
<b>xiii)</b>	Indoor Light Fittings and Lamps (Excluding decorative Bracket Light)	PHILIPS / WIPRO / BAJAJ / CROMPTON / LIGHTING TECHNOLOGY (LT) / HAVELLS
<b>xiv)</b>	Outdoor Light Fittings	PHILIPS / WIPRO / BAJAJ / CROMPTON / LIGHTING TECHNOLOGY (LT)/ SIMOCO / HAVELLS
<b>xv)</b>	Piano Type / Modular type Switch, Socket, Ceiling Rose, Electronic Type Fan Regulator, etc.	ANCHOR / LEGRAND / PHILIPS/ PANASONIC/ ABB / HAVELLS / NORTH-WEST
<b>xvi)</b>	Ceiling Fan, Exhaust Fan, Wall Fan, Pedestal Fan, etc.	CROMPTON / ORIENT / HAVELLS / ALMONARD

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<b>Sl. No.</b>	<b>Items</b>	<b>Manufactures / Makes / Brands</b>
<b>xvii)</b>	Calling Bell	CONA / MAX / ANCHOR
<b>xviii)</b>	HT Cable (11 kV grade) XLPE .	HAVELLS / FINOLEX / UNISTAR / RPG / APAR INDUSTRIES (UNIFLEX) / POLYCAB / TORRENT
<b>xix)</b>	XLPE LT Cable (1.1 kV grade) .	HAVELLS / FINOLEX / GLOSTER / UNISTAR / RPG / APAR INDUSTRIES (UNIFLEX) / POLYCAB / RR KABLE / KEI/ TORRENT
<b>xx)</b>	Cable Jointing Kit	3M / RAYCHEM / DENSON
<b>xxi)</b>	Cable Lug & Cable Gland	DOWELLS / JHONSON / RAYCHEM
<b>xxii)</b>	Digital Multifunction Meter, Energy Meter [ac Static Watthour Meters]	CONZERV / SECURE / L&T / ABB / SIEMENS / AE / IMP / UNIVERSAL / RESHABH / KAYCEE / MECO / ENERCON / NIPPEN / YOKINS
<b>xxiii)</b>	Panel Meters	AE / IMP / UNIVERSAL / RESHABH / KAYCEE / MECO / ENERCON / SCHNEIDER (CONZERV) / L&T / SECURE/ NIPPEN / YOKINS
<b>xxiv)</b>	Lead Acid Battery	EXIDE / FURUKAWA / AMCO / AMARA RAJA/ CROMPTON GREAVES / CUMMINS PULSE / AMARON/ HBL
<b>xxv)</b>	Electric Water Heater (Geyser)	VENUS / BAJAJ / RACOLD / HAVELLS / CROMPTON
<b>xxvi)</b>	Outdoor Type PVC Box	HENSEL / SINTEX/ ABB / HAVELLS
<b>xxvii)</b>	Paints	ASIAN / BERGER / NEROLAC / SHALIMAR / DULUX
<b>xxviii)</b>	MS Pipe for exhaust pipe line	JINDAL / TATA

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Sl. No.	Items	Manufactures / Makes / Brands
xxix)	LRB (light resin bonded) mattresses	ROCKWOOL/MINWOOL/LLO YDS
xxx)	Aluminium Sheets	BALCO/ HINDALCO

Bidders shall submit makers list for all major items [Engine ,Alternator , Controller, VCB, ACB, MCB, RCCB, MCB Type Isolator, MCCB, Contactor, Switch – Disconnecter – Fuse Unit, MCCB / MCB Enclosure or Distribution Board, Wires, Cables, Cable Jointing Kits, Cable Lugs, Cable Glands, Light Fittings, Fans, Switches, Energy meters, Multi Function meters, PVC Box, Paints, etc.] during submission of Techno-Commercial bid. In case bidders fails to submit the list, it would be presumed that the bidder would strictly adhere to the preferred makes as indicated in the tender.

After placement of LOA, successful bidder shall be required to comply the following during engineering stage of the project:-

Any new make, other than preferred make mentioned in the tender, may be accepted by the 'Engineer', if the same meets the following criteria:-

- (a) Shall meet technical specification of the tender.
- (b) Shall be from OEM [original equipment manufacturer].
- (c) Shall submit at least 3Nos. Work order and Performance certificate from Central Govt./ State Govt./ PSU/other reputed organisation for offered equipment.
- (d) Shall have valid type test certificates for the offered equipment from CPRI /ERDA /ERTL /Gov. Labs.

In case, the new make offered by the bidder does not meets above mentioned criteria, the bidder should be required to adhere to the preferred make list of the tender.

#### **D. Detailed Technical Specification (Civil Works):**

##### **6.51 General**

- 6.51.1 All materials to be used in the permanent works shall be of the best quality of the kind and to the approval of the Engineer. They shall comply with the Specifications laid out in the BIS codes (referred to as IS) as revised or modified up to the date one month prior to the Tender Date unless otherwise specifically mentioned in the Tender Documents.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 6.51.2 The materials supplied and the workmanship shall satisfy the Specifications as given in the PWD Schedule of Rates, Govt. of West Bengal (Road Works) as applicable and the job specifications contained in the Bill of quantities of the tender. In absence of the above, relevant Indian Standards shall be referred to.

In absence of any Standard / Specification / Code of Practice covering any part of the work related to this tender, instruction / directions of the Engineer will be binding on the contractor.

All works to be done as detailed in the bill of Quantities.

- 6.51.3 Samples of materials to be supplied and used by the Contractor in the works shall be subject to the prior approval of the Engineer. For this purpose, the contractor shall furnish in advance, representative samples in quantities and in the manner as directed by the Engineer for his approval.
- 6.51.4 Materials brought to the site, which in the opinion of the Engineer do not conform to the approved sample, shall, and if so directed by him, be removed by the contractor within 24 hours at his own cost from the site and replaced by materials of approved quality at no extra cost.
- 6.51.5 The contractor shall produce manufacturer's test certificates for the materials procured by him. The Engineer may carry out or order any test on any of the materials as he may decide. The contractor shall, at his cost and expense, supply requisite materials for this purpose and render such assistance to the Engineer as he may require. The cost of testing will be borne by the Contractor. Further, if and as required by the Engineer, the contractor shall get the materials tested from approved laboratories at his expense and produce the test certificates for the inspection of the Engineer.
- 6.51.6 If the Engineer is of the opinion that the materials are not suitable for use on the works; he may reject the consignment, notwithstanding the Manufacturer's certificates. The Engineer's decision regarding the suitability of materials brought to site for use in the works shall be final and binding on the contractor, who shall remove the rejected materials from site and replace them with materials of required quality.
- 6.51.7 In spite of approval of the Engineer of any material brought to the site, he may subsequently reject the same if in his opinion the materials has since deteriorated due to long or defective storage or for any reason whatsoever and is thereby considered unfit for use in the permanent works. Any material thus rejected shall be immediately removed from the site at contractor's cost and expense.
- 6.51.8 All materials bought to the site shall be properly stored and preserved to ensure their quality and fitness during the course of their use in work. If the storage arrangements are not to the Engineer's satisfaction, he may direct

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

the contractor for arranging proper storage to which the contractor shall have to comply. The materials shall be stored in adequate quantities well in advance to meet the construction schedule and shall be guarded in the manner directed by the Engineer and to his satisfaction.

- 6.51.9 All materials used in the works shall be of the best kind and to the approval of the Engineer's Representative. The materials supplied and the workmanship shall satisfy the relevant clauses as given below and in the Bill of Quantities of the tender.

6.52 Materials

6.52.1 **Cement**

Unless specifically mentioned otherwise the cement to be used in the Works shall be OPC/PPC/PSC of Grade 53/43 conforming to IS: 12269 / IS: 8112 or cement conforming to IS: 455/IS1489 or grades approved by the Engineer. The source of supply shall be subject to prior approval of the Engineer. The Contractor shall endeavour to get approval of at least two makes / sources, so as to have an alternative make / source in hand in case of disruption in supply from the other make / source.

Once the quality and make of cement to be used in the Works is approved the Contractor shall endeavour to obtain further supplies from the same source and make. The Contractor should be prepared to furnish Manufacturer's test certificate as and when required to do so by the Engineer.

For each delivery of cement to the Site the Contractor shall forward to the Engineer a certificate to the effect that such cement was tested and analysed at the Factory and the results of such tests and analysis meet the specifications stipulated in the relevant Indian Standards. The supplier shall also furnish the date of manufacture of the lot from which the contractor has drawn the consignment.

Notwithstanding the provisions of certificate as stated above, each consignment of cement may after delivery on site and at the discretion of the Engineer be subjected to part or whole of the tests and analyses required by relevant IS Codes. Cost of all such tests shall be borne by the Contractor. No cement shall be used in the works until the Engineer has accepted it as satisfactory.

Storage space shall be adequate to store the required quantity of cement to suit the concreting program for the entire work as well as to permit proper storage.

Cement shall be stored in a proper manner in suitable dry and waterproof sheds to prevent damage from weather or improper storage. Where cement in bags are stacked, the stacking shall be at least 10 to 20 cms

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

above the floor with at least a space of 60 cms kept all round between exterior walls and the stacks. The height of the stacks shall not be more than 10 bags. Further safeguards shall be undertaken in monsoon such as covering the stacks with polythene sheets.

The cement storage at site shall be at Contractor's expense and risk. Damage, if any, occurring to cement due to faulty storage, shall be the liability of the Contractor.

Any consignment or part of a consignment of cement which has deteriorated in any way or which does not otherwise comply with the specifications shall not be used in the Works and shall be removed from the Site by the Contractor at no extra cost to the Employer. Storage of cement shall be such as to permit easy identification of the different consignments stored. Records must be maintained by the Contractor showing the date-wise receipts with consignment numbers, amounts used and the balance.

Removal of cement from storage sheds for use in the Works shall be on "First in, First out" basis.

**6.52.2 Water**

Water used for mortars, grout, concrete, curing and for other purposes on the Works, shall be clean and free from deleterious materials such as acids, alkalis, salts, vegetable or organic matters in injurious quantities. Potable water, in general, shall be used.

**6.52.3 Course Aggregate**

Stone aggregates required for works or aggregate for cement concrete (Plain or reinforced) shall be hard, of uniform and fine texture, free from faults or planes of weakness and free from weathered faces. These must also be free from loam, clay, free from organic matter or other impurities. The materials shall be stacked at roadside lands or other lands (as directed by the Engineer's Representative) in specified heights without causing inconvenience to traffic and in such a way as to afford maximum facilities of work. Aggregates for Cement concrete work should conform to IS: 383. Physical requirements and grading of aggregates for pavement courses shall be as specified for particular type of work and as described in P.W.D. (Roads) and the job specifications contained in the Bill of Quantities of the tender. Only stones as is available from quarries in Pakur areas will be normally used.

All coarse aggregate for concrete works must be well graded. These shall be screened for removal of dust and if so necessary in the opinion of the Engineer's Representative, shall be washed at the cost and expense of the contractor.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

#### 6.52.4 Fine Aggregate

All sand shall be clean, sharp and free from clay, loam, organic or any other foreign matter and shall be obtained from the approved source. The contractor shall get the sample of sand to be used in different kinds of work approved by the Engineer before using the same in work. Sand that in the opinion of the Engineer is dirty must be washed to his satisfaction at the cost and expenses of the contractor. Sand for cement concrete work must be Zone-II sand. The sand shall pass through a mesh, 4.75 mm square measured in the clear. Sand shall not be used for concrete works if it contains more than 10% of fine grains passing through a 76 mesh sieve as used for cement test, nor should the fineness modulus be less than 2.00 unless specific permission is obtained from the Engineer's Representative, (ii) Medium sand may be used for cement mortar for masonry plaster etc. (iii) Sand filling in bed shall be done with Zone-III brown sand or as specified in the Bill of Quantities. The gradation of sand as per IS-383 is given below:-

IS SEIVES	PERCENT- AGE FOR PASSING ZONE-I	PERCENT- AGE FOR PASSING ZONE-II	PERCENT- AGE FOR PASSING ZONE-III	PERCENT- AGE FOR PASSING ZONE-IV
10 mm	100	100	100	100
4.75 mm	90-100	90-100	90-100	95-100
2.36 mm	60-95	75-100	85-100	95-100
1.18 mm	30-70	55-90	75-100	90-100
600 micron	15-34	35-59	60-79	80-100
300 micron	5-20	8-30	12-40	15-50
150 micron	0-10	0-10	0-10	0-15

#### 6.52.5 Bricks

All bricks shall be of approved quality of standard specifications, made of good brick earth, uniform deep red, cherry or copper colour, thoroughly burnt in kiln (machine made) without being vitrified, regular in shape and size, sound, hard, homogeneous in texture, true to shape and of standard dimension and shall be free from cracks, chips, flaws, stones or humps of any kind and shall not show appreciable signs of efflorescence either dry or subsequent to soaking in water. The Bricks shall emit a clear ringing

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

sound on being struck and have minimum crushing strength of 105 kg/sq.cm. All the bricks which absorb water more than 20% of their own dry weight after 24 Hours immersion in cold water shall be rejected.

**6.52.6 Steel**

All steel shall be clean and free from loose mill scales, dust, loose rust and coats of paints, oil or other coatings. Any scale or loose rust shall be removed before use, even though the same may have been supplied by the Department without any claim for extra charge for the same. No steel excepting those supplied by the Department or approved by the Engineer-in-Charge shall be used in work or brought to site by the contractor.

**6.52.7 Timber**

All timber shall be of best quality well-seasoned and/or well-treated for preservation and protection against decay etc. It shall be uniform in substance, straight in fibre, free from large or dead knots, sap, flaws, sun cracks, shakes or blemishes of any kind. Any insect damage or splits across the grain shall not be permissible. The colour of the timber shall be uniform throughout, firm and shining with a silky luster when planed and shall not emit dull sound when struck.

**6.52.8 Glass**

All glasses shall be of the specified type, colour visibility and sound and shall be free from cracks, flaws. Spick bubbles and blemishes and shall not weigh less than 7.4 kg/sqm unless otherwise specified

**6.52.9 Paints etc.**

All paints shall be delivered in strong containers, marked with the colour of the paint, brand, volume of paint content in litres and of the best quality of approved make and brand as approved by the Engineer-in-Charge. Under no circumstances shall the paint be diluted with Linseed oil or otherwise. Any paint or enamel although of approved brand, which so hardens in the container that it cannot be readily broken up with a stirrer to a smooth uniform painting consistency, shall be rejected. Any paint or enamel too thick for proper brush application shall be rejected

**6.53 Storage of Materials**

**6.53.1** All materials shall be stored in accordance with the provisions of given hereunder and other relevant IS Specifications. All efforts must be made to store the materials in proper places so as to prevent their deterioration or contamination by foreign matter and to ensure their satisfactory quality and fitness for the work. The platform where aggregates are stockpiled shall be appropriately made. The area shall have slope and

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

drain to drain off rain water. The storage space must also permit easy inspection, removal and storage of the materials. Aggregates of different sizes shall be stored in partitioned stack-yards. All such materials even though stored in approved godowns must be subjected to acceptance test as per these specifications immediately prior to their use

**6.53.2 General**

All materials may be stored at proper places so as to prevent their deterioration or intrusion by foreign matter and to ensure their satisfactory quality and fitness for the work. The storage space must also permit easy inspection, removal and re-storage of the materials. All such materials even though stored in approved godowns/places, must be subjected to acceptance test prior to their immediate use.

**6.53.3 Aggregate**

Aggregate stockpiles may be made on ground that is denuded of vegetation, is hard and well drained. If necessary, the ground shall be covered with 50 mm plank. Coarse aggregates, unless otherwise agreed by the Engineer in writing, 20 mm and downgraded Pakur variety stone chips. Aggregates placed directly on the ground shall not be removed from the stockpile within 30 cm. of the ground until the final cleaning up of the work, and then only the clean aggregate will be permitted to be used.

In the case of fine aggregates, these shall be deposited at the mixing site not less than 8 hours before use and shall have been tested and approved by the Engineer.

**6.53.4 Cement**

Cement shall be transported, handled and stored on the site in such a manner as to avoid deterioration or contamination. Cement shall be stored above ground level in perfectly dry and water-tight sheds and shall be stacked not more than eight bags high. Wherever bulk storage containers are used their capacity should be sufficient to cater to the requirement at site and should be cleaned at least once every 3 to 4 months.

Each consignment shall be stored separately so that it may be readily identified and inspected and cement shall be used in the sequence in which it is delivered at site. Any consignment or part of a consignment of cement which had deteriorated in any way, during storage, shall not be used in the works and shall be removed from the site by the Contractor without charge to the Employer.

The Contractor shall prepare and maintain proper records on site in



respect of delivery, handling, storage and use of cement and these records shall be available for inspection by the Engineer at all times.

The Contractor shall make a monthly return to the Engineer on the date corresponding to the interim certificate date, showing the quantities of cement received and issued during the month and in stock at the end of the month.

6.53.5 **Water**

Water shall be stored in containers/tanks covered at top and cleaned at regular intervals in order to prevent intrusion by foreign matter or growth of organic matter. Water from shallow, muddy or marshy surface shall not be permitted. The intake pipe shall be enclosed to exclude silt, mud, grass and other solid materials and there shall be a minimum depth of 0.60 m of water below the intake at all times.

**E. General Requirements (Civil Works):**

- 6.54 6.54.1 In connection with the aforesaid work, all materials, will be under the custody of the Contractor, till completion of work and commissioning of the same.
- 6.54.2 In connection with aforesaid work, transportation and handling of all materials, welding, etc. should be done by the Contractor at their own risk, cost and arrangement.
- 6.54.3 The Contractor must make their own arrangements for delivery of all materials, as well as for careful and proper unloading at H.D.C.'s site. The responsibility for preventing damage / deterioration to the materials during transit, delivery, unloading at the designated point shall rest with the Contractor. All transit risk will be to Contractor's account.
- 6.54.4 The Contractor should arrange, at their own cost, all necessary tools, tackles, lifting machineries, scaffolding, temporary lighting, different vehicular transport etc., required for the execution of total work.
- 6.54.5 No project surplus material will be taken over by HDC, SMP, Kolkata after completion of the work unless otherwise specified
- 6.54.6 All materials required for the entire work should be as per latest Indian Standard (IS) issued by Bureau of Indian Standard, as applicable, if not specified otherwise in this Bidding Document
- 6.54.7 The supply, installation and commissioning of all items required for this work should be complied with the above Acts & Rules and relevant Code of Practice of the **Bureau of Indian Standard**, if not specified otherwise.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

6.54.8 If during execution of work any damage takes place in the property of HDC, the same will have to be mended good by the contractor at their risk, cost and arrangement.

6.54.9 Relevant aspects of following Rules / Code of Practices should also be followed and complied with:

Indian Factories Act

Dock Workers (Safety, Health & Welfare) Act, 1987

The Workmen's Compensation Act, 1923

The Minimum Wages Act, 1948

The Contract Labour (Regulation & Abolition) Act, 1970

Other Local Regulations

6.55 TRAINING

The Contractor shall arrange training for the technical staff of HDC for operation & maintenance of D.G. sets. The training should included AMF panel operation on both the mode i.e. Auto / manual start of DG set, during failure of power supply.

6.56 TEST ON COMPLETION

On completion of the work , necessary tests shall be carried out as per relevant standards to the satisfaction of the Engineer or his representative.

On successful completion of Acceptance Tests & Functional Tests, the complete system will be energised and the power distribution scheme shall be verified.

6.57 O & M MANNUAL AND AS BUILT DRAWING

On completion of the work, "As Built" drawings, duly incorporating all the changes made during the construction / execution, shall be submitted to Haldia Dock Complex. A CD / DVD / USB flash drive, containing the "As Built" drawings and comprehensive list of the drawings, shall also be submitted by the Contractor.

The Contractor shall also provide 2 sets of Operation & Maintenance manual of Generator Sets.

6.58 On successful completion of 'Test on Completion', the system will be declared commissioned and the same will be taken over by HDC, SMPK.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**SECTION VII**  
**GENERAL CONDITIONS OF CONTRACT (GCC)**

General Conditions of Contract  
Forms and Agreements

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Sanctioned by the Trustees under Resolution No. 92 of the 6<sup>th</sup> Meeting held on 27<sup>th</sup> May, 1993

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Including Addendum Sanctioned by the Trustees Meeting held on July, 2014

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KOLKATA PORT TRUST  
KOLKATA DOCK SYSTEM  
HALDIA DOCK COMPLEX  
July 2014

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

<b>GENERAL CONDITIONS OF CONTRACT</b>		
	<b>CLAUSE</b>	<b>PAGES</b>
1)	AMENDMENT TO GENERAL CONDITIONS OF CONTRACT	GC-1 – GC-2
2)	DEFINITION	GC-3 – GC-5
3)	DUTIES & POWERS OF ENGINEER & ENGINEER'S REPRESENTATIVE	GC-5 – GC-6
4)	THE TENDER / OFFER AND ITS PRE-REQUISITES	GC-7 – GC-12
5)	THE CONTRACT & GENERAL OBLIGATIONS OF CONTRACTOR	GC-12 – GC-18
6)	COMMENCEMENT, EXECUTION AND COMPLETION OF WORK	GC-18 – GC-22
7)	TERMS OF PAYMENT	GC-23 – GC-25
8)	VARIATION AND ITS VALUATION	GC-25 – GC-27
9)	DELAY/EXTENSION OF COMPLETION TIME/LIQUIDATED DAMAGE / TERMINATION OF CONTRACT	GC-27 – GC-29
10)	MAINTENANCE AND REFUND OF SECURITY DEPOSIT	GC-30
11)	INTERPRETATION OF CONTRACT DOCUMENTS, DISPUTES & ARBITRATION	GC-31 – GC-33
12)	FORMS GC-1, GC-2 , GC-3	
13)	FORM OF AGREEMENT	
14)	PROFORMA FOR B.G. FOR CONTRACT PERFORMANCE	
15)	INTEGRITY PACT DOCUMENT: PROFORMA	
16)	ADDENDUM	

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**GC-1**  
**AMENDMENT**  
**TO**  
**GENERAL CONDITIONS OF CONTRACT**

❖ ***CI-3.4 THE TENDER /OFFER & ITS PRE-REQUISITES***

Table under sub-clause (a)

<b>PREVIOUS</b>			<b>AS AMENDED</b>		
<b>Estimated Value of Work</b>	<b>Amount of Earnest Money</b>		<b>Estimated Value of Work</b>	<b>Amount of Earnest Money</b>	
	<b>For Works Contract</b>	<b>For Contract of Supplying Materials or Equipment only</b>		<b>For Works Contract</b>	<b>For Contract of Supplying Materials or Equipment only</b>
Up to Rs. 1,00,000/-	5% of the estimated value of work	1% of the estimated value of work	Up to Rs. 10 Crore	2% 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/-.	½% of the estimated value of work subject to a maximum of Rs. 10,000/- and minimum of Rs. 1,000/-.	Over Rs. 10 Crore	2% on first Rs. 10 Crore + 1% on the balance	½% of the estimated value of work subject to a maximum of Rs. 10,000/- and minimum of Rs. 1,000/-.

**[AMENDMENT SANCTIONED BY THE BOARD OF TRUSTEES VIDE RESOLUTION NO 210 OF THE TRUSTEES' MEETING HELD ON 26.02.2013]**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**GC-2**

Table under sub-clause (d)

<b>PREVIOUS</b>			<b>AS AMENDED</b>		
Class of Registration	Amount Of Fixed Security	Financial Limit Of Each Tender	Class of Registration	Amount Of Fixed Security	Financial Limit Of Each Tender
<b>A</b>	Rs 10,000/-	Any tender priced upto Rs 2,00,000/-	<b>A</b>	Rs 50,000/-	Any tender priced up to Rs 10,00,000/-
<b>B</b>	Rs 5,000/-	Any tender priced upto Rs 1,00,000/-	<b>B</b>	Rs 25,000/-	Any tender priced upto Rs 5,00,000/-
<b>C</b>	Rs 2,500/-	Any tender priced upto Rs 50,000/-	<b>C</b>	Rs 15,000/-	Any tender priced upto Rs 3,00,000/-

**[AMENDMENT SANCTIONED BY THE BOARD OF TRUSTEES VIDE RESOLUTION NO 82 OF THE TRUSTEES' MEETING HELD ON 12.10.2012 ]**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## 1. DEFINITIONS

- 1.0. In the contract, as here in after defined, the following words and expressions shall have the meaning herein assigned to them, except where the context otherwise required.
- 1.1. “Employer” or “Board” or “Trustees” means of the Board of Trustees for the Port of Kolkata, a body corporate under Section 3 of the Major Port Trusts Act, 1963, including their successors, representatives and assigns. **Employer**
- 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. **Chairman**
- 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 representatives, heirs, successor and assigns, if any, permitted by the Board/Chairman **Contractor**
- 1.4. “Engineer” means the Board’s official who has invited the tender on its behalf and includes the Manager (Infrastructure & Civic Facilities) 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. **Engineer**
- 1.5. “Engineer’s Representative” means any subordinate 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. **Engineer’s Representative**
- 1.6. “Work” means the work to be executed in accordance with the Contract and includes authorised “Extra Works” and ‘Excess Works” and “Temporary Works”. **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 godowns, platforms and bins for stacking building materials, gantries, temporary tracks and roads, temporary culverts and mixing platforms. **Temporary works**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-4

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|---|-------------------------------------|
| 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 the works i.e. (Bill 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.  | <b>Extra works and Excess works</b> |
| 1.9. “Specifications” means the relevant and appropriate Bureau of Indian Standard’s specifications / International Standard’s Specifications (latest revisions) for materials and workmanship unless stated otherwise in the Tender.   | <b>Specification</b>                |
| 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.   | <b>Drawings</b>                     |
| 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.   | <b>Contract</b>                     |
| 1.12. “Constructional Plant” means all appliances or things of whatsoever nature required 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 works.  | <b>Constructional Plant</b>         |
| 1.13. “Site” means the land, waterways and other places, on, under, in or through which the works are to be executed by the Trustees for the purpose of the Contract.   | <b>Site</b>                         |
| 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 deductions therefrom as may be made by the Engineer under the provisions here in after contained.   | <b>Contract Price</b>               |
| 1.15. “Month” means English Calendar Month.   | <b>Month</b>                        |
| 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). | <b>Excepted Risks</b>               |

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



## GC-5

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|-------|--|--|
| 1.17. | Word importing the singular only, also includes the plural and vice-versa where the context so requires.   | Singular/ Plural                             |
| 1.18. | The heading 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.   | Headings/<br>Marginal Notes.                 |
| 1.19. | Unless otherwise stipulated the work “Cost” shall be deemed to include overhead costs of the Contractor, whether on or off the site.   | Cost   |
| 2.0.  | DUTIES & POWERS OF ENGINEER & ENGINEER’S REPRESENTATIVE.   |  |
| 2.1.  | The Contractor shall execute, compete 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.  | Engineer’s<br>Authority                      |
| 2.2.  | The Contractor shall take instructions from the Engineer and subject to limitation of Clause 2.5 hereof, from the Engineer’s Representative.   | Authority of<br>Engineer’s<br>Representative |
| 2.3.  | <i>The Engineer shall have full power and authority :</i>  | Engineer’s<br>Power                          |
|       | (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, alteration 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.  | <i>The Engineer’s Representative shall</i>   | Power of<br>Engineer’s<br>Representative.    |
|       | (i) watch and supervise the works.   |  |
|       | (ii) test and examine any material to be used or workmanship employed in connection with the work.   |  |

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-6

- (iii) 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.
  - (iv) take measurements of work done by the contractor for the purpose of payment or otherwise.
  - (v) order demolition of defectively done work for its reconstruction all by the Contractor at his own expense
  - (vi) have powers to issue alteration order not implying modification of design and extension of completion time of the work and
  - (vii) 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, breaking-up thereof and re-constructing at the contractor's cost and the contractor shall have no claim to compensation for the loss if any 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 the 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.
- Limitation of  
Engineer's  
Representative's  
Power
- Engineer's  
Overriding  
Power

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-7

### 3.0. 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 considered all factors, risks and contingencies, which will have direct and indirect 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 climatic 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.   | Site & Local condition.                                       |
| (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.   | Drawing / Specification / Nature & extent of work to be done. |
| (c) The accommodation required for the workmen and site office, mobilisation/demobilisation and storage of all plant, equipment and Construction materials.   | Accommodation for Contractor's men / 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 at Contractor's cost.   | Water for drinking etc. /Electrical power.                    |
| (e) Payment of taxes and duties and compliance of all applicable statutes, ordinances and law together with the rules made thereunder, 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. | Payment of Taxes/duties and observance of all statutes.       |
| (f) Payment of all kinds of stamp-duty for executing the agreement or for any legal instrument including Bank Guarantees and Indemnity Bonds.   | Payment of Stamp Duty by the Contractor.                      |

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-8

- 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 initialling 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. Disclosure of Owner's name.
- 3.4. (a) Unless otherwise stipulated in the Notice Inviting Tender / Offer, every tender must be submitted with Earnest Money of the amount calculated as per the following scale. Earnest Money and Security Deposit.

Estimated Value of Work	Amount of Earnest Money	
	For Works Contract	For Contract of Supplying Materials or Equipment only
Up to Rs. 1,00,000.00	5% of the estimated value of work	1% of the estimated value of work
Over Rs. 1,00,000.00	2% of the estimated value of work subject to a maximum of Rs. 20,000/- and minimum of Rs. 5,000/-.	½% 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 the Trustees' treasurer in cash or by Banker's Cheque of any Kolkata Branch of a Nationalised Bank of India drawn in favour of Kolkata Port Trust or in the form of any "Account Payee" Draft of any Nationalised Bank of India drawn in favour of "Kolkata Port Trust" and payable at Kolkata/Haldia, as the case may be, and the receipt granted therefor be kept attached to the Tender/Offer in the Sealed Cover. Method of Paying E.M.
- (c) Earnest Money of unaccepted tender shall be refunded without any interest through A/c. Payee Cheque drawn on a Nationalised Bank of Kolkata / Haldia. Refund of E.M.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-9

- (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 :

Exemption from E.M. Regd. Firms

Class of Registration	Amount of Fixed Security	Financial Limit of Each Tender
A	Rs. 25,000/-	Any tender priced up to Rs.5,00,000/-
B	Rs. 10,000/-	Any tender priced up to Rs.2,00,000/-
C	Rs. 5,000/-	Any tender priced up to Rs.1,00,000/-

- (e) (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 tenderer 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 at the option of the Trustees.
- (f) 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.
- (g) 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.

Tender without EM liable to rejection.

Forfeiture of E.M. before Acceptance of offer.

E.M. to be converted to part S.D.

Mode of recovery of balance S.D.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

# GC-10

Value of Work	% of Security Deposit for works contract.	% of Security Deposit For contract of supplying materials & equipment 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/- + 7½% on the balance.	1% on first Rs.10,00,000/- + ½% on the balance.
For works costing more than Rs.20,00,000/-	10% on first Rs.10,00,000/- + 7½% on the next Rs.10,00,000/- + 5% on the balance.	1% on first Rs.10,00,000/- + ½% on the next Rs.10,00,000/- + ¼% on the balance.

Scale of S.D. recovery.

- (h) 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 Nationalised Bank of India drawn in favour of Kolkata Port Trust and payable at Kolkata/Haldia, as the case may be.
- (i) 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.

S.D. for supply contracts to be deposited in advance.

No interest payable on E.M. /S.D

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-11

- 3.5. (i) The Security Deposit shall 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. Id, 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 expiry of 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. Mode of refund of S.D.
- (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. Forfeiture of S.D.
- 3.6. 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 Nationalised 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 shall be liable to forfeiture; all at the 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-fulfilment 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. Bank Guarantee in lieu of Cash S.D. in certain cases

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-12

- 3.7. “Every Tenderer/ Bidder shall submit, in respect of a tender value of more than Rs 5 Crore, along with their tender comprising Special Conditions of Contract, General Conditions of Contract, BOQ, Earnest Money, etc. a document called Integrity Pact Agreement duly signed by their authorized representative. The Proforma of the Integrity Pact Agreement shall as specified in the GCC. In case of tender value more than Rs 5 Crore, the Integrity Pact Agreement is an essential part and parcel of bid document to be submitted by each tenderer, without which the tender shall not be considered.”

### 4.0. THE CONTRACT & GENERAL OBLIGATIONS OF CONTRACTOR

- 4.1. (a) The contract documents shall be drawn-up in English language. English language to be used
- (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 Acts : Applicability of laws on the contract
1. The Contract Act (India), 1872.
  2. The Major Port Trusts Act, 1963.
  3. The Workmen’s Compensation Act, 1923.
  4. The Minimum Wages Act, 1948.
  5. The Contract Labour (Regulation & Abolition) Act, 1970.
  6. The Dock Workers’ Act, 1948.
  7. The Arbitration and Conciliation Act (1996) (in the case of a definite Arbitration Agreement only).
- 4.2. After acceptance of his Tender/Offer and when called on 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, Contractor to Execute Contract Agreement.
- shall collectively be the Contract.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



## GC-13

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| 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.  | Interpretation of contract documents – Engineers' Power |
| 4.4. | Two copies of the Drawings 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 or being regularly used at site.   | All Drawings are Trustees' property.                    |
| 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.   | Contractor to prepare working / progress drawings       |
| 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 sub-letting under this clause. | Contractor cannot sub-let the work                      |
| 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.  | Contractors' price is inclusive of all costs            |

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-14

- 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. Contractor is responsible for all construction process, except for correctness of design and specification formulated by the Engineer.
- 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. Contractor to submit his programme of work
- 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. Contractor to supervise the works
- 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 its 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. Contractor to deploy qualified men and Engineer's power to remove Contractor's men

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-15

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| 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.  | Contractor is responsible for line, level, setting out etc.   |
| 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 own 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 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. | Contractor is responsible to protect the work   |
| 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.  | Contractor is responsible for all damages to other structure / persons caused by him in executing the work. |

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-16

- 4.15. The Contractor shall immediately inform the Engineer's Representatives 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. Fossils, Treasure travois, etc. are Trustees' property
- 4.16. The Contractor shall be deemed to have indemnified and shall indemnify the Trustees against all claims, demands, actions and proceedings and all costs arising therefrom on account of : Contractor to Indemnify the Trustees against all claims for loss, damage, etc.
- (a) Infringement of any patent right, design, trademark 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) Unauthorised obstruction or nuisance caused by the contractor in respect of Public or Private 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 property, building or structure in terms of the Contract shall remain the property of the Trustees. Dismantled materials Trustees' property

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-17

- 4.18. The Contractor's quoted rates shall be deemed to have been inclusive of the following :
- Contractor's quoted rates / price must be all inclusive
- (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 labourer 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 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 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 despatch.
- Notice to Contractor

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## GC-18

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| 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.  | Contractor not to publish photograph or particulars of work                 |
| 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.  | Contractor to provide facilities to outsiders                               |
| 4.22.  | The work has to be carried out by the Contractor causing the minimum of hindrance for any maritime traffic or surface traffic.   | Work to cause minimum possible hindrance to traffic movement                |
| 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 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.  | Trustees' lien on Contractor's Plant & Equipment.                           |
| 5.0. 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. | Preliminary time to commence work an maintenance of steady rate of progress |
| 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.   | Contractor's site office  |

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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- 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. Contractor to observe Trustees' working hours.
- 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. Contractor to supply all materials as per requirement of the Engineer or his representative
- 5.5. Unless stipulated otherwise in the contract all materials, workmanship and 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 material and workmanship shall be of the best of their respective kinds to the satisfaction of the Engineer. Materials & Works
- 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. Contractor to submit samples for approval
- 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. Contractor to arrange all testing at his own cost.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

5.8. Regarding the supply of any materials by the Trustees to the contractor in accordance with the contract, the following conditions shall apply :

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| (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.  | The Contractor shall account for and look after the Trustees' materials  |
| (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 in writing.   | Contractor to compensate for loss and damage to Trustees' materials  |
| (c) | (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.   | Delay in supply of Trustees' materials will only entitle the Contractor for extension of completion time of work |
| (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/or 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/s 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. | Recovery from Contractor for Trustees' materials under normal circumstances                                      |

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



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- (e) If the Engineer decides that due to the contractor's negligence, any 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 -
- Recovery from Contractor for Trustees' materials under other circumstances.
- (1) The issue rate of the materials at the Trustees' Stores and
  - (2) 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 any 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.
- Contractor to replace materials / work not acceptable to the Engineer or his Representative
- 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.
- Contractor to seek approval of Engineer or his Representative before covering up any portion of work
- 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.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 5.11. On a written order of the Engineer or his Representative, the Contractor to suspend work on Order from Engineer or his Representative.
- 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 –
- (a) otherwise provided for in the contract, or
  - (b) necessary by reason of some default on the part of the contractor, or
  - (c) necessary by reason of climatic conditions on the site, or
  - (d) 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, and the same shall be final and binding on the Contractor.

- 5.11.1. 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 instructions.
- 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 taken over and/or used by the Trustees, the Contractor shall on application be entitled to partial completion certificate in the Form 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.
- Completion Certificate G.C.1.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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### 6.0. 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. All interim payments are advances till issue of Certificate in Form G.C.2
- On account payments, if any, made prior to issue of the certificate in Form G.C.2, shall all be treated as mere advance, 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 only on the basis of measurements 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 decides any other rate for change in the scope of work or omission, if any, on the part of the Contractor. Payment on the basis of measurements at agreed rates.
- 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. Limitation for on account payment
- 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 token 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. Recording of measurements

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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- 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, amounts and recoveries to type out the bill. Contractor to prepare and submit his bills
- 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 – Advance payment against Non-perishable materials
- (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 discretion,
  - (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 storage 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 Trustees' 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

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

a Kolkata/Haldia Branch of any Nationalised Bank or a Schedule 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. Recovery for wrong and over payment
- 6.8. No claim for interest shall be admissible or payable 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. Interest not admissible to Contractor
- 7.0. 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 fulfilment of his obligation under the contract. Quantities in Bill of Quantities of Tender.
- 7.2. The Engineer shall have the power to order the Contractor in writing to make any variation of the quantity, quality 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 : Engineer's power to vary the works
- (a) Increase or decrease the quantity of any work included in the contract.
- (b) Omit any work included in the contract

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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- (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. Variation by engineer do not vitiate the contract
- 7.4. Provided always that written order of the Engineer shall not be required for increase or decrease in the quantity of any work upto 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. Where written order for variation is not needed
- 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. Payment for extra or additional, or omitted work or substituted work, Engineer's powers
- (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.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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- (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.

### 8.0. 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 commotion 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 Damage" Clause (No.8.3 hereof) on the Contractor and his decision shall be final and binding on the Contractor. If an extension of completion time is granted by the Engineer without imposition of liquidated damage, from 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 communicated by the Engineer, as aforesaid. Extension of completion time
- 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 piece) as mentioned in the letter 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 % of the said value of work. The amount of Liquidated damages shall be determined by the Engineer, which shall be final and binding. 'Liquidated Damage' and other compensation due to Trustees

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- (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 and enter upon the site and works and expel the Contractor there from after giving him a minimum 3 days' notice in writing, 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 :
- Default of the Contractors remedies & powers / Termination of Contract.
- (i) The Contractor has abandoned the contract.
  - (ii) In the opinion of the Engineer, either the progress of work is not satisfactory or the work is not likely to be completed within the agreed period on account of Contractor's lapses.
  - (iii) The Contractor has failed to commence the works or has without any lawful excuse under these conditions has kept the work suspended for at least 15 days 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 or to dismantle or demolish and replace work for 7 days after receiving from the Engineer or his representative the written notice stating that the said materials or work were condemned and rejected by him under these conditions.
  - (v) The Contractor is not executing the works in accordance with the contract or is persistently or flagrantly neglecting to carry out his obligations under the contract.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



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- (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 adjusted insolvent or enters into composition with his creditors or being a company goes into liquidation either compulsory or voluntary.
- 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 at 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 work of the work in accordance with the contract.
  - 8.3.3. Upon termination of contract, the Contractor shall be entitled to receipt payment of only 90% of the value of work actually done or materials actually supplied by him and subject to recoveries as per contract, 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 are known in all respect.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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### 9.0. 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 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 any manner deemed suitable by the Engineer. Contractor's obligation for maintenance of work.
- 9.2. The Contractor 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. Certificate of final completion
- 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 Form G.C.3 annexed hereto (in original), where upon the Engineer shall issue Certificate in Form 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 therefrom in respect of any sum due to the Trustees from the Contractor. Refund of Security Deposit

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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### 10.0. INTERPRETATION OF CONTRACT DOCUMENTS, DISPUTES AND 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, drawings, designs 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 works 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. Engineer's decision
- 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. Chairman's award.
- 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 require 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. Arbitration.
- 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 his predecessor left it.
- 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..

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 10.3.4. The venue of the arbitration shall be either Kolkata or Haldia as may be fixed by the Arbitrator in his sole discretion. Upon every or any such reference the cost of any incidental to the reference and award respectively shall be in the 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 thereunder, 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 decision. 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 10.3 to 10.3.7 hereinabove would apply in the cases 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.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

### GC-33

- (c) Contractor's dispute if any arising only during the maintenance period, if any, stipulated in the contract, must be submitted to the Engineer, with detailed justification in the context of contract conditions, before the issuance of final completion certificate in Form G.C.-2 *ibid*.

No dispute or difference on any matters whatsoever, the Contractor can raise pertaining to the Contract after submission of certificate in form G.C.3 by him.

- (d) Contractor's claim / dispute raised beyond the time limits prescribed in sub-clauses 10.5[b] and 10.5 [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, *vide* Clause 10.3 hereinabove, on their sole discretion, by adding the names of new Arbitrators and / or by deleting the names of existing Arbitrators, without making any reference to the Contractor.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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

**FORM OF TENDER**

To

.....

.....

.....

I/We \_\_\_\_\_

having examined the site of work, inspected the Drawings and read the specifications, General & Special Conditions of Contract and Conditions of the 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 & prices set out in the annexed Bill of Quantities within \_\_\_\_\_

months / weeks from the date of 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 to the acceptance of the Tender and incorporating such Specification, Bill of Quantities, Drawing and Special & General Conditions of Contract and I / We hereby agree that until such Contract Agreement is executed the said Specification, 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. **NOT TO BE QUOTED**

(Repeat in words) .....

.....

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

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

I / We have deposited with the Trustees' Manager (Finance), HDC, vide Receipt No. \_\_\_\_\_ of \_\_\_\_\_ as Earnest Money.

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

Dated : \_\_\_\_\_ (Signature of Bidder with Seal)

<b><u>WITNESS :</u></b>	
Signature:	Name of the Bidder : (In Block Letters)
Name: (In Block Letters)	
Address:	Address:
Occupation:	

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**Syama Prasad Mookerjee Port, Kolkata**

**FORM G.C.1**

Contractor : \_\_\_\_\_  
Address : \_\_\_\_\_  
Date of completion : \_\_\_\_\_

Dear Sir(s),

This is to certify that the following work viz :-

Name of work : \_\_\_\_\_  
Estimate No. : E.E.O. \_\_\_\_\_ Date \_\_\_\_\_  
C.E.O. \_\_\_\_\_ Date \_\_\_\_\_

Work Order No. : \_\_\_\_\_  
Allocation : \_\_\_\_\_  
Contract No. : \_\_\_\_\_

which was carried out by you is in the opinion of the undersigned complete in every respect on the day of 2000 in accordance with terms of the Contract and you are required to maintain the work as per Clause 62 of the General Conditions of Contract and under provisions of the Contract for a period of \_\_\_\_\_ weeks / months / years.

from the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

from the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Yours faithfully,

Signature :

(ENGINEER/ENGINEER'S REPRESENTATIVE)

Name : \_\_\_\_\_

Designation : \_\_\_\_\_

OFFICE SEAL

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



**Syama Prasad Mookerjee Port, Kolkata**

**FORM G.C.2**

**Certificate of Final Completion.**

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

This is to certify that the following work viz :-

Name of work : \_\_\_\_\_

Estimate No. : E.E.O. \_\_\_\_\_ Date \_\_\_\_\_

C.E.O. \_\_\_\_\_ Date \_\_\_\_\_

Work Order No. : \_\_\_\_\_

Contract No. : \_\_\_\_\_

Resolution & 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 obligations under the Contract have been fulfilled by the Contractor.

Signature : \_\_\_\_\_

(ENGINEER/ENGINEER'S REPRESENTATIVE)

Name : \_\_\_\_\_

Designation : \_\_\_\_\_

OFFICE SEAL

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**Syama Prasad Mookerjee Port, Kolkata**

**FORM G.C.3**

**(‘NO CLAIM ‘ CERTIFICATE FROM CONTRACTOR)**

**The Engineer**

**Syama Prasad Mookerjee Port, Kolkata**

Kolkata.

**(Atten : \_\_\_\_\_ )**

Dear Sir,

I / We do hereby declare that I / we have received full and final payment from the Syama Prasad Mookerjee Port, Kolkata for the execution of the following work viz:-

Name of work : \_\_\_\_\_

\_\_\_\_\_

Work Order No. : \_\_\_\_\_

Contract No. : \_\_\_\_\_

Agreement No. : \_\_\_\_\_ Date \_\_\_\_\_

and I / we have no further claim against the Syama Prasad Mookerjee Port, Kolkata in respect of the above-mentioned job.

Yours faithfully,

(Signature of the Contractor)

Dated \_\_\_\_\_

Name of Contractor : \_\_\_\_\_

Address : \_\_\_\_\_

**(OFFICE SEAL OF THE CONTRACOR)**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**Syama Prasad Mookerjee Port, Kolkata**  
**PROFORMA OF FORM OF AGREEMENT**

**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 ..... a  
nd 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 (GCC).
  - (c) The Special Conditions of Contract (SCC).
  - (d) The Conditions of Tender.
  - (e) The Technical Specification & Scope of Work.
  - (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

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at  
Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250  
kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at  
Haldia.

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 :

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**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 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 fulfilment 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.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## INTEGRITY PACT

### Between

**Syama Prasad Mookerjee Port, Kolkata (SMP, Kolkata) hereinafter referred to as  
“The Principal / Employer”**

And

\_\_\_\_\_ hereinafter referred to as **“The Bidder/Contractor”**

### **Preamble**

The Principal intends to award, under laid down organizational procedures, contract/s for ..... The Principal values full compliances with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relations with its Bidder(s) and/or Contractor(s). In order to achieve these goals, an Independent External Monitor (IEM) appointed by the principal, will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

### NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the PRINCIPAL/EMPLOYER to get the contractual work executed and/or to obtain/dispose the desired said stores/ equipment at a competitive price in conformity with the defined specifications/ scope of work by avoiding the high cost and the distortionary impact of corruption on such work /procurement/ disposal and Enabling BIDDERS/ CONTRACTORS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the PRINCIPAL/EMPLOYER will commit to prevent corruption, in any form, by its officials by following transparent procedures

### **Section 1 – Commitments of the Principal/ Employer**

- (1) The Principal commits itself to take measures necessary to prevent corruption and to observe the following principles:
  - (a) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



- (b) The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will, in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
  - (c) The Principal will exclude from the process all known prejudiced persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC)/Prevention of Corruption (PC) Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

## **Section-2 –Commitments of the Bidder(s) / Contractor(s)**

- (1) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
  - (a) The Bidder(s) /Contractor(s) will not directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
  - (b) The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contract, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
  - (c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- (d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s)/Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principles, if any. Further details as mentioned in the “Guidelines on Indian Agents of Foreign Suppliers” shall be disclosed by the Bidder(s)/Contractor(s). Further, as mentioned in the Guidelines, all the payments made to the Indian agent/representative have to be in Indian Rupees only. Copy of the “Guidelines on Indian Agents of Foreign Suppliers” is annexed and marked as Annex-A.
- (e) The Bidder(s)/Contractor(s) will when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

### **Section-3-Disqualification from tender process and exclusion from future contracts**

If the Bidder(s)/Contractor(s) before award or during execution has committed a transgression through a violation of Section 2 above, or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as considered appropriate

### **Section 4-Compensation for damages**

- (1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.
- (2) If the Principal has terminated the contract according to Section 3 or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the contract value or the amount equivalent to Performance Bank Guarantee.

### **Section 5-Previous transgression**

- (1) The Bidder declares that no previous transgressions occurred in the last 3 years from the date of signing the Integrity pact with any other Company in any country conforming to the anticorruption approach or with any other Public Sector Undertaking / Enterprise in India, Major Ports/ Govt. Departments of India that could justify his exclusion from the tender process.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as considered appropriate.

#### **Section 6- Equal treatment of all Bidders/Contractors/Sub-Contractors**

- (1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- (2) The Principal, will enter into agreements with identical conditions as this one with all Bidders, Contractors and Sub-contractors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

#### **Section 7- Other Legal actions against violating Bidder(s)/ Contractor(s)/ Sub Contractor(s)**

The actions stipulated in this Integrity pact are without prejudice to any other legal action that may follow in accordance with provisions of the extant law in force relating to any civil or criminal proceedings.

#### **Section 8 – Role of Independent External Monitor (IEM) :**

- (a) The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this pact.
- (b) The Monitors shall not be subject to instructions by the representatives of the parties and shall perform their functions neutrally and independently.
- (c) Both the parties accept that the Monitors have the right to access all the documents relating to the contract.
- (d) As soon as the Monitor notices, or has reason to believe, a violation of this pact, he will so inform the authority designated by the Principal and the Chief Vigilance Officer of Kolkata Prot Trust.
- (e) The BIDDER/ CONTRACTOR(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the PRINCIPAL including that provided by the BIDDER/ CONTRACTOR. The BIDDER/ CONTRACTOR will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation, if any. The same is applicable to sub-contractors. The Monitor shall be under contractual obligation to treat the information and documents of the Bidder/Contractor/ Sub- contractor(s) with confidentiality.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- (f) The Principal/ Employer will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor, the option to participate in such meetings.
- (g) The Monitor will submit a written report to the designated Authority of Principal/ Employer/ Chief Vigilance Officer of Syama Prasad Mookerjee Port, Kolkata within 8 to 10 weeks from the date of reference or intimation to him by the Principal/ Employer/ Bidder/ Contractor and should the occasion arise, submit proposals for correcting problematic situation. BIDDER/ CONTRACTOR can approach the Independent External Monitor (s) appointed for the purposes of this Pact.
- (h) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or to take corrective action, or to take other relevant action. The Monitor can in this regard submit non- binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (i) If the Monitor has reported to the Principal substantiated suspicion of an offence under the relevant IPC/PCA, and the Principal/ Employer has not, within reasonable time, taken visible action to proceed against such offence or reported to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- (j) The word 'Monitor' would include both singular and plural.

#### **Section 9 – Facilitation of Investigation :**

In case of any allegation of violation of any provisions of this Pact or payment of commission, the PRINCIPAL/EMPLOYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER/CONTRACTORS and the BIDDER/CONTRACTOR shall provide necessary information and documents **in English** and shall extend all possible help for the purpose of such examination.

#### **Section 10 – Pact Duration :**

The pact beings with when both parties have legally signed it and will extend upto 2 years or the complete execution of the contract including warranty period whichever is later. In case bidder/contractor is unsuccessful this Integrity Pact shall expire after 6 months from the date of signing of the contract.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by Chairman, SMP Kolkata.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**Section 11 – Other Provisions :**

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal in Kolkata.
- (2) Changes and supplements as well as termination notices need to be made in writing in English.
- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turn out to be invalid, the reminder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

\_\_\_\_\_  
(For & on behalf of the Principal)

\_\_\_\_\_  
(For & on behalf of Bidder/Contractor)

(Office Seal)

(Office Seal)

Place :

Date :

Witness 1 :

(Name & Address)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Witness 2 :

(Name & Address)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **GUIDELINES FOR INDIAN AGENTS OF FOREIGN SUPPLIERS**

- 1.1. There shall be compulsory registration of Indian agents of Foreign suppliers for all Tenders. An agent who is not registered with SMP, Kolkata shall apply for registration in the prescribed Application-Form.
  - 1.2. Registered agents will file an authenticated Photostat copy (duly attested by a Notary Public)/Original certificate of the principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission/remuneration/salary/retainer ship being paid by the principal to the agent before the placement of order by SMP Kolkata.
  - 1.3. Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.
2. **DISCLOSURE OF PARTICULARS OF AGENTS / REPRESENTATIVES IN INDIA. IF ANY.**
- 2.1. Tenderers of Foreign nationality shall furnish the following details in their offer :
    - 2.1.1. The name and address of the agents/representatives in India, if any and the extent of authorization and authority given to commit the Principals. In case the agent/representative be a foreign Company, it is to be conformed whether it is real substantial Company and details of the same shall be furnished
    - 2.1.2. The amount of commission/ remuneration included in the quoted price(s) for such agents/ representatives in India
    - 2.1.3. Confirmation of the Tenderer that the commission/remuneration if any, payable to his agents/ representatives in India, is to be paid by SMP, Kolkata in Indian Rupees only
  - 2.2. Tenderers of Indian Nationality shall furnish the following details in their offers :
    - 2.2.1. The name and address of the foreign principals indicating their nationality as well as their status, i.e. whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or through the agents /representatives.
    - 2.2.2. The amount of commission/remuneration included in the price(s) quoted by the Tenderer for himself.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 2.2.3. Confirmation of the foreign principals of the Tenderer that the commission/remunerations, if any, reserved for the Tenderer in the quoted price(s), is to be paid by SMP, Kolkata in India in equivalent Indian Rupees
- 2.3. In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/remuneration, if any payable to the agents/representatives in India in Indian Rupees on expiry of 90 days after the discharge of the obligations under the contract.
- 2.4. Failure to furnish correct and detailed information as called for in paragraph-2.0 above will render the concerned tender liable for rejection or in the event of a contract materializing, the same liable to termination by SMP Kolkata. Besides this there would be a penalty of banning business dealings with SMP, Kolkata or damage or payment of a named sum.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

### **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.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



**SECTION - VIII**  
**SPECIAL CONDITIONS OF CONTRACT (SCC)**

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4)	Definitions
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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **SECTION - VIII**

### **SPECIAL CONDITIONS OF CONTRACT (SCC)**

#### **A. GENERAL PROVISIONS**

##### **8.1. Preface**

These provisions though given in a separate section are part of the Bidding Documents, which must be read as a whole, the various sections being complementary to one another and are to be taken as mutually explanatory. These provisions shall be read in conjunction with the other parts of the Bidding Documents, viz. Notice Inviting E-Tenderers, Instructions to Bidders, General Conditions of Contract (GCC), Technical Specification & Scope of Work, Drawings, Price Schedule and other documents forming part of the Contract. In case of any discrepancy or ambiguity in the documents, the order of precedence of the documents as stated below will apply. In particular, these provisions will over ride those in the General Conditions of Contract (GCC) provided there is discrepancy between them.

##### **8.2. Correlation and Order of Precedence of Bidding Documents**

If the stipulations in the various Bidding Documents be found to be at variance in any respect, one will override others (but only to the extent these are at variance) in the order of precedence as given in the list below, i.e. any particular item in the list will take precedence over all those placed lower down in the list.

- i ) Drawings.
- ii ) Technical Specification & Scope of Work.
- iii ) Price Schedule / Bill of Quantities.
- iv ) Special Conditions of Contract (SCC).
- v ) Bidding Forms & Formats.
- vi ) Instructions to Bidder.
- vii ) General Conditions of Contract (GCC).

##### **8.3. 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

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

will take precedence over all those placed lower down the list :

- i ) Letter of Acceptance (LOA) or Work Order or Order Letter [including Accepted Price Schedule].
- ii ) Drawings.
- iii ) Technical Specification & Scope of Work.
- iv ) Price Schedule / Bill of Quantities.
- v ) Special Conditions of Contract (SCC).
- vi ) Bidding / Contract Forms & Formats.
- vii ) Instructions to Bidder.
- viii ) General Conditions of Contract (GCC).
- ix ) Any other document(s) forming part of the Contract.

#### 8.4. Definitions :

In the conditions of contract (“these conditions”), which includes particular conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

##### 8.4.1. The Contract:

- a) **“Contract”** means and includes these Bidding Documents in entirety (including all Addenda and Corrigenda, if any), the specification, the drawings, the PRICE SCHEDULE, the bid / offer, the Letter Of Acceptance, the Contract Agreement (when Contract Agreement would be completed in all respect) and such further documents as may be expressly incorporated in the Letter Of Acceptance or Contract Agreement (when Contract Agreement would be completed in all respect).
- b) **“Contract Agreement”** means the executed Contract Agreement referred to in ITB Clause No. 5.36 [Signing of Contract Agreement].
- c) **“Contract documents”** means the documents listed in the Contract Agreement, including any amendments thereto.
- d) **“Letter Of Acceptance (LOA)”** or **“Work Order”** or **“Order Letter”** means the formal acceptance of the bid (and placement of order with the successful bidder), issued by or on behalf of the Employer, including any adjustments or variation to the bid agreed between the Employer and the successful bidder and includes its enclosure(s), annexure(s), etc., if any.
- e) **“Specification”** means the specification of the work included in the contract and any modification thereof or addition thereto or submitted by the Contractor and approved by the Engineer, in writing. “Specifications” also means the relevant & appropriate Bureau of Indian Standard’s specifications / International Standard’s Specifications (latest revisions) for materials and workmanship,

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

unless stated otherwise in the Tender.

- f) **“Drawings”** means all drawings, calculations and technical information, etc., provided by the Engineer to the Contractor under the contract and all drawings, calculations, samples, patterns, models, etc., including modification, if any, and other technical information & manuals of a like nature, submitted by the Contractor and approved by the Engineer.
- g) **“Tender”** or **“Bid”** means the proposal (priced offer), along with all supporting documents, submitted by the bidder to the Employer for consideration.
- h) **“Price Schedule”** means the priced schedule of items, forming part of the bid.
- i) **“Tenderer”** or **“Bidder”** means the individual firm, who submits the bid, duly filled up and signed, along with all the required documents and payment instruments, in strict compliance of the conditions / requirements stipulated in these bidding documents.

8.4.2. Parties and persons :

- a) **“Party”** means the Employer or the Contractor, as the context requires.
- b) **“Employer”** or **“Board”** or **“Trustees”** means the Board of Trustees for “Syama Prasad Mookerjee Port, Kolkata” (Formerly Kolkata Port Trust), including their successors, representatives and assigns.
- c) **“Contractor”** or **“Successful Bidder”** or **“Successful Tenderer”** means the person or persons, Firm or Company whose tender / offer has been accepted by the Trustees and is named as Contractor in the Contract Agreement and includes the Contractor’s representatives, heirs, successor & assigns, if any, permitted by the Board / Chairman.
- d) **“Contractor’s representative”** means the person(s) named by the Contractor in the contract or appointed from time to time by the Contractor, who acts on behalf of the Contractor.
- e) **“Sub-contractor”** shall mean a person or persons, firm or company to whom a part of the work has been sub-contracted by the Contractor, with prior consent of the ‘Engineer’.
- f) **“Contractor’s personnel”** means the Contractor’s representative and all personnel whom the Contractor utilises on site, who may include staff, labour and other employees of the Contractor and of each Sub-contractor, and any other personnel assisting the Contractor in the execution of the work.
- g) **“Engineer”** means the Board’s official who has invited the tender on its behalf and includes the General Manager (Engineering), HDC or other official as may be appointed from time to time by the Employer, with written notification to the Contractor, to act as

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Engineer for the purpose of the Contract, in place of the “Engineer” so designated.

- h) **“Engineer’s Representative”** means any sub-ordinate 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 GCC Clause Nos. 2.4 to 2.6, under Section - VII.
- i) **“Engineer-in-charge”** means employee of SMP, Kolkata, authorised by the ‘Engineer’ to look after the physical execution of the contract, at site level.
- j) **“Haldia Dock Complex”** or **“HDC”** means a Dock Complex situated at Haldia, under Syama Prasad Mookerjee Port, Kolkata (Formerly Kolkata Port Trust).
- k) **“Chairman”** means the Chairman of the Board of Trustees for Syama Prasad Mookerjee Port, Kolkata (Erstwhile Kolkata Port Trust) and includes the person appointed to act in his place under Sections 14 and 14A of the Major Port Trusts Act, 1963.
- l) **“Deputy Chairman”** means the Deputy Chairman, Haldia Dock Complex and includes the person appointed to act in his place.
- m) **“General Manager (Engineering)”** means the Officer appointed to take charge of Plant & Equipment Division, Infrastructure & Civic Facilities Division and Materials Management Division of HDC, under the supervision of the Deputy Chairman, HDC.
- n) **“Senior Deputy Manager (P&E)”** means the Officer of Plant & Equipment Division of HDC, reporting to the General Manager (Engineering).
- o) **“Deputy Manager (P&E)”** means the Officer of Plant & Equipment Division of HDC, reporting to the General Manager (Engineering) / Sr. Deputy Manager (P&E).

8.4.3. Dates and periods:

- a) **“Completion period”** means the time of completion / period of execution notified under SCC Clause No. 8.38 [Completion period].
- b) **“Month”**, for the purpose of this contract, shall mean the period starting from the date of commencement in any month to the previous date of the following month, as per English Calendar.
- c) **“Week”**, for the purpose of this contract, shall mean any period of 7 (seven) consecutive English Calendar Days.
- d) **“Day”**, for the purpose of this contract, means English Calendar Day.

8.4.4. Money and payments:

- a) **“Contract Price”** or **“Contract Value”** means the sum named in the “Letter of Acceptance (LOA)” [excluding GST] of the bid /offer of the Contractor, subject to such additions thereto and deductions

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

therefrom, as may be made by the 'Engineer', under the provisions contained in these Bidding Documents.

- b) **"Foreign Currency"** means the currency other than Indian Currency.

8.4.5. Work:

- a) **"Excess work"** means the required quantities of work, in excess of the provision made against any item of the 'Bill of Quantities' or 'Price Schedule'.
- b) **"Extra work"** means those work, required by the Engineer for completion of the contract, which were not specifically and separately included in the schedule of items of the work (i.e., 'Bill of Quantities' or 'Price Schedule') of the tender.
- c) **"Related Services"** means the services incidental to the supply of goods / contract job, such as insurance, installation, training, initial maintenance and other obligations of the Contractor, under the contract.

8.4.6. Other definitions

- a) **"Approved / approval"** means approval in writing.
- b) **"Test on Completion"** means such tests, prescribed by the applicable Design Standard, codes and described in the bidding document, to be performed by the Contractor before the equipment / items / installations are supplied, delivered and taken over by the 'Engineer'.
- c) **"Defect Liability Period (DLP)"** means the period defined in the SCC Clause No. 8.40.
- d) **"Force Majeure"** is defined in SCC Clause No. 8.55 [Definition of Force Majeure].

**8.5. Contract documents**

- 8.5.1. The several documents forming the contract are to be taken as mutually explanatory of one another and should anything appear in one, which is not described in the other, no advantage shall be taken of any such omission.
- 8.5.2. In case, any discrepancies or inconsistencies however appear or should any misunderstandings arise as to the meaning and of the specifications or drawings or as to the dimensions or the quality of the materials or the due and proper execution of the work or as to the measurement or quality and valuation of the work executed under this contract or as extra thereupon, the same shall be explained by the Engineer or his authorised representative.
- 8.5.3. The explanation of 'Engineer' or his authorised representative shall be final and binding upon the Contractor and the Contractor shall execute the work according to such explanations, and without extra charge or deductions and do all such work and things as may be necessary for the proper execution of the contract as implied by the specification and drawings, even though such work and things are not specifically shown and described therein.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



## **8.6. Interpretations :**

8.6.1. In the contract, except where the context requires otherwise:

- a) words indicating one gender include all genders;
- b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- c) provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing;
- d) “written” or “in writing” means hand-written (manuscript), type-written, printed or electronically made, and resulting in a permanent record, under or over signature and seal, as the case may be;

And

- e) the word “tender” is synonymous with “bid”, and “tenderer” with “bidder” and the words “tender documents” with “bidding documents”.

## **8.7. All Drawings are Trustees’ property :**

8.7.1. The Drawings, referred to in the ‘Special Conditions of Contract’ / ‘Technical Specification & Scope of Work’ / ‘Price Schedule’, if and as applicable, shall be furnished by the ‘Engineer’ to the Contractor, 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.

## **8.8. Language**

8.8.1. The contract as well as all correspondence and documents relating to the contract, exchanged between the Contractor and the Employer/Engineer, shall be written in English Language only. If any documents / manuals / printed literature / drawings are submitted by the Contractor in other language(s), the same should be accompanied by an accurate translation of the relevant pages in the English language. In that case, for the purposes of interpretation of the contract, such translation shall govern.

8.8.2. The Contractor shall have to bear all costs of translation to the English Language and all risk of the accuracy of such translation, for documents provided by the Contractor.

## **8.9. Governing Law**

8.9.1. The contract shall be governed by and interpreted in accordance with the relevant Indian Acts [considering latest amendment thereof], as applicable, within the jurisdiction of the Honourable High Court of Kolkata [ Calcutta High Court], India, including the following Acts:

- i) The Indian Contract Act, 1872.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- ii) The Workmen's Compensation Act, 1923.
- iii) The Payment of Wages Act, 1936.
- iv) The Dock Workers' (Regulation of Employment) Act, 1948.
- v) The Minimum Wages Act, 1948.
- vi) The Employees Provident Fund Act, 1952.
- vii) The Maternity Benefits Act, 1961.
- viii) The Major Port Trust Act, 1963.
- ix) The Payment of Bonus Act, 1965.
- x) The Contract Labour (Regulation & Abolition) Act, 1970; Rules 1971.
- xi) The Payment of Gratuity Act, 1972.
- xii) The Equal Remuneration Act, 1976.
- xiii) Interstate Migrant Workmen (Regulation of Employment & Conditions of Service) Act, 1979.
- xiv) The Employees State Insurance Act, 1948 & The Employees State Insurance (Amendment) Act, 1989.
- xv) Child Labour (Prohibition & Regulation) Act, 1986.
- xvi) The Dock Workers (Safety, Health & Welfare) Act, 1986.
- xvii) The Indian Arbitration and Conciliation Act, 1996 [considering its latest amendment in 2015].

- 8.9.2. Unless otherwise specified, all the laws / rules / acts, etc., mentioned in different clauses of this bidding document, should be considered as laws / rules / acts, etc. applicable in India.
- 8.9.3. The Contractor shall indemnify SMP, Kolkata for any proceeding taken or commenced by any authority against the Employer for any contravention of any of such laws, bye laws, rules, regulations, orders, etc., by the Contractor or their personnel / workmen / agent / supplier, etc. If, as a result of the Contractor's failure, negligence, omission, default or non-observance of any provisions of any law, bye law, rule, regulation, order, etc., the Employer is called upon by any authority to pay or reimburse or is required to pay or reimburse any amount, the Employer shall be entitled to deduct the same from any amount due or that may become due to the Contractor under this contract or any other contract or by any other means or may otherwise recover from the Contractor any sum which SMP, Kolkata is required or called upon to pay or reimburse on behalf of the Contractor.
- 8.9.4. The Contractor shall indemnify SMP, Kolkata for any proceeding taken or commenced by any authority against the Employer for any contravention of any of such laws, bye laws, rules, regulations, orders, etc., by the Contractor or their personnel/workmen/agent/supplier, etc. If, as a result of the Contractor's failure, negligence, omission, default or non-observance of any provisions of any law, bye law, rule, regulation, order, etc., the

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Employer is called upon by any authority to pay or reimburse or is required to pay or reimburse any amount, the Employer shall be entitled to deduct the same from any amount due or that may become due to the Contractor under this contract or any other contract or by any other means or may otherwise recover from the Contractor any sum which SMP, Kolkata is required or called upon to pay or reimburse on behalf of the Contractor.

#### **8.10. Patent Rights**

- 8.10.1. The Contractor shall fully indemnify SMP, Kolkata against any action, claim or demand, costs or expenses arising from or incurred by reason of any infringement or alleged infringements of letters, patents, design, trademark or name, copyright or other protected rights in respect of any machine, plant, work, materials or things, system or methods of using, fixing working or arrangement used for fixed or supplied by the Contractor in India, or elsewhere.
- 8.10.2. All payments, or otherwise shall be deemed to be included by the Contractor in the prices named in the bid and shall be paid by them to whom they may be payable.
- 8.10.3. In the event of any claim being made or action brought against SMP, Kolkata in respect of any such matter as aforesaid, the Contractor shall be immediately notified thereof and they shall with the assistance, if they so require, of SMP, Kolkata but at the sole expense of the Contractor conduct all negotiations for the settlement of the same or any litigation that may arise there from, provided that the conduct of such negotiations or litigations shall be conditional upon the Contractor giving to SMP, Kolkata such security, as shall from time to time, by reasonably required by SMP, Kolkata to recover the ascertained or agreed amount, as the case may be, of any compensation, damages, expenses and cost, which might be payable by the Trustees in respect of or as a result of any such negotiation or litigation.

#### **8.11. Stamp duty & other expenses**

- 8.11.1. All the costs, charges and expenses to be incurred in connection with Contract Agreement, Indemnity Bond, Bank Guarantees, Integrity Pact, etc., including stamp duty, shall be borne by the Contractor.

#### **8.12. Indemnity**

- 8.12.1. Notwithstanding that all reasonable and proper precautions may have been taken by the Contractor, at all times during the progress of the work, the Contractor shall, nevertheless, be wholly responsible for all damages, whether to the works themselves or to any other property of SMP, Kolkata or to the lives, persons, property of others during the progress of the work.
- 8.12.2. In case any damage occurs to the existing structure due to the Contractor's operation, the same shall be made good by the Contractor, at their own risk and cost. The areas, which are likely to be unsafe for use, shall be barricaded and all necessary precautionary measures, like displaying notices, shall be taken by the Contractor, during the contract period.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 8.12.3. In case any material, spare parts, components, sub-assemblies, accessories, etc., related to the work (under the scope of the Contractor), is required to be taken out of the Dock premises by the Contractor, for some specialised servicing, repairs, overhauling, etc. or for any other reason whatsoever, the Contractor shall have to obtain permission from the Employer. For this the Contractor shall have to submit an “Indemnity Bond” [in the form furnished in Section-XI].

### **8.13. Employer’s lien**

- 8.13.1. All constructional plant, temporary work and materials, when brought to the site by the Contractor, shall be deemed to be the property of the Employer, who will have 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.
- 8.13.2. The Employer shall have a lien on and over all or any money that may become due and payable to the Contractor under this contract or any other contract or from any amount lying with them or under their control and in respect of any debt or sum that may become due and payable by the Employer to the Contractor, either alone or jointly with another or other and either under this contract or under any other contracts or transaction of any nature whatsoever between the Employer and the Contractor.

### **8.14. Additions and alterations**

- 8.14.1. SMP, Kolkata shall have power and authority, from time to time and at all times, to make amendments or additions or alterations or changes in the Technical Specification and give such further instructions and directions, as may appear necessary and proper to SMP, Kolkata for the guidance of the Contractor and good & efficient execution of the work.
- 8.14.2. The Contractor shall receive, obey and be bound by the same, according to the true intent and meaning thereof, as if the same had been mentioned or referred to in the Technical Specification.
- 8.14.3. SMP, Kolkata may also vary or alter the levels or positions of any of the work contemplated by approved specification or may order any of the work contemplated thereby to be omitted, with or without substitution of any other works in lieu thereof, or may order any work or any portion of works executed or partially executed, to be removed, changed or altered, if required.
- 8.14.4. In this connection, SMP, Kolkata may increase or decrease or split the quantity of work included in the contract or execute additional work of any kind necessary for good & efficient execution of the work.
- 8.14.5. The ‘Engineer’ shall have the power to order for the above amendments (additions/alterations/changes, etc.) and any difference in the cost occasioned by any such diminution or alteration so ordered and directed shall be added to or deducted from the amount accepted under the contract based on the rate(s) available in the contract. Where the rate(s) is/are not

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

available in the contract, such difference in the cost shall be determined by the Engineer, taking into account the market rate and labour cost at site for similar work, backed up by rate analysis, (to be submitted by the Contractor and agreed upon between the Contractor and SMP, Kolkata).

In the event of disagreement, SMP, Kolkata shall fix such rates or prices as shall, in their opinion, be reasonable and proper having regard to the circumstances.

## **B. THE ENGINEER**

### **8.15. Instructions of the Engineer or Engineer's Representative**

- 8.15.1. 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. However, the Engineer shall exercise his discretion impartially, within the terms of the contract and have regard to all the circumstances.

The Contractor shall take instructions from the Engineer and subject to limitation indicated in **GCC Clause No. 2.5, under Section-VII**, from the Engineer's Representative.

- 8.15.2. The Contractor shall maintain a Site Order Book at their site office and all orders and instructions issued to them from time to time by the 'Engineer' or his representative will be recorded in the Site Order Book. The authorized representative of the Contractor shall promptly sign each entry as token of having received such orders.

### **8.16. Replacement of the Engineer**

- 8.16.1. If the Employer intends to replace the 'Engineer', the Employer shall give notice to the Contractor in this respect.

### **8.17. Determinations**

- 8.17.1. Whenever these conditions provide that the 'Engineer' shall proceed, in accordance with this clause, to agree or determine any matter, the 'Engineer' shall consult with each party, in an endeavour to reach agreement. If agreement is not achieved, the 'Engineer' shall make a fair determination, in accordance with the contract, taking due regard of all relevant circumstances.

The 'Engineer' shall give notice to both parties of each agreement or determination, with supporting particulars **within 28 (twenty-eight) days** from the receipt of the corresponding claim or request, except when otherwise specified. Each party shall give effect to each agreement or determination, unless and until revised .

## **C. THE CONTRACTOR**

### **8.18. Security Deposit / Performance Guarantee**

- 8.18.1. **Submission of Security Deposit / Performance Guarantee**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Within **28 (twenty-eight) days** of issuance of “Letter of Acceptance (LOA)”, the Contractor shall have to provide an irrevocable and unconditional Bank Guarantee, from a Nationalized Bank / Scheduled Bank in India, in the amount, **3 %** of the Contract Value, excluding GST.

This Security Deposit / Performance Bank Guarantee should be kept valid & enforceable till a date, covering **at least 3 (three) months** beyond the date of expiry of the Defect Liability Period of the Contract job [for the materials, installations & workmanship, with respect to the instant work, as a whole] (as specified in **SCC Clause No. 8.40**). In case the actual duration of the aforesaid Defect Liability Period is required to be extended, the validity of this Bank Guarantee shall have to be extended till a date, covering at least 3 (three) months beyond the date of expiry of such extended duration of the Defect Liability Period.

Failure of the Contractor to submit the aforesaid Performance Bank Guarantee and in the manner stated above, shall constitute sufficient grounds for termination of the contract (including forfeiture of the Earnest Money Deposit, if any).

- 8.18.2. The **Security Deposit / Performance Bank Guarantee** shall be denominated in the currency(ies) of payment in the Contract, and shall be in the form furnished in **Section-XI**.
- 8.18.3. The original Bank Guarantee should be sent by the issuing Branch of the Bank, directly to the Employer, under Registered Post (A.D), at the following address:

General Manager (Finance),  
Haldia Dock Complex (HDC),  
Jawahar Tower Complex,  
P.O: Haldia Township,  
Dist.: Purba Medinipur,  
PIN – 721 607,  
State : West Bengal, India.

A photocopy of the Bank Guarantee should also be sent to the ‘Engineer’, by the Contractor, for record, at the following address:

Dy. Manager (P&E),  
Haldia Dock Complex (HDC)  
Township Electrical Maintenance Office  
Cluster-V, P.O.: Haldia Township,  
Dist.: Purba Medinipur,  
PIN – 721 607,  
State: West Bengal, India.

The General Manager (Finance), HDC may require Bank’s confirmation for having issued the Guarantee. In that case, the issuing Branch of the Bank should send a confirmation letter, directly to the Employer, under

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Registered Post (A.D), at the above address.

- 8.18.4. The proceeds of **Security Deposit / Performance Guarantee** shall be payable to the Employer, as compensation, for any loss resulting from the Contractor's failure to complete its obligations under the Contract.
- 8.18.5. **Security Deposit / Performance Guarantee** shall be liable to be forfeited, at the option of the Employer, if the Contractor fails to carry out the work or to perform / observe any of the conditions of the Contract.
- 8.18.6. The Employer shall be at liberty to deduct / recover any of their dues from **Security Deposit / Performance Guarantee**.

In that case, if **Security Deposit / Performance Guarantee** is reduced by reason of any such deduction or encashment, the Contractor shall have to, **within 15 (fifteen) days thereafter**, make good the amount so reduced.

- 8.18.7. The cost of obtaining **Security Deposit / Performance Bank Guarantee** or any other Bank Guarantee and / or revalidation thereof, whenever required, has to be borne by the Contractor and it shall be their sole responsibility to arrange for timely revalidation of such Bank Guarantee, failing which and for non-fulfilment of any contractual obligation by the Contractor, the Engineer and/or the Employer shall be at liberty to raise claim / demand under Security Deposit / Performance Guarantee and/or enforce the same unilaterally.

No interest/charge, of whatsoever nature, shall be paid by the Employer on the amount of **Security Deposit / Performance Guarantee** held by the Employer, at any stage.

- 8.18.8. On completion of execution of the work, the Contractor shall maintain the same during the "**Defect Liability Period**", as specified in **SCC Clause No. 8.40**, from the date mentioned in the "**Certificate of Completion of Work**" [as per the form furnished in **Section-XI**]. Any defect / fault, which may appear in the work during the 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 their own cost, within 7 (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 any manner deemed suitable by the 'Engineer'.
- 8.18.9. The Contract shall not be considered completed and the work shall not be treated as finally accepted by the Trustees, until a "**Certificate of Final Completion**" [as per the form furnished in **Section-XI**] shall have been signed and issued by the 'Engineer', after all obligations under the contract, including that in the Defect Liability Period (DLP), if any, have been fulfilled by the Contractor. Previous entry on the works or taking

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

possession, working or using thereof by the Trustees shall not relieve the Contractor of their obligations under the Contract for full and final completion of the work.

**8.18.10. Release / refund of Security Deposit / Performance Guarantee:**

On successful completion of the 'Defect liability period' (considering extension, if any) of the Contract job [for the materials, installations & workmanship, with respect to the instant work, as a whole] (as specified in **SCC Clause No. 8.40**), the Contractor may apply for release / refund of his Security Deposit / Performance Guarantee [as stated in **SCC Clause No. 8.18.1**] by submitting to the 'Engineer', an application alongwith "No Claim Certificate", as per the form furnished in Section-XI, whereupon the 'Engineer' shall issue "Certificate of Final Completion" [as per the form furnished in Section-XI] . The 'Engineer' shall also issue necessary recommendation for release of the said Security Deposit / Performance Bank Guarantee [as stated in **SCC Clause No. 8.18.1**] or refund the balance due against the Security Deposit / Performance Guarantee [as stated in **SCC Clause No. 8.18.1**] to the Contractor, after making deduction therefrom in respect of any sum due to the Trustees from the Contractor.

**8.19. Contractor's personnel and Contractor's representative**

8.19.1. The Contractor's personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The 'Engineer' may require the Contractor to remove (or cause to be removed) any person employed on the site of work, including the Contractor's representative, if applicable, who:

- a) persists in any misconduct or lack of care,
- b) carries out duties incompetently or negligently,
- c) fails to conform with any provisions of the contract, or
- d) persists in any conduct, which is prejudicial to safety, health or protection of the environment.

If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

8.19.2. The Contractor shall have to communicate the names of their officials/representatives, authorized by them through **Power of Attorney** (specimen signature of such authorized representative should be attested), to make all correspondences and sign all documents/papers in relation to this Contract.

Written orders or instructions, which the Employer may issue to such authorized officials/ representatives of the Contractor, shall be deemed to have been given to the Contractor.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



- 8.19.3. In case any of such authorised persons fails to act as Contractor's representative, the Contractor shall similarly communicate the name and particulars of another suitable person for such authorization.

The Contractor shall have to notify the 'Engineer', immediately after revoking the appointment of the Contractor's representative and appointment of a replacement.

- 8.19.4. If any of the Contractor's representatives / officials is required to be temporarily replaced during the period of contract, the name of the person temporarily authorised [by any one of the authorised officials/representatives, authorized earlier through **Power of Attorney**], shall have to be notified. Specimen signature of such temporarily authorised representative(s) should be attested [by the said authorised official / representative].

## **8.20. Assignment and sub-contracting**

- 8.20.1. The Contractor shall not, directly or indirectly, transfer, assign, sublet or sub-contract the whole of the work.

Unless otherwise stated in the contract, the Contractor shall not, directly or indirectly, transfer, assign, sublet or sub-contract any part of the work without prior consent of the Engineer. Any such consent shall not relieve the Contractor from any of their liabilities or obligations under the contract and they shall be responsible for :

- a) the acts, defaults and neglect of any Sub-contractor, their agents, servants or workmen as fully as if these were the acts, defaults or neglects of the Contractor, their agents, servants or workmen,
- b) their full and entire responsibility of the contract and active superintendence of the work by them despite being sublet.

**Provided that** the Contractor shall not be required to obtain such permission for:

- i) the provision of labour engaged on piece-work basis/daily rate basis,
- ii) the purchase of materials/services which are in accordance with the standards specified in the contract,

Or

- iii) the sub-contracting of any part of the work, for which the Sub-contractor is named in the contract.

The Contractor shall be responsible for observance, by all Sub-contractors, of labour laws applicable in India (for the portion of work that would be executed in India) and all other provisions of the contract.

- 8.20.2. No **participating bidder** [in connection with the instant tender] will be allowed to act as a **Sub-contractor** of the successful bidder (Contractor).

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 8.20.3. In the event of the Contractor contravening aforesaid condition [**SCC Clause No. 8.20.2**], the Employer shall be entitled to terminate the contract forthwith and award a fresh contract to some other parties at **risk and cost of the Contractor**, who shall be liable for any loss or damage, which SMP, Kolkata may sustain in consequence to arising out of such replacement of the Contractor.
- 8.20.4. The Contractor shall not assign their right and interest in these presents nor assume a fresh partner or partners, dissolve the partnership existing between them in reference to this contract, without the prior written permission of the Employer.

#### **8.21. Access to site**

- 8.21.1. The Contractor shall have to abide by the **rules and regulations of Syama Prasad Mookerjee Port, Kolkata** in respect of entry / exit and movement in the dock premises.
- 8.21.2. Necessary **Gate Pass / Dock Entry Permit**, for entering into the Dock area, will be issued to the personnel of the Contractor [including that of approved Sub-contractor(s)] directly connected with the work, **on chargeable basis** [as per the extant “**Scale of Rates**” of SMP, Kolkata, available at of **Syama Prasad Mookerjee Port, Kolkata**], on receipt of a formal written request.

However, for issuing such Gate Pass, the following would be required:

- i) **For Indian nationals:** A photocopy of the Voter’s Identity Card/any other Photo Identity Card.
- ii) **For foreign nationals (excluding from Nepal and Bhutan):** **Permission in the form of “No objection” for entering Haldia Dock**, from the office of the **Superintendent of Police, Purba Medinipur, West Bengal, India**, which acts as the **District Registration Office for foreigners**.

**Dock Entry Permits shall not be issued to the mentioned foreign nationals without the aforesaid permission.** The aforesaid “No objection”, along with photocopies of Passport and Visa of the foreign national, has to be submitted to the Administration Division of HDC, SMP, Kolkata, with an application for obtaining Dock Entry Permit(s).

- 8.21.3. The Contractor will be fully responsible for any injury (whether fatal or otherwise) to their personnel [including that of approved Sub-contractor(s)], for any loss or damage to property or for any other loss, damage, costs and expenses, whatsoever caused, which, but for the granting of such permission, would not have arisen.
- 8.21.4. The Contractor will be liable to indemnify the Employer against any loss or damage to the property of the Employer or neighbouring property, which may be caused due to any act of the Contractor or their personnel [including that of approved Sub-contractor(s)].

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 8.21.5. **No photograph within the Dock Area** shall be taken by the Contractor, without prior permission of the Engineer.

**8.22. Transportation of materials**

- 8.22.1. All materials, spare parts, tools, tackles, service equipment, including consumables, required under this contract, will have to be packed, securely placed and protected by the Contractor during transportation. The Contractor will be held responsible for the inefficient packing, storing and protection of the materials.

**8.23. Contractor's equipment**

- 8.23.1. The Contractor shall be responsible for all the equipment of the Contractor. When brought on to the site, the Contractor's equipment shall be deemed to be exclusively intended for the execution of the work. The Contractor shall not remove from the site any major items or Contractor's equipment without the consent of the Engineer. However, consent shall not be required for vehicle(s) transporting goods or Contractor's personnel off site.

**8.24. Supply of Water and Electricity**

8.24.1. **Supply of water:**

Drinking water supply at the **Contractor's site office, store, workshop, assembly / erection yard, etc.** will be given **on chargeable basis**.

Water supply, if required, for the **actual work (including erection, commissioning & cleaning work) at the site** and / or **maintenance, repair & cleaning work** (required to be carried out at site during the "Defect Liability Period") will also be provided **on chargeable basis**.

For this, the Contractor shall have to make **all arrangements, including installation of Water Meter and laying of pipelines from the source(s) identified by SMP, Kolkata, at their cost**. The Contractor will be responsible for maintenance and calibration of such water meter also.

SMP, Kolkata do not guarantee uninterrupted supply of water and the Contractor shall not be compensated for any delay or irregularity in supplying water. The Contractor shall have to arrange for the supply of water at their own cost during such periods.

8.24.2. **Billing against supply of water:**

**Water consumption charges** will be determined on the basis of actual consumption recorded through water meter and applicable rate of HDC, SMPK [based on the prevalent rates of SMP, Kolkata, as may be amended from time to time]. Billing will be done on the basis of aforesaid **water consumption charges** and overhead charges @ 19.25% [on the aforesaid **water consumption charges**] as per the notifications of **Tariff Authority of Major Ports (TAMP)**.

The billed amount against **water supply** shall have to be paid by the Contractor immediately, on receipt of the bill from the office of the Finance Division, Haldia Dock Complex. All payment on this account should be

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

updated, otherwise the pending bill amount, along with late payment surcharge, will be recovered from the Contractor's bill(s).

8.24.3. **Supply of electricity:**

Supply of Electricity at the **Contractor's site office, store, workshop, assembly / erection yard, etc.** will be on **chargeable basis**.

Power supply, if required, for the **actual work (including erection and commissioning) at the site** and/or **maintenance and repair** (required to be carried out at site during the "Defect Liability Period") will also be provided **on chargeable basis**.

For this, the Contractor shall have to make all arrangements, including **installation of Energy Meter** and **laying of Cables from the source(s) identified by SMP, Kolkata, at their cost**. The Contractor will be responsible for maintenance and calibration of such Energy Meter also.

SMP, Kolkata do not guarantee uninterrupted supply of Electricity and the Contractor shall not be compensated for any delay or irregularity in supplying Electricity. The Contractor shall have to arrange for Electricity at their own cost during such periods.

8.24.4. **Billing against supply of electricity:**

**Electricity consumption charges** will be determined on the basis of **Chargeable Unit (kWh) [actual Unit (kWh) consumed** (recorded through Energy Meter) **plus 3% on actual Unit consumed]** and applicable rate of **West Bengal State Electricity Distribution Company Limited (WBSEDCL)**. Billing will be done on the basis of aforesaid **Electricity consumption charges** and overhead charges @ 19.25% [on the aforesaid **Electricity consumption charges**] as per the notifications of **Tariff Authority of Major Ports (TAMP)**.

The billed amount against **electric supply** shall have to be paid by the Contractor immediately, on receipt of the bill from the office of the Finance Division, Haldia Dock Complex. All payment on this account should be updated, otherwise the pending bill amount, along with late payment surcharge, will be recovered from the Contractor's bill(s).

**8.25. Use of ground and land/covered space for Contractor's establishment**

8.25.1. The Contractor shall be allowed to use a suitable land (open space), which in the opinion of SMP, Kolkata may be absolutely necessary for the proper and efficient execution of works. The Contractor shall be allowed to erect any temporary structures on this land for **office and / or store and / or workshop**, etc. and make all suitable arrangement for water supply, Electricity supply and sanitary arrangements for the same, at their own cost.

For this, the Contractor shall have to make an application and the required land would be allotted on chargeable basis, as per SMP, Kolkata's "Schedule of Rate", prevailing at that time.

8.25.2. On completion of work or termination of the contract, the Contractor shall have to clear away all their tools, plants, rubbish and other materials,

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**within a fortnight** and hand over vacant and peaceful possession of the same to SMP, Kolkata, in a tidy and clean condition.

- 8.25.3. In case the Contractor is interested in taking **covered space, office room**, etc. of SMP, Kolkata for the purpose of making a site office and store in the Dock area, the same may also be allotted subject to availability. The rents for such covered spaces or office room of SMP, Kolkata, to be allotted to the Contractor, shall have to be paid by the Contractor, as per the 'Schedule of Rent' of SMP, Kolkata, prevailing at that time. In addition to the rent, **water consumption charges** [as per **SCC Clause Nos. 8.24.2**] and **Electricity consumption charges** [as per **SCC Clause No. 8.24.4**] (if Electricity / water is supplied from SMPK's sources) and other applicable charges, as per the notifications of **Tariff Authority of Major Ports (TAMP)**, have to be paid by the Contractor. The Contractor will be responsible for installation, maintenance and calibration of Water Meter and / or Energy Meter also.

#### **8.26. Existing services**

- 8.26.1. Drains, Pipes, Cables, overhead wires and similar services, whether above or below the ground, which may be encountered in the course of the work, shall be saved and kept harmless from injury and/or loss or damages by the Contractor, at their own costs and expenses, so that they continue to be in full and uninterrupted use to the Employer.
- 8.26.2. The Contractor shall not store any materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services. The Contractor shall, at their own costs and expenses and without any delay, repair and make good, to the satisfaction of the Employer, any injury and/or loss or damage caused by the Contractor to the same.

### **D. STAFF AND LABOUR**

#### **8.27. Engagement of staff and labour**

- 8.27.1. The labour, as mentioned in the respective clauses, shall include all labourers of the approved sub-contractor(s), with respect to this contract.
- 8.27.2. The Contractor shall have to make their own arrangements for the engagement of all staff and labour, for doing the work at site or in respect of or in connection with the execution of work, as also for the transport, housing, feeding. They shall have to ensure making payment to the above staff and labours, to be engaged by them (including the labours, to be engaged by the approved Sub-contractor, if any).
- 8.27.3. SMP, Kolkata's store shall mean any store of Haldia Dock Complex, situated at Haldia.
- 8.27.4. It is expressly made clear that both before and after the completion of the work or termination of the contract, SMP, Kolkata **shall have no liability, whatsoever, for the personnel to be engaged by the Contractor [or by the approved Sub-contractor(s)] for the work under this contract.**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## 8.28. Labour Laws

8.28.1. The Contractor shall, at all times, during the pendency of the contract [including the period of making good/rectification of deficiencies/defects, if any], have to comply fully with all existing **Acts, Regulations and Byelaws**, including all **statutory amendments** and re-enactment of **State or Central Government** and other **Local Authorities** and any other enactments and acts that may be passed in future either by the **State** or the **Central Government** or **Local Authority**, including **Workmen's Compensation Act, Labour Laws and Equal Remuneration Act, Factories Act, Minimum Wages Act, Contract Labour (Regulation & Abolition) Act**, etc., if applicable and/or as applicable.

8.28.2. If, as a result of the Contractor's failure, negligence, omission, default or non-observance of any provisions of any laws, the Employer is called upon by any authority to pay or reimburse or required to pay or reimburse any amount, the Employer shall be entitled to deduct the same from any moneys due or that become due to the Contractor under this contract or any other contract or otherwise recover from the Contractor any sums, which the Employer is required or called upon to pay or reimburse on behalf of the Contractor.

All **registration** and **statutory inspection fees**, in connection with labour engagement, with respect to this contract, shall have to be paid by the Contractor, if applicable and/or as applicable.

8.28.3. The Contractor shall have to, immediately after the occurrence of any accident, at or near the site or in connection with the execution of the work under the contract, report (over phone or otherwise) to the Engineer or his representative(s) and shall make every arrangement to render all possible assistance to the victim(s) of such accident.

The Contractor shall also have to report such accident to the Engineer, in writing (giving reference to the earlier communication made). Based on such report, necessary communication with the competent authority would be made whenever such a report is required by law.

8.28.4. For any accident occurred within the entire operational area covered under the contract, the Contractor shall have to arrange prompt investigation into the matter through recording of statement of the personnel witnessing the accident. Such "Accident Report", containing the findings, along with the statements so recorded, shall have to be forwarded by the Contractor to the Engineer at the earliest.

8.28.5. The Contractor shall have to provide full medical treatment to their staff & labourers, in case of "**Accident on Duty**", which will inter alia include their obligations under the **Workmen's Compensation Act, 1923**, including all amendments thereof.

The Employer shall in no manner be liable to the Contractor or any person engaged/employed by them [including that of Sub-contractor] or any other person, for injuries or death caused as a result of accidents occurred, either

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

within or outside the site of work, under the contract. The Contractor shall be responsible for such contingencies and will make good all claims for compensation, claim by their personnel/workmen or the families of the sufferer(s), as the case may be, or as per the decision of the appropriate authority/tribunal or other involved persons.

- 8.28.6. The Contractor shall have to indemnify SMP, Kolkata, in the event of SMP, Kolkata being held liable to pay compensation for injury to any Contractor's servants or workmen [including that of Sub-contractor] under the **Workmen's Compensation Act, 1923**, as amended from time to time.
- 8.28.7. Whenever the contract comes to an end with the efflux of time or otherwise or is terminated, the Contractor shall be required to fulfil all their obligations towards their workmen in terms of applicable labour laws and submit necessary documents towards such effect, to the Employer in support of the same. Any deposit, which may be lying with SMP, Kolkata to their credit, will be liable to be applied for this purpose, if the Contractor fails to comply with the same. In case such documents are not furnished by the Contractor, the Employer will not release the **Security Deposit / Performance Guarantee** and any other amount as may remain due to the Contractor.

## **8.29. Health and safety**

- 8.29.1. In the event of any outbreak of illness or an epidemic nature, the Contractor shall have to comply with and carry out such regulations, orders & requirements, as may be made by the Government, or the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same.
- 8.29.2. The contractor shall provide all necessary First Aid measures, rescue & lifesaving equipment, to be available at Site of Work, in proper condition.
- 8.29.3. The contractor shall adhere to safe construction practice, guard against hazardous & unsafe working conditions and follow all safety precautions for prevention of injury or accidents and safeguarding life & property. The Contractor shall have to ensure safety of all their working personnel to the fullest compliance of the provisions of **general safety rules/regulations**, including **Dock Workers' (Safety, Health & Welfare) Act, 1986**.
- The Contractor shall be solely responsible for consequences arising out of non-compliance or violation of safety rules/ regulations.
- 8.29.4. The Contractor [including approved Sub-contractor(s)] shall have to provide (at their own expenses) all required **Personal Protective Equipment (PPE)** [such as Helmets, Safety Shoes, Nose Masks, Hand Gloves, etc.] & **Safety Gears** for all personnel & labourers engaged during the work.

The contractor shall also provide job specific PPEs [ such as safety belts for working at heights; protective face & eye shield; goggles & hand gloves for welding / gas cutting works; protective foot wear & gloves for hot works; facemasks & gloves for painting works, mixing & material handling work, etc.], as directed by the 'Engineer' or his representative.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

In case of failing to provide the PPEs & Safety Gears, as mentioned above, by the Contractor, the Employer shall provide the same & recover the cost thereof from any amount due, or which may become due to the Contractor or from any amount lying with them or under their control.

8.29.5. Safety Officer of the Trustees or Safety Inspectors shall be afforded all facilities for inspection of the works, tools, plant, machineries, equipment, etc., wherever so required. The contractor shall further comply with any instruction issued by the 'Engineer', Trustees' Safety Officer, Safety Inspector in regards to safety which may relate to temporary, enabling or permanent works, working of tools, plants, machineries, equipment, means of access or any other aspect.

8.29.6. All safety rules shall be strictly followed while working on live electrical systems or installations as stipulated in the relevant safety codes.

Use of hoisting machines and tackles including their attachments, construction tools, machineries and equipment shall comply to the relevant safety codes.

Before allowing workers in sewers, manholes, any duct or covered channel etc, the manhole covers shall have to be kept open and ventilated at least one hour in advance and necessary safety torches / lamps should be inserted first before allowing entry to the worker. Suitable hand gloves and other safety gear will be provided to the worker during handling / removing of slushes / sludge etc. without any extra cost. The Contractor shall adopt all the above safety measures at his own cost.

8.29.7. The successful bidder shall also ensure that –

- i) No damage is caused to plants and vegetations unless the same is required for execution of the project proper.
- ii) The work shall not pollute any source of water / land / air surrounding the work site so as to affect adversely the quality or appearance thereof or cause injury or death to animal and plant life.
- iii) Their office, labour hutment, etc. shall be maintained in a clean and hygienic condition through out the period of their use and different effluents of the labour hutment shall have to be disposed off suitably.

### **8.30. Labour licence**

8.30.1. Within 7 (seven) days from the date of issuance of the order, the Contractor shall have to apply for **labour licence** for the maximum number of workers proposed to be deployed for this work. Necessary certificate shall be issued by the Engineer against a request from the Contractor.

**Photocopy of the application shall have to be furnished to the Engineer**, immediately. However, payment will be released only on furnishing the copy of the **Labour Licence** to the Engineer. However, such license should be kept valid throughout the actual duration of contract.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



### **8.31. Employees' Provident Fund & Employees' State Insurance**

- 8.31.1. The Contractor should have their establishment (with respect to this contract) registered with the concerned authorities under the provision of **Employees' Provident Fund & Miscellaneous Provision Act, 1952** and **Employees' State Insurance Act, 1948**. The Contractor shall have to submit the proof of registration as mentioned above immediately after commencement of work.
- 8.31.2. As per the above mentioned Act, the Contractor is liable for remittance of monthly subscription contribution in respect of **Employees' Provident Fund (EPF)** and **Employees' State Insurance (ESI)** for the workers engaged by them, wherever applicable.
- 8.31.3. In case, registration with the EPF and ESI Authorities is not applicable for the employees of the Contractor [or for the employees of the Sub-contractor(s)], documentary evidence to establish non-applicability to be submitted by the Contractor.
- 8.31.4. In case of sub-contracting any part of the work, above requirements should also be fulfilled by the approved Sub-contractor and necessary documents shall have to be submitted in time, as indicated above.

## **E. PLANT, MATERIALS AND WORKMANSHIP**

### **8.32. Materials to be supplied by the Employer**

- 8.32.1. Regarding 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' Store [store of Haldia Dock Complex, situated at Haldia], 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.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 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/or 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(s) stipulated in the contract. These rates shall only be considered by the Contractor in the preparation of his bid/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, any 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 19.25 % 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.

### **8.33. Contractor's arrangement for execution of the work**

- 8.33.1. The Contractor will have to arrange and provide all types of materials, etc. [in line with the Technical Specification] throughout the execution of the contract.
- 8.33.2. SMP, Kolkata will not take any responsibility regarding non-availability of any such materials for which Contractor is responsible as per contract. The Contractor shall have to assess the requirement of such materials and keep sufficient stock.
- 8.33.3. The Contractor shall have to provide all equipment, including tools, tackles, lifting machineries, air compressor, scaffolding arrangement, different vehicular transport, etc., necessary to execute the work.
- 8.33.4. All tools & machineries to be used by the Contractor should be suitable for the particular requirement (i.e. capacity should be adequate) and the same should be checked for fitness before use. They should maintain the said equipment properly to ensure their efficient working.
- 8.33.5. The Contractor shall, at their own costs and expenses, have to provide all labour, plant, haulage, transportation of plant and equipment to be used for executing the contract, all materials, stores, etc. (except the equipment & materials to be provided by SMP, Kolkata, as per contract) required for efficiently carrying out the work to the satisfaction of the Employer.
- 8.33.6. The Contractor should use calibrated measuring & testing instruments and should also ensure revalidation of such calibration as and when required. In

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

this regard, initially the Contractor shall have to submit a list of measuring and testing instruments (mentioning the period of validity of Calibration Certificates) to be used. The photocopies of the Calibration Certificates (including the revalidations) of the said measuring and testing instruments, shall have to be submitted to the 'Engineer'.

#### **8.34. Inspection and testing**

- 8.34.1. The Engineer or his authorised Representative shall have, at all reasonable time, access to the Contractor's premises or work site or other premises [if a part of the work is being executed there or some **maintenance repair** work (during **Defect Liability Period**) is being done there] and shall have the power, at all reasonable time, to **inspect, examine and test the materials and workmanship**, as well as the **documents, equipment, tools, measuring & testing instruments**, as applicable, in connection with the instant contract (including **Defect Liability Period**).
- 8.34.2. During execution of the work as well as after completion of the jobs, the same will be inspected and tested jointly by the authorized representative of HDC, SMPK and the Contractor at site, based on the 'Technical Specification & Scope of Work'. The Contractor will have to provide all facilities for inspection of the materials and executed work, at their own risk, cost and arrangement.
- 8.34.3. The major items (fabricated / bought out items) may be inspected & tested at Manufacturer's works by the representative of HDC, SMPK, before delivery. Physical checking & verification of the items will be carried out at site after delivery, as per the 'Technical Specification', based on Manufacturer's test certificate, as applicable. Other materials, which will be provided / installed by the Contractor, will be inspected at site, as applicable, before installation.
- 8.34.4. The materials supplied & utilised by the Contractor, in the instant work, should strictly conform to the laid down specification in the contract.  
  
Samples from the supplies may be drawn for testing by SMPK's own arrangement or for testing at Government approved Test House. If the sample is found to be inferior to the laid down specification of the contract, the materials will be rejected in whole or in part. The Contractor shall be debited with the cost of test. Moreover, rejected materials shall have to be replaced by the Contractor at their own cost, risk & arrangement.
- 8.34.5. The 'Engineer' or his authorised 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 material and/or workmanship in the subject of any of the said grounds of objection, which are not in accordance with the contract.
- 8.34.6. If found necessary, SMP, Kolkata reserves the right to get the materials inspected from a **Government or Government recognized Laboratory / Test House**.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 8.34.7. In case of subletting to other Contractors or manufacturers or suppliers by the Contractor, the Engineer will reserve the right as follows:
- i) that inspection and / or testing will be carried at the Sub-contractor's works; or
  - ii) that inspection will be carried out at site; or
  - iii) that inspection will be waived, subject to the Contractor furnishing a certificate of compliance with specification by a competent authority recognised by national/international institutes.
- 8.34.8. The Employer may appoint a **Third Party Inspection Agency**, at the cost of the Employer, for stage-wise technical inspection and certification of **materials & workmanship**, including **painting, erection, commissioning**, etc. [in connection with commissioning of DG Sets, including AMF Panel, Cable, etc.], in part or as a whole, on their behalf. In that case the relevant Certificates shall be produced by the **Third Party Inspection Agency** to the 'Engineer' or his authorised Representative.
- 8.34.9. The stage-wise technical inspection will be carried out by the representative of the Engineer [or **Third Party Inspection Agency**] based on the approved **Quality Assurance Plan (QAP) & Field Quality Assurance Plan (FQAP)** [considering the 'Technical Specification & Scope of Work' of the Bidding Documents].
- 8.34.10. The Contractor shall have to submit a **Quality Assurance Plan (QAP)** and a **Field Quality Assurance Plan (FQAP)**, based on the 'Technical Specification & Scope of Work' and other terms & conditions stipulated in the bidding documents. The **QAP & FQAP** shall be approved by the "**Engineer**".
- 8.34.11. In all cases where tests are required, within the purview of QAP & FQAP, whether at the premises of the Contractor or any Sub-contractor or elsewhere, the Contractor, except where otherwise specified, shall provide free of charges such labour, materials, electricity, fuel, water, stores, apparatus and instruments, as may reasonably be demanded, to carry out sufficiently such tests and shall, at all times, facilitate the 'Engineer' or his Representative [and / or the Third Party Inspection Agency] , to accomplish such testing.
- 8.34.12. The cost of all tests and / or analyses, within the purview of QAP & FQAP, effected at the Contractor's or Sub-contractor's works and on the site, shall be borne by the Contractor. The Contractor will be called upon to pay all expenses incurred by the Employer in respect of any work found to be defective or of inferior quality, adulterated or otherwise unacceptable.
- 8.34.13. If, during inspection by the **Third Party Inspection Agency [if appointed by SMP, Kolkata]**, any material or test [within the purview of QAP & FQAP] fails to fulfil the contract conditions for **more than 2 (two) times, any additional amount charged by the Third Party Inspection Agency towards inspection of the same from the 3<sup>rd</sup> time onwards shall have to**

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**be borne by the Contractor.** If the Contractor fails to make such payment to the **Third Party Inspection Agency**, the same shall be deducted from the bill(s) of the Contractor and paid to the **Third Party Inspection Agency**

- 8.34.14. Inspection & testing of the work by the authorized representative of HDC, SMPK or TIPA shall not relieve the Contractor from their obligations for conforming to the quality, workmanship, guaranteeing the performance, etc. as per the contract.

- 8.34.15. **Tests on completion:**

On completion of installation, the contractor shall give a 7 (seven) days' notice to the Engineer [with a copy to the Third Party Inspection Agency, if appointed by SMPK], in writing (informing the date on which they will be ready to make the tests), before carrying out such tests, in accordance with and in the manner prescribed in the specifications.

If any portion of work fails under the tests to fulfil the contract conditions, tests of the faulty portion shall, if required by the **Third Party Inspection Agency (appointed by SMPK)** or the 'Engineer' or by the Contractor, be repeated within reasonable time, upon the same terms and conditions.

If such "**Tests on completion**" cannot be carried out successfully by the Contractor within 1 (one) month after the time fixed by the Contractor and if, in opinion of the 'Engineer', the tests are being unduly delayed, the 'Engineer' may, in writing, call upon the Contractor, with 7 (seven) days' notice, to make such tests, failing which the 'Engineer' may proceed to make such tests himself, at the Contractor's risk and expense. In the above eventuality, the Employer shall, nevertheless, have the right of using the installations at the Contractor's risk until the "**Tests on completion**" are successfully carried out.

- 8.34.16. After completion of the work, on satisfactory testing & commissioning, the Completion Certificate will be issued and the Diesel Generator Sets , alongwith electrical & civil works , will be taken over by HDC thereafter.
- 8.34.17. Notwithstanding the fact that the materials or installations have 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.

### **8.35. Removal of materials on completion**

- 8.35.1. The Contractor shall, on completion of the contract or when directed by the Employer, shall have to remove all plant, equipment, tools, materials, temporary constructions, etc. and rubbish garbage, waste, which may have accumulated during the execution of the contract, other than those permanently used into the work, at Employer's site.

### **8.36. Workmanship and secrecy**

- 8.36.1. The Contractor shall carry out the services in conformity with generally accepted norms and sound standards of Engineering. The Contractor shall

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

be responsible for the technical soundness of the services rendered. In the event of any deficiency in those services, the Contractor shall promptly redo the same, at no additional cost to the Employer.

- 8.36.2. The Contractor shall use all the documents, drawings and other data & information, of proprietary nature, received from the Employer, solely for the purpose of performing and carrying out the obligations on his part under the Agreement in the performance of the works for the project and maintain utmost secrecy, in this regard. The documents, drawings and other data & information, received from the Employer, shall not be used by the Contractor for any other purpose.

## **F. COMPLETION OF WORK, HANDING OVER & TAKING OVER, ETC.**

### **8.37. Completion Certificate**

- 8.37.1. When the whole of the work has been completed to the satisfaction of the 'Engineer', the Contractor shall, within 21 (twenty one) days of submission of their application to the 'Engineer', be entitled to receive from him a certificate for completion of work as per the form furnished in **Section – XI**.

### **8.38. Completion period**

- 8.38.1. All the jobs related to Commissioning of the Diesel Generator Sets, AMF Panels, Control Panel, etc., as per contract, are to be completed within **10 (ten) months from the date of** issue of Letter of Acceptance (LOA) [ i.e. **award of contract**].

### **8.39. Taking over of the Contract job by SMP, Kolkata**

- 8.39.1. The Contract job related to supply, installation, testing & commissioning of the Diesel Generator Sets (including Civil & Electrical Works) will be taken over by HDC, SMPK after completion of the works in accordance with the contract, having passed all the tests under "Tests on completion" and submission of required Manuals, As Built Drawings, etc..
- 8.39.2. However, the actual date of completion of the contract will be considered as per **SCC Clause No. 8.38 [Completion period]**.

### **8.40. Defect Liability Period (DLP)**

- 8.40.1. The materials supplied and work executed by the Contractor will be guaranteed for a period of 02 years from the date of taking over, after complete execution of the work (Part-A, Part-B & Part-C).
- 8.40.2. "**Defect Liability Period**" shall mean the **Guarantee Period**, which starts from the date of taking over the Contract job related to supply, installation, testing & commissioning of the Diesel Generator Sets (including Civil & Electrical Works) [as per **SCC Clause No. 8.39** (Taking over of the Contract job by SMP Kolkata)] and will continue till expiry of 02 years,

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calculated from the date of taking over the Contract job.

- 8.40.3. During “**Defect Liability Period**” [as specified above], the Contractor shall nominate 1 (one) competent, experienced and responsible technical person, to co-ordinate and execute all works to be attended by the Contractor, as per contractual obligations, without any extra cost to HDC, SMP, Kolkata.
- 8.40.4. The Contractor shall be responsible for making good (including replacement of defective items, if required), with all possible speed, at their expense, any defect in or damage to any portion of the work, which may appear or occur after the Contract job has been taken over [as per **SCC Clause No. 8.39** (Taking over of the Contract job by SMP, Kolkata)] and before expiry of Defect Liability Period [as specified above] and which arises either:
- a) from any defective materials, workmanship or design, or
  - b) from any act or omission of the Contractor done or omitted during the said period.

#### **8.41. Defects after taking over**

- 8.41.1. If any such defects shall appear or damage occur (as detailed in **8.40.4**), the ‘Engineer’ shall forthwith inform the Contractor thereof, stating in writing the nature of defect or damage.

The provision of this clause shall apply to all replacements or renewals carried out by the Contractor to remedy defects and damage as if the said replacements and renewals had been taken over on the date they were completed to the satisfaction of ‘Engineer’.

- 8.41.2. After the taking over of the Contract job, if the same cannot be used (for the purpose for which it is intended), during any period, by the reason of a defect or damage, the **Defect Liability Period** shall be extended accordingly. If only a **portion** of the **Contract job** is affected, the **Defect Liability Period** shall be extended [in case the defects is not rectified or defective materials is not replaced within 24 (twenty four) hours of its occurrence] only for that portion, provided the other portions of the **Contract job** remains in order, fulfilling contract conditions. In neither case shall the **Defect Liability Period** be extended beyond **36 (thirty-six) months** [from the date of taking over the **Contract job**] for the materials, installations & workmanship, with respect to the instant job, as a whole (Part-A, Part-B & Part-C).
- 8.41.3. If any such defect or damage be not remedied by the Contractor within a reasonable time, HDC, SMP, Kolkata may proceed to do the work at the Contractor’s risk and expense, but without prejudice to any other rights which HDC, SMP, Kolkata may have against the Contractor in respect of such defects.

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- 8.41.4. All inspection, adjustments, replacement or renewal carried out by the Contractor during the period referred in this clause shall be subject to the conditions of this contract, which shall be binding on the Contractor in all respects during the **Defect Liability Period** and its extension, if any.

**8.42. Extension of completion period:**

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 **Force Majeure** condition (as per **SCC Clause No. 8.55**) or other special circumstances, of any kind, beyond the control of the Contractor or any other reason not attributable to the Contractor [including hindrance at site of work, causes indicated as "**Excepted Risks**", etc.] cause delay in completing the work [Contract job related to design, manufacture, supply, installation, testing & commissioning of the lift (including Civil & Electrical Preparatory Works)], the Contractor shall apply to the 'Engineer', in writing, for suitable extension of completion period, within **7 (seven) 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 Damage**" (**SCC Clause No. 8.43.1** hereof) on the Contractor and his decision shall be binding on the Contractor. If an extension of completion period is granted by the 'Engineer', "**Liquidated Damage**" (**SCC Clause No. 8.43.1** hereof) shall apply from its date of expiry, if the work be not completed within the extended time, unless stated otherwise in the decision communicated by the 'Engineer', as aforesaid.

**8.43. Liquidated Damage :**

**8.43.1. Liquidated Damage**

If the Contractor fails to complete the work [Contract job related to supply, installation, testing & commissioning of the Air-conditioning System (including Civil & Electrical Works)] within the stipulated dates [as per **SCC Clause No. 8.38** (Completion period)] 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 piece, excluding GST) as mentioned in the Letter 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% of the said value of work.

- 8.43.2. Without prejudice to any of their legal rights, the Trustees shall have the power to recover the said amount of compensation/damage/ penalty, as per **SCC Clause No. 8.43.1** 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 3 (three) days' notice, in

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



writing, has been given to the Contractor by the 'Engineer' or his Representative.

## **G. CONTRACT PRICE, PAYMENT AND DEDUCTIONS**

### **8.44. Contract Price**

- 8.44.1. Price charged by the Contractor for the related services performed under the contract shall not vary from the rates accepted by the Employer, based on the bid/offer of the successful bidder and stated in the "Letter Of Acceptance", with the exception of any price adjustment, if provided for in the contract.
- 8.44.2. The Accepted Rates [in Accepted Price Schedule] shall include all taxes & duties of Central / State / Local bodies [excluding Goods and Services Tax (GST)], as applicable, all incidental charges and charges for packing, forwarding, loading, handling, carrying to any lead, stacking, transportation, permits, overheads & profit, etc. necessary for the complete services, as described in the 'Price Schedule' & 'Technical Specification & Scope of Work'.
- 8.44.3. Changes **in statutory taxes & duties will be adjusted** time to time.
- 8.44.4. No claim whatsoever of the Contractor for their man & material resources remaining idle for any reason or for any other expenses incurred by them due to the flow of work not being continuous or for stoppage of work, will be entertained by the Employer.

### **8.45. Terms of payment**

*The quantities given in the "PRICE SCHEDULE" are indicative only [which may vary (both upward & downward) during execution] and are given to provide a common base for tendering and evaluation. However, the payment will be made on the exact quantity to be executed by the Successful Bidder.*

Payment to the Successful Bidder will be made stage-wise, against executed work, as indicated below :-

- 8.45.1. **Against Price Schedule Sl. Nos. 1 a), 2 a), 3 a), 5 a), 7 a), 8 a), 10 a), 12 a), 13 a) & 15 a), under Part-A [Supply of new DG Sets, HT Panel / DG Control Panel / AMF Panel (with LT Distribution Panel) & Cable].**
  - i) Payment for 70% amount of each item will be made against supply of respective item at HDC's site and submission of unambiguous bill along with Custodian Certificate & other relevant documents like Inspection Reports, Challans, physical verification (at site)-cum-measurement sheet, etc.
  - ii) Payment for 20% amount of each item will be made against installation of the respective item and submission of unambiguous bill, along with Installation Certificate & other required documents.
  - iii) 10% payment amount will be made against successful commissioning of the new Air-conditioning System & handing over

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

the same to HDC , against submission of unambiguous bill, supported with documents regarding successful commissioning & taking over the commissioned job by HDC .

- iv) Payment for 10 % amount will be made against testing, successful commissioning, taking over the commissioned job by SMPK and submission of unambiguous bill, supported with documents regarding successful commissioning & taking over the commissioned job by SMPK .

**8.45.2. Against Price Schedule Sl. Nos. 1 b), 2 b), 3 b), 5 b), 7 b), 8 b), 10 b), 12 b), 13 b) & 15 b), under Part-A [Installation / laying, testing & commissioning of new DG Sets, HT Panel / DG Control Panel / AMF Panel (with LT Distribution Panel) & Cable].**

- i) Payment for 90% amount of each item will be made against installation / laying of the respective item and submission of bills along with Installation Certificate.
- ii) Payment for 10 % amount will be made against Testing, successful commissioning, taking over the commissioned job by SMPK and submission of unambiguous bill, supported with documents regarding successful commissioning & taking over the commissioned job by SMPK .

**8.45.3. Against remaining items of Price Schedule, under Part-A [Sl. Nos. 4, 6, 9, 11, 14 & 16]**

- i) Payment for 70% amount of the executed work (including supply) will be made after successful completion of the work and submission of unambiguous bill, along with required documents like Challans, Inspection Report / Work Done Certificates, etc.
- ii) Payment for 30 % amount of the executed work (including supply) will be made against Testing, successful commissioning, taking over the commissioned job by SMPK and submission of unambiguous bill, supported with documents regarding successful commissioning & taking over the commissioned job by SMPK .

**8.45.4. Against Price Schedule Sl. Nos. 1 to 50, under Part-B [Preparatory Electrical Work].**

Payment to be made on the exact quantity, which would be executed by the contractor.

- i) Payment for 70% amount of the executed work (including supply) will be made after successful completion of the work and submission of unambiguous bill, along with required documents like Challans, Inspection Report / Work Done Certificates, etc.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- ii) Payment for 30 % amount of the executed work (including supply) will be made against Testing, successful commissioning, taking over the commissioned job by SMPK and submission of unambiguous bill, supported with documents regarding successful commissioning & taking over the commissioned job by SMPK .

**8.45.5. Against Price Schedule Sl. Nos. 1 to 38, under Part-C [Preparatory Civil Work].**

Payment to be made on the exact quantity, which would be executed by the contractor.

- i) Payment for 70% amount of the executed work (including supply) will be made after successful completion of the work and submission of unambiguous bill, along with required documents like Challans, Inspection Report / Work Done Certificates, etc.
- ii) Payment for 30 % amount of the executed work (including supply) will be made against Testing, successful commissioning, taking over the commissioned job by SMPK and submission of unambiguous bill, supported with documents regarding successful commissioning & taking over the commissioned job by SMPK .

**8.45.6. Submission of Bill / Tax Invoice:**

Bills should be submitted, in triplicate, to Township Electrical Maintenance Office, Plant & Equipment Division, Haldia Dock Complex, along with required certifications / inspection reports and other relevant documents.

Payment will be made in Indian Rupees through the banker of the Contractor (i.e. through ECS), within 30 days from the date of submission of clear & unambiguous bill, in line with the aforesaid payment stages, alongwith required documents. During submission of bill(s), the following information must be submitted by the Contractor regarding their banker:

- i) Bank Account number.
- ii) Name of the bank
- iii) Name of the branch.
- iv) Address of the branch.
- v) MICR code of the branch.

**8.45.7. Payment of Goods & Services Tax (GST):**

GST, as applicable, shall be paid extra against proper invoice submitted by the Contractor.

The Contractor will be required to submit GST compliant invoice with all required details and also be required to file timely and proper return so as to enable SMPK to get due credit against GST paid.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

In case of any failure on the above account, GST amount, even if paid by SMPK, shall be recoverable from the Contractor.

8.45.8. **Time of payment:**

The Contractor shall have to submit **bills in triplicate** to the Engineer, in accordance with the stage-wise payments specified in **SCC Clause No. 8.45**. In normal circumstances, payment of the bills, accompanied by Inspection Certificates / Work Done Certificate / Job Certification & other relevant documents, duly recommended by the 'Engineer' or his Representative, will be passed within 30 (thirty) days from the date of receipt of such bills, if found in order.

8.45.9. **Income Tax deduction:**

**Income Tax**, if any, as per the relevant provision of the Income Tax Act, shall be **deducted at source** from amount payable to the Contractor.

8.45.10. **No interest on account of delayed payments:**

Any claim for interest will not be entertained by SMP, Kolkata with respect to any delay on the part of SMP, Kolkata for making payment, or for any dispute. The decision of the Engineer is final in such matters.

**8.46. Extra expenses incurred by the Employer**

8.46.1. Any extra expenses incurred in connection to the work by the Employer in the performance of the work owing to the neglect or omission on the part of the Contractor in any of the case mentioned in this contract shall be deducted from any sum due or which may thereafter become due to the Contractor or from any amount lying with them or under their control or they may be called upon to pay the amount of such extra expense to such person or persons as the Employer may appoint to receive the same and in the event of the Contractor failing to make such payment, the said amount shall be recoverable from them in such manner as the Employer may determine.

**8.47. Recovery of deducted amount**

8.47.1. Without prejudice to any of their legal rights, the Trustees shall have the power to recover the amount of deduction, from any money due or likely to become due to the Contractor. Such payment or deduction shall not relieve the Contractor from their obligation to complete the work or from any of their other obligations / liabilities under the contract.

**H. SUSPENSION & TERMINATION**

**8.48. Notice to correct**

8.48.1. If the Contractor fails to carry out any of their obligations under the contract, the Engineer may give notice to the Contractor, requiring them to make good the failure and to remedy the same within a specified reasonable time.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

#### 8.49. Termination by Employer

8.49.1. The Employer shall be entitled to terminate the contract if:

- a) the Contractor fails to comply with **SCC Clause No. 8.18 [Security Deposit / Performance Guarantee]**  
or  
with a notice under **SCC Clause No. 8.48 [Notice to correct]**,
- b) the Contractor **abandons** the work, or **repudiates** the contract, or otherwise plainly demonstrates the intention not to continue performance of their obligations under the contract,
- c) the Contractor, without reasonable or lawful excuse under this contract,
  - i) fails to proceed with the work, **within 14 days** from the scheduled date for commencement of work, in accordance with **GCC Clause No. 5.1 [Preliminary time to commence work and maintenance of steady rate of progress]**, under Section -VII
  - ii) keeps the work suspended for **at least 14 days**, despite receiving Engineer's written notice to proceed with the work,  
or
  - iii) fails to comply with a notice issued regarding rejection of material(s)/work and/or remedial work, **within 28 days** after receiving it,
- d) the Contractor **assigns / sub-contracts the whole of the work**  
Or  
**sub-contracts any portion of the work**, without the required consent, in line with **SCC Clause No. 8.20.**
- e) the Contractor becomes **bankrupt or insolvent**, goes into liquidation, have a receiving or administrative order made against them, compounds with their creditors, or carries on business under a receiver, trustees or manager for the benefit of their creditors, or if any act is done or event occurs which (under applicable laws) has a similar effect to any of these acts or events,
- f) the Contractor gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward,
  - i) for doing or forbearing to do any action in relation to the contract, or
  - ii) for showing or forbearing to show favour or disfavour to any person in relation to the contract,

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

or, if any of the Contractor's personnel, Agents or Sub-contractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this **sub-paragraph (f)**. However, lawful inducement and reward to the Contractor's personnel shall not entitle termination.

- g) the Contractor fails to execute the work in accordance with the contract

or

persistently or flagrantly neglects to carry out their obligations under the contract.

- h) the Contractor fail to make payment of wages to their personnel in relation to this contract,
- i) the Contractor fails to carry out the work satisfactorily (as stated in these bidding documents or otherwise decided by the Engineer) or may not be able to complete the work within the agreed period on account of Contractor's lapses.
- j) any accident occurs due to improper way of working by the Contractor's personnel, or
- k) any misconduct done by Contractor's personnel (including that of Agents or Sub-contractors) to SMP, Kolkata's employees.

In any of these event or circumstances, the Employer may, upon giving a **minimum 14 days' notice** [communicated by the Engineer] to the Contractor, **terminate the contract** and expel the Contractor from the site, without being liable for any compensation to the Contractor. However, in case of **sub-paragraph (e) or (f)**, the Employer may, by notice [communicated by the 'Engineer'], terminate the contract immediately.

The Employer's election to terminate the contract shall not prejudice any other rights of the Employer, under the contract or otherwise.

- 8.49.2. Upon receipt of the letter of termination of work, which may be issued by the Engineer on behalf of the Employer, the Contractor shall have to leave the site of work and deliver any **required goods**, all **Contractor's documents**, and other **design documents**, made by or for them, all the **Trustees' tools, plant and materials** issued to them, at the place to be ascertained by the Engineer, **within 7 days** of receipt of such letter. However, the Contractor shall use their best efforts to comply immediately with any reasonable instructions included in the notice

- i) for the assignment of any Sub-contractor,

And

- ii) for the protection of life or property or for the safety of the equipment/work.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

The Contractor shall not be released from any of their obligations or liability under the contract and the rights & authorities conferred on the Employer and Engineer, by the contract, shall not be affected.

- 8.49.3. Upon such termination of work, the Employer shall have the power to complete the work by themselves and/or through any other agency at the Contractor's risk & 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 they duly completed the whole of the work in accordance with the contract.

The Employer or such other agency may use, for such completion, so much of the Contractor's documents, other design documents, made by or on behalf of the Contractor, Contractor's equipment, temporary work, plant & materials, as they think proper.

Upon completion of the work, or at such earlier date, as the Engineer shall give notice that the Contractor's equipment and temporary work will be released to the Contractor at or near the site, the Contractor shall remove or arrange removal of the same from such place without delay and at their risk & cost. However, if by this time the Contractor has failed to make a payment due to the Employer, these items may be sold by the Employer in order to recover this payment. Any balance of the proceeds shall be paid to the Contractor.

#### **8.50. Valuation at date of termination**

- 8.50.1. As soon as practicable after a notice of termination under **SCC Clause No. 8.49 [Termination by Employer]**, has taken effect, the Engineer shall proceed in accordance with **SCC Clause No. 8.17 [Determinations]** to agree or determine the value of the work, goods & Contractor's documents, and any other sums due to the Contractor for work executed, in accordance with the contract. The value of such work (executed in accordance to the Contract) shall be determined based on measurements of actual work done and approved rate(s), as per contract or other rates, as decided by the Engineer. The Engineer's decision, in such case, shall be final, binding and conclusive.

#### **8.51. Payment after termination**

- 8.51.1. After a Notice of termination, under **SCC Clause No. 8.49 [Termination by Employer]** has taken effect, the Employer may
- a) give notice to the Contractor, indicating the particulars, for which Employer is entitled to any payment under any Clause or otherwise in connection with the contract, and or any extension of the **Defect Notification Period**.

However, Notice is not required for payments due under **SCC Clause No. 8.24 [Supply of water and Electricity]**, under **SCC Clause No. 8.25 [Use of ground and land/covered space for Contractor's establishment]**, or for other services requested by the Contractor,

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- b) withhold further payments to the Contractor until the cost of execution, completion and remedying of any defects, damage, and all other costs incurred by the Employer, have been established, and / or
- c) recover from the Contractor any losses and damages incurred by the Employer and any extra costs of completing the work, after allowing for any sum due to the Contractor under **SCC Clause No. 8.50 [Valuation at date of termination]**. After recovering any such losses, damages and extra costs, the Employer shall pay any balance to the Contractor.

## **8.52. Employer's entitlement to termination for convenience**

8.52.1. The Employer, by notice [communicated by the Engineer] sent to the Contractor, may terminate the Contract, in whole or in part, at any time **for Employer's convenience**. Such termination shall take effect **28 days** after the date on which the Contractor receives this notice or the Employer returns the Performance Guarantee. The notice of such termination shall specify that termination is for **Employer's convenience**, the extent to which performance of the Contractor under the contract is terminated, and the date upon which such termination become effective.

The Employer shall not terminate the contract under this Sub-clause in order to execute the work exclusively by themselves or to arrange for work to be executed exclusively by another Contractor.

After such termination, the Contractor shall proceed in accordance with **SCC Clause No. 8.54 [Cessation of work and removal of Contractor's equipment]** and shall be paid in accordance with **SCC Clause No. 8.59 [Optional termination, payment and release]**.

## **8.53. Corrupt or fraudulent practices**

8.53.1. If the Employer determines that the Contractor has engaged in **corrupt, fraudulent, collusive, coercive, or obstructive** practices, in competing for or in executing the Contract, then the Employer may, after giving **14 days notice** to the Contractor, terminate the Contractor's employment under the Contract and expel them from the Site, and the provisions of **SCC Clause Nos. 8.48 to 8.51** shall apply as if such expulsion had been made under **SCC Clause No. 8.49 [Termination by Employer]**.

Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the work, then that employee shall be removed in accordance with **SCC Clause No. 8.19 [Contractor's personnel and Contractor's representative]**.

For the purposes of this clause:

- i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts

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to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

- iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- v) “obstructive practice” is deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede the Employer investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and / or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation.

#### **8.54. Cessation of work and removal of Contractor’s equipment**

8.54.1. After a notice of termination under **SCC Clause No. 8.52 [Employer’s entitlement to termination for convenience]** or **SCC Clause No. 8.59 [Optional termination, payment and release]** has taken effect, the Contractor shall promptly:

- a) cease all further work, except for such work as may be necessary and instructed by the Engineer for the purpose of making safe or protecting those parts of the work already executed and any work required to leave the site in a clean and safe condition.
- b) hand over all construction documents, Plant and Materials for which the Contractor has received payment.
- c) hand over those other parts of the Works executed by the Contractor up to the date of termination
- d) remove all Contractor’s equipment, which is on the site and repatriate all their staff and labour from the site.

And

- e) remove all other goods from the site, except as necessary for safety, and leave the site.

Any such termination shall be without prejudice to any other right of the Contractor under the contract.

### **I. FORCE MAJEURE**

#### **8.55. Definition of Force Majeure**

8.55.1. In this clause “**Force Majeure**” means an exceptional event or circumstance

- a) which is beyond the control of the Employer and the Contractor,

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- b) which such party (Employer / Contractor) could not reasonably have provided against before entering into the contract,
- c) which, having arisen, such party could not reasonably have avoided or overcome,

And

- d) which is not attributable to other party.

**Force Majeure** may include, but not limited to, exceptional events or circumstances of the kind listed below, so long as conditions a) to d) above are satisfied:

- i) **war, hostilities** (whether war be declared or not) , **invasion, act of foreign enemies;**
- ii) **rebellion, terrorism, sabotage by persons other than the Contractor's personnel, revolution, insurrection, military or usurped power, or Civil War;**
- iii) **riot, commotion, disorder, strike or lockout by persons other than the Contractor's personnel;**
- iv) **munitions of war, explosive materials, ionisation radiation or contamination by radio-activity,** except as may be attributable to the Contractor's use of such munitions, explosives, radiations or radio-activity;
- v) **natural catastrophes** such as **earthquake, tsunami** (caused by earthquake at the ocean bed), **fire, floods, hurricane, cyclone, typhoon or volcanic activity,**

And

- vi) **pressure waves** caused by air craft or other aerial devices travelling at sonic or supersonic speed at the site of the work.

#### **8.56. Notice of Force Majeure**

- 8.56.1. If a party is or will be prevented from performing its obligations under the Contract by Force Majeure, then it shall give notice to the other party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given **within 48 (forty-eight) hours** of the alleged beginning of the relevant event or circumstance constituting Force Majeure, giving full particulars and satisfactory evidence.

The party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

Notwithstanding any other provision of this clause, Force Majeure shall not apply to obligations of either party to make payments to the other party under the contract.

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### **8.57. Duty to minimise delay**

8.57.1. Each party shall at all times use all reasonable endeavours to minimise any delay in the performance of the contract as a result of Force Majeure.

A Party shall give notice to the other party when it ceases to be affected by the Force Majeure, **within 48 (forty eight) hours** of such ending.

### **8.58. Consequences of Force Majeure**

8.58.1. If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under **SCC Clause No. 8.56 [Notice of Force Majeure]**, and suffers delay and / or non-performance as per the contractual obligations, by reason of such Force Majeure, the Contractor shall be entitled, subject to **SCC Clause No. 8.60 [Engineer's decision]**, to:

- a) an extension of time for any such delay, if completion is or will be delayed, under **SCC Clause No. 8.42 [Extension of completion period]**,
- and
- b) non-imposition of penalty due to non-performance as per the contractual obligations.

After receiving this notice, the 'Engineer' shall proceed in accordance with **SCC Clause No. 8.17 [Determinations]** to agree or determine these matters.

### **8.59. Optional termination, payment and release**

8.59.1. If the execution of all the work in progress is prevented for a **continuous period of 84 days** by reason of **Force Majeure** of which notice has been given under **SCC Clause No. 8.56 [Notice of Force Majeure]**, or for **multiple periods which total more than 140 days** due to the same notified Force Majeure, then either party may give to the other party a notice of termination of the contract. In this event, the **termination shall take effect 7 days after the notice is given**, and the Contractor shall proceed in accordance with **SCC Clause No. 8.54 [Cessation of work and removal of Contractor's equipment]**.

Upon such termination, the Engineer shall determine the value of the work done and issue a payment certificate which shall include:

- a) The amounts payable for any work carried out for which a price is stated in the Contract;
- b) the cost of plant and materials ordered for the work which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery. Such Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer and the Contractor shall place the same at the Employer's disposal;
- c) any other cost or liability, which in the circumstances was reasonably incurred by the Contractor in the expectation of completing the

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Works;

- d) the **reasonable Cost** of removal of temporary work and Contractor's equipment from the site and the return of such items to the Contractor's premises,

and

- e) the reasonable cost of repatriation of the Contractor's staff and labour employed wholly in connection with the work at the date of such termination.

## **J. CLAIMS, DISPUTES AND ARBITRATION**

### **8.60. Engineer's decision**

8.60.1. If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with, or arising out of, the contract or the execution of the works, whether during the execution of the works or after their completion and whether before or after repudiation or other termination of the contract, including any dispute as to any opinion, instruction, determination certificate or valuation of the 'Engineer', the matter in dispute shall, in the first place, be referred, in writing, to the Engineer within **30 (thirty) days**, with a copy to the other party. Such reference shall state that it is made pursuant to this clause. No later than the **thirtieth day** after the day on which he received such reference, the 'Engineer' shall give notice of his decision to the Employer and the Contractor. Such decision shall state that it is made pursuant to this clause.

Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the works with all due diligence and the Contractor and the Employer shall give effect forthwith to every such decision of the 'Engineer' unless and until the same shall be revised, as hereinafter provided, in an amicable settlement or an arbitral award.

If either the Employer or the Contractor be dissatisfied with any decision of the 'Engineer', or if the 'Engineer' fails to give notice of his decision on or before the **thirtieth day** after the day on which he received the reference, then either the Employer or the Contractor may, on or before the **seventieth day** after the day on which he received notice of such decision, or on or before the seventieth day after the day on which the said period of thirty days expires, as the case may be, give notice to the other party, with a copy for information to the Engineer, of his intention to commence arbitration, as hereinafter provided, as to the matter in dispute. Such notice shall establish the entitlement of the party giving the same to commence arbitration, as hereinafter provided, as to such dispute and, subject to **SCC Clause No. 8.63 (Failure to comply with Engineer's decision)**, no arbitration in respect thereof may be commenced unless such notice is given.

If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the Contractor and no notice of intention to commence

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

arbitration as to such dispute has been given by either the Employer or the Contractor on or before the **seventieth day** after the day on which the parties received notice as to such decision from the Engineer, the said decision shall become final and binding upon the Employer and the Contractor.

#### **8.61. Amicable settlement**

- 8.61.1. Where notice of intention to commence arbitration as to a dispute has been given in accordance with **SCC Clause No. 8.60 (Engineer's decision)** above, both parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both parties agree otherwise, arbitration may be commenced on or **after the fifty-sixth day after the day on which a notice of intention to commence arbitration of such dispute was given**, even if no attempt at amicable settlement thereof has been made.

#### **8.62. Arbitration**

- 8.62.1. Any dispute in respect of which

- a) the decision, if any, of the Engineer, has not become final and binding pursuant to **SCC Clause No. 8.60 (Engineer's decision)** and
- b) amicable settlement has not been reached within the period stated in **SCC Clause No. 8.61 (Amicable settlement)**,

shall be finally settled by arbitration, in accordance with the **Arbitration and Conciliation Act, 1996 (considering its amendment in 2015)** or any statutory modification or re-enactment thereof and rules made there under and for the time being in force. The **Arbitration Tribunal** shall be composed as per provision of the **Arbitration and Conciliation Act, 1996 (considering its amendment in 2015)** or any statutory modification or re-enactment thereof and rules made there under and for the time being in force.

- 8.62.2. In connection with the instant contract:

- a) the place of arbitration shall be **Kolkata or Haldia**, West Bengal, India,
- b) the arbitration shall be conducted in **English language**,  
and
- c) the fees, if any, of the Arbitrators, if required to be paid before the award of work in respect to disputes is made and published, shall be shared equally by each of the parties

- 8.62.3. The Arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion, valuation or decision of the Engineer, relevant to the dispute. Nothing shall disqualify representatives of the parties and the Engineer from being called as a witness and giving evidence before the Arbitrators on any matter, whatsoever, relevant to the dispute.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

- 8.62.4. Neither party shall be limited in the proceedings before such Arbitrators to the evidence or arguments put before the Engineer for the purpose of obtaining his said decision pursuant to **SCC Clause No. 8.60 (Engineer's decision)**. No such decision shall disqualify the Engineer from being called as a witness and giving evidence before the Arbitrators on any matter whatsoever relevant to the dispute.
- 8.62.5. Arbitration may be commenced prior to or after completion of the works, provided that the obligations of the Employer, the Engineer and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the works.

**8.63. Failure to comply with Engineer's decisions**

- 8.63.1. Whether neither the Employer nor the Contractor has given notice of intention to commence arbitration of dispute within the period stated in **SCC Clause No. 8.60 (Engineer's decision)** and the related decision has become final and binding, either party may, if the other party fails to comply with such decisions, and without prejudice to any other rights it may have, refer the failure to arbitration, in accordance with **SCC Clause No. 8.62 (Arbitration)**. The provision of **SCC Clause No. 8.60 (Engineer's decision)** and **SCC Clause No. 8.61 (Amicable settlement)** shall not apply to any such reference.

**8.64. Progress of work not to be interrupted**

- 8.64.1. The Contractor must, at all the times, fulfil their obligations under the Contract and shall not slow down or stop the progress of work during the period any dispute is under settlement either through reference to the 'Engineer' or through arbitration, pursuant to the preceding clauses. Even if the works to be carried out during such a period involve matters under dispute, the Contractor shall nevertheless proceed with the works as per direction of the 'Engineer', pending settlement of the dispute. Failure of the Contractor, in this respect, shall constitute default on their part and render them liable to actions under the provisions of **SCC Clause No. 8.49 [Termination by Employer]**.

**K. INSURANCE**

**8.65. General requirements for insurances**

- 8.65.1. The contractor during the contract period shall provide for insurance of 110% of the contract value upto the commissioning and taking over of the installation.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **SECTION – IX**

### **BIDDING FORMS**

<b>Sl. No.</b>	<b>Bidding Form No.</b>	<b>Description</b>
1)	BIDDING FORM – I	FORM OF TENDER
2)	BIDDING FORM – II	BID-SECURING DECLARATION FORM AND DETAILS OF FEES & DEPOSITS
3)	BIDDING FORM – III	BIDDER’S DECLARATION FORM [General]
4)	BIDDING FORM – IV	INFORMATION RELATED TO PRE- QUALIFICATION CRITERIA
5)	BIDDING FORM – V	FORMAT OF AFFIDAVIT [EPF]
6)	BIDDING FORM – VI	FORMAT OF AFFIDAVIT [ESI]
7)	BIDDING FORM – VII	BIDDER’S DECLARATION FORM [ESI]
8)	BIDDING FORM – VIII	GENERAL INFORMATION OF THE BIDDER
9)	BIDDING FORM – IX	PRICE SCHEDULE

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **BIDDING FORM – I**

### **FORM OF TENDER**

[To be filled on Bidder's Letter Head and uploaded, duly signed & stamped]

To,  
General Manager (Engg.)  
Haldia Dock Complex ;  
Syama Prasad Mookerjee Port, Kolkata .

Name of Work: Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Tender No. : **SDM(P&E)/TSEM/T05/2021-2022**

I/We ..... (Name of the bidder) .....of .....(Address of the bidder) ..... having examined the site of work and read the Bidding Documents [including **all addenda / corrigenda**, issued i.e. .... {insert Addendum / Corrigendum / Extension No(s)}], hereby bid and undertake to execute & complete all the work related to “*Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia*”, required to be performed in accordance with the ‘Technical Specification & Scope of Work’, ‘General Conditions of Contract (GCC)’, ‘Special Conditions of Contract (SCC)’, etc., at the rates & prices arrived based on quoted percentage (%) [above /below /at par] in the Price Bid [*submitted electronically, through the website <https://kopt.enivida.in>* ], within ..... **months** from the date of issuance of Letter of Acceptance (LOA), in the event of our bid being accepted.

I/we also undertake to enter into a **Contract Agreement** in the form hereto annexed [**Section XI**] with such alterations or additions thereto, which may be necessary to give effect to the acceptance of the bid and incorporating such ‘Technical Specification & Scope of Work’, ‘General Conditions of Contract (GCC)’, ‘Special Conditions of Contract (SCC)’, etc. and I/we hereby agree that until such **contract agreement** is executed, the said ‘Technical Specification & Scope of Work’, ‘General Conditions of Contract (GCC)’, ‘Special Conditions of Contract (SCC)’, etc. and the bid, together with the acceptance thereof in writing, by or on behalf of the Employer, shall be the Contract.

I / We require .....days preliminary time to arrange and procure the materials, tools & tackles, etc. required by the work, from the date of acceptance of bid, before I/we could commence the work.

I / We have submitted Bid-securing Declaration as per attached format [BIDDING FORM – II] in lieu of Earnest Money Deposit.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



I/We agree that the period for which the bid shall remain open for acceptance, shall not be less than ..... **days**, from the last date of submission of bid.

(Signature of authorised person of the bidder)

WITNESS:

Signature:

Name: \_\_\_\_\_

Name:  
(In Block Letters)

Designation: \_\_\_\_\_

Address:

Date: \_\_\_\_\_

Occupation:

(Office Seal)

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **BIDDING FORM – II**

### **BID-SECURING DECLARATION FORM**

[To be filled on Bidder's Letter Head and uploaded, duly signed & stamped]

To,  
**General Manager (Engg.)**  
**Haldia Dock Complex;**  
**Syama Prasad Mookerjee Port, Kolkata.**

*Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia..*

Tender No. : **SDM(P&E)/TSEM/T05/2021-2022**

I/We, the undersigned, declare that:

I/We understand that, according to conditions of the instant Bidding Documents, bids must be supported by a Bid-securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with HDC, SMPK for a period of three years from the date of notification, if I am /We are in a breach of any obligation under the tender conditions, because I / we

- a ) have withdrawn / modified / amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid;  
or
- b ) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity
  - i ) fail or refuse to execute the contract, if required,  
or
  - ii ) fail or refuse to furnish the Performance Security, in accordance with the terms and conditions of the tender.

I/We understand this Bid-securing Declaration shall cease to be valid if I am / we are not the Successful Bidder, upon the earlier of

- i ) the receipt of your notification of the name of the Successful Bidder;  
or
- ii ) thirty days after the expiration of the validity of my/our Bid.

Signed: (Insert signature of person whose name and capacity are shown)

.....

(In the capacity of) (Insert legal capacity of person signing the Bid-securing Declaration)

Name: (Insert complete name of person signing the Bid-securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on \_\_\_\_\_ day of \_\_\_\_\_ (insert date of signing)

Corporate Seal:

**Note:** In case of a Joint Venture, the Bid-securing Declaration must be in the name of all partners to the Joint Venture that submits the bid.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

### DETAILS OF FEES & DEPOSITS

i)	RailTel Processing Fee (Non-refundable)	Tender (Non-	::	a) Mode of Payment: E-payment through Debit / Credit Card / Net Banking.	
				b) Paid Amount:	
ii)	Bid Document Fee (Cost of bidding documents)		::	a) Mode of Payment: Banker's Cheque / Pay Order / Demand Draft.	
				b) Paid Amount:	
				c) Document for exemption of Bid Document Fee:	
iii)	Earnest Money Deposit (EMD)		::	Bid Securing Declaration as per BIDDING FORM – II:	
				Uploaded	Not Uploaded

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**BIDDING FORM – III**

**BIDDER'S DECLARATION FORM [General]**

[To be filled on Bidder's Letter Head and uploaded, duly signed & stamped]

**To,**  
**General Manager (Engg.)**  
**Haldia Dock Complex;**  
**Syama Prasad Mookerjee Port, Kolkata.**

*Name of Work:* Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**Tender No.:** **SDM(P&E)/TSEM/T05/2021-2022**

I ....., the authorized signatory of the ..... (Name of the Company /Firm) do hereby declare / confirm that:

\* I / We have not been **debarred, banned or delisted** by any Government or Quasi-Government Agencies or Public Sector Undertakings in India.

I / we have not made any **addition / modification / alteration** in the **Bidding Documents** (including Bidding Forms & Contract Forms) hosted in the websites.

The percentage above / below / at par has been quoted in the Price Bid, electronically, through the **eNivida Portal of RailTel** only and no direct or indirect mention of the prices has been made by me / us anywhere else in my / our bid.

No extraneous conditions (like "Not Applicable", conditional rebate, etc.), regarding the Price Bid, have been mentioned anywhere in our bid.

**Signature of authorised person of the bidder**  
**(with office seal)**

\* In case the **firm** has been debarred or banned or delisted by any Government or Quasi-Government Agencies or Public Sector Undertaking in India, then the same should be declared properly, after modifying the sentence, suitably.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**BIDDING FORM – IV**

**INFORMATION RELATED TO PRE-QUALIFICATION CRITERIA**

[To be filled up and uploaded, duly signed & stamped]

Tender No. : SDM(P&E)/TSEM/T05/2021-2022

**MINIMUM ELIGIBILITY CRITERIA**

**(I) ANNUAL TURNOVER STATEMENT**

The annual turnover of .....( name of the bidding firm), **for the years 2018-19 , 2019-20 and 2020-21**, based on the **Balance Sheets and Profit & Loss Accounts**, are given below:

<b>Financial years</b>	<b>Turnover (as per Auditor's Report / Balance Sheet) [in ₹ ]</b>
<b>2018-2019</b>	
<b>2019-2020</b>	
<b>2020-2021</b>	
<b><i>Total</i></b>	
<b><i>Average Annual Turnover</i></b>	

SIGNATURE OF CHARTERED ACCOUNTANT        ::

NAME OF CHARTERED ACCOUNTANT                ::

UDIN (Unique Document Identification Number)        ::

(COMPANY SEAL)

**NOTE:** Copy of Balance Sheets and Profit & Loss Accounts should be enclosed with sealed & signed.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**(II) TECHNICAL EXPERIENCE**

Sl. No.	Contract No. / Order No. and date	Name of the Employer and Place of work	Contract value [in ₹ ]	Date of completion of work	Page number(s) of reference / supporting document (s), uploaded.

**(III) ELECTRICAL CONTRACTOR'S LICENSE**

Valid Electrical Contractor's License	::	a) Issuing Authority:
		b) Validity upto:

**POWER OF ATTORNEY (if applicable).**

Scanned copy of Power of Attorney	::	Uploaded	
		Not Uploaded	
		Not Applicable	

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **OTHER DOCUMENTS**

Tender No. : SDM(P&E)/TSEM/T05/2021-2022

	Requirement	Submitted/Not submitted [Put √ if submitted & X if not submitted]	Validity/ For the month of
a)	<b>GST</b>		
i)	GST Registration Certificate.	<input type="text"/> If submitted, <b>Page Number(s):</b>	Not applicable.
ii)	Document in support of non-applicability.	<input type="text"/> If submitted, <b>Page Number(s):</b>	Not applicable.
b)	<b>PTCC</b>		
i)	Profession Tax Clearance Certificate (PTCC)	<input type="text"/> If submitted, <b>Page Number(s):</b>	
	<u>OR</u> Profession Tax Payment Challan (PTPC)	<input type="text"/> If submitted, <b>Page Number(s):</b>	
ii)	Document in support of non-applicability.	<input type="text"/> If submitted, <b>Page Number(s):</b>	Not applicable.
c)	<b>EPF</b>		
i)	Certificate for allotment of EPF Code No.	<input type="text"/> If submitted, <b>Code No.:</b> <b>Page Number(s):</b>	Not applicable.
ii)	Latest EPF Payment Challan.	<input type="text"/> If submitted, <b>Page Number(s):</b>	
iii)	Document in support of non-applicability.	<input type="text"/> If submitted, <b>Page Number(s):</b>	Not applicable.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

d)	<b>ESI</b>		
i)	Registration Certificate of ESI Authority.	<input type="text"/> If submitted, <b>Code No.:</b> <b>Page Number(s):</b>	Not applicable.
ii)	Affidavit, Declaration and Indemnity Certificate.	<input type="text"/> If submitted, <b>Page Number(s):</b>	Not applicable.
e)	<b>PAN Card</b>	<input type="text"/> If submitted, <b>PAN No.:</b> <b>Page Number(s):</b>	Not applicable.
f)	<b>MSME / MSE / DIC / SSI / NSIC</b> certificate	<input type="text"/> If submitted, <b>Page Number(s):</b>	

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



**BIDDING FORM-V**

**FORMAT OF AFFIDAVIT [EPF]**

[On the Rupees Ten Non – Judicial Stamp Paper ]

**BEFOR THE 1ST CLASS JUDICIAL MAGISTRATE AT-----  
AFFIDAVIT**

I ----- son of ----- aged about -----  
--Years, by faith -----, by occupation -----, residing at-----  
-----do hereby solemnly affirm and declare as follows:

- 1) That I am the Proprietor / Partner / Director / Authorised Person [ POA holder ] of -----  
-----, having office at -----and carrying on business on the said name and style.
- 2) That my aforesaid Firm is exempted from E.P.F. Act and the said Firm has no valid **Employees' Provident Fund (EPF)** Registration.
- 3) That the present affidavit is to be filed before Syama Prasad Mookerjee Port, Kolkata (Formerly Kolkata Port Trust) as per the **Clause No.2.2.2 iii)** of Tender no. **SDM(P&E)/TSEM/T05/2021-2022** issued by Syama Prasad Mookerjee Port, Kolkata , in respect of the work of "Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia".
- 4) That the statements made above are all true to be the best of my knowledge and belief.
- 5) That in the event the declaration is found to be wrong and false, I will be held responsible for all the consequences in respect of compliance of the Employees' Provident Fund & Miscellaneous Provision Act, 1952 [amended up to date].

DEPONENT

Identified by me

---

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **BIDDING FORM-VI**

### **FORMAT OF AFFIDAVIT [ESI]**

**[On the Rupees Ten Non – Judicial Stamp Paper ]**

**BEFOR THE 1ST CLASS JUDICIAL MAGISTRATE AT-----  
AFFIDAVIT**

I ----- son of ----- aged about -----  
--Years, by faith -----, by occupation -----, residing at-----  
-----do hereby solemnly affirm and declare as follows:

- 6) That I am the Proprietor / Partner / Director / Authorised Person [ POA holder ] of -----  
-----, having office at -----and carrying on business on the said name and style.
- 7) That my aforesaid Firm is exempted from E.S.I. Act and the said Firm has no valid E.S. I  
Registration.
- 8) That the present affidavit is to be filed before Syama Prasad Mookerjee Port, Kolkata  
(Formerly Kolkata Port Trust) as per the **Clause No.2.2.2 iv)** of Tender no.  
**SDM(P&E)/TSEM/T05/2021-2022** issued by Syama Prasad Mookerjee Port, Kolkata , in  
respect of the work of “Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA,  
11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port  
House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of  
Haldia Dock Complex, at Haldia”.
- 9) That the statements made above are all true to be the best of my knowledge and belief.
- 10) That in the event the declaration is found to be wrong and false, I will be held responsible for  
all the consequences in respect of compliance of the Employees State Insurance Act, 1948  
[amended up to date].

**DEPONENT**

Identified by me

---

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at  
Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250  
kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at  
Haldia.

**BIDDING FORM – VII**

**BIDDER'S DECLARATION FORM [ESI]**

[To be filled on Bidder's Letter Head and uploaded, duly signed & stamped]

**To,  
General Manager (Engg.)  
Haldia Dock Complex;  
Syama Prasad Mookerjee Port, Kolkata.**

*Name of Work:*                *Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.*

**Tender No.:**                **SDM(P&E)/TSEM/T05/2021-2022**

I ....., the authorized signatory of the ..... (Name of the Company /Firm) do hereby declare / confirm that :

- 1) We are exempted from E.S.I. Act and we have no valid E.S. I Registration.
- 2) We are enclosing necessary document(s) [to establish Non-applicability], along with **affidavit, affirmed before a first-class Judicial Magistrate** to that effect.
- 3) We will obtain registration certificate of ESI authority, if required.
- 4) We will indemnify **Syama Prasad Mookerjee Port, Kolkata (Formerly Kolkata Port Trust)** against all damages & accident occurring to their labourer (including that of sub-contractor's labourers), in connection with the instant contract, in case we become a Successful Bidder.

**Signature of authorised person of the  
bidder  
(with office seal)**

---

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**BIDDING FORM-VIII****GENERAL INFORMATION OF THE BIDDER**

[To be filled up and uploaded, duly signed & stamped]

**Tender No. : SDM(P&E)/TSEM/T05/2021-2022**

1.	Bidder's Legal Name (IN CAPITAL LETTERS)		
2.	a )	Country of registration.	
	b )	Year of registration.	
	c )	Legal address in country of registration.	
	d )	URL of the bidder.	
3.	Information regarding bidder's authorised representative(s) / contact person(s)		
	a )	Name(s)	
	b )	Address(es)	
	c )	Telephone number(s)	
	d )	Facsimile number(s)	
	e )	Electronic mail address	

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

4.	a )	Address of the branch office, if any	
	b )	Name of the contact person at branch office	
	c )	Telephone number(s)	
	d )	Facsimile number(s)	
	e )	Electronic mail address	
5.	Whether the bidder is a <b>Proprietorship Firm</b> or <b>Partnership Firm</b> or <b>Limited Company</b> .		
6.	<b>Details of the Banker(s) :</b>		
	a )	Name of the Banker(s) in full.	
	b )	Address(es) of the Banker(s)	
	c )	Telephone number(s)	
	d )	Facsimile number(s)	
	e )	Electronic mail address	
	f )	Name(s) of the contact person(s)	
7.	<b>Bank details for ECS payment:</b>		
	a )	Bank Account number.	
	b )	Name of the bank.	
	c )	Name of the branch.	
	d )	Address of the branch.	

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

	e )	RTGS code of the branch.	
	f )	MICR code of the branch.	
8.	<b>Income Tax and Goods &amp; Services Tax (GST)</b> details (if applicable):		
	a)	<b>Permanent Account Number (PAN)</b>	
	b)	<b>GST Registration Number (GSTIN)</b>	
9.	<b>Employees' Provident Fund (EPF) Code No.</b>		
10.	<b>Employees' State Insurance (ESI) Code No.</b>		
11.	Mainlines of business		

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**PRICE SCHEDULE**

[To be uploaded, duly signed & stamped]

**Tender No. : SDM(P&E)/TSEM/T05/2021-2022**

**Preamble:**

1. The ‘**Price Schedule**’ is to be read in conjunction with the ‘**Instructions To Bidders (ITB)**’ and other terms & conditions [including ‘**Technical Specification & Scope of Work**’] of the Bidding Document, considering all addenda / corrigenda (if issued).
2. This being a percentage rate tender, the Bidder shall quote their rate on-line, as percentage above / below / at par with the estimated amount put to tender, based on their own analysis.
3. Estimated Rates, shown in this ‘**Price Schedule**’, include all incidental charges and all taxes & duties of Central/ State/ Local bodies [excluding Goods & Services Tax (GST)], as applicable, and charges for packing, forwarding, loading, handling, carrying to any lead, stacking, transportation, permits, overheads & profit, etc. necessary for the complete services as described in this Bidding Document.  
GST, as applicable, shall be paid extra against proper invoice submitted by the Contractor.
4. The contractor will be required to submit GST compliant invoice with all required details and also be required to file timely and proper return so as to enable SMP, Kolkata to get due credit against GST paid.  
In case of any failure on the above account, GST amount, even if paid by SMP, Kolkata, shall be recoverable from the Contractor.
5. The quantities given in this ‘**Price Schedule**’ are indicative only, which may vary (both upward & downward) during execution and are given to provide a common base for tendering and evaluation. However, the payment will be made on the exact quantity to be executed by the Successful Bidder.
6. The accepted unit rates, based on the quoted percentage, should remain firm till all the jobs are completed. No Price escalation is admissible other than statutory increase in Taxes & Duties (within the scheduled completion period).
7. Except where otherwise expressly provided, the Contractor shall provide all materials, labour and plant and things necessary in connection with the contract work although everything may not be fully specified and although there may be errors and omissions in the specifications.
8. Tools, tackles, lifting machineries, scaffolding, temporary lighting, different vehicular transport etc. required for execution of the whole work will have to be arranged by the Contractor, at their own risk, cost & arrangement.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **PRICE SCHEDULE**

*Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.*

**Tender No. :** SDM(P&E)/TSEM/T05/2021-2022

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
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### **PART-A [ DG Set , Panel, Etc.]**

#### **I. 1010 kVA, 11kV DG Set :**

1.	Outdoor type 1010 kVA, 11kV, 3 Phase, 50 Hz Diesel Generator set, with acoustic enclosure and complete with Cooling System, Exhaust Tower (including LA, Aviation light, etc.), Earthing & all accessories, as detailed in 'Technical Specification & Scope of Work'.				
	a) Supply	1	set	1,04,30,463.00	1,04,30,463.00
	b) Installation, Testing & Commissioning	1	set	4,53,805.00	4,53,805.00
2.	Indoor type HT (11kV) Panel consists of Incoming VCB, Outgoing VCB & NGR [suitable for 1010 kVA (11 kV) DG Set], complete with Earthing & all accessories (control, protection, measuring, etc.), as per 'Technical Specification & Scope of Work'.				
	a) Supply	1	set	17,59,406.00	17,59,406.00
	b) Installation, Testing & Commissioning	1	set	1,61,429.00	1,61,429.00
3.	Indoor type LT Panel for DG Control [suitable for 1010 kVA (11 kV) DG Set], complete with Earthing, Relay & all accessories, as per 'Technical Specification & Scope of Work'.				

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	a) Supply	1	set	3,99,814.00	3,99,814.00
	b) Installation, Testing & Commissioning	1	set	42,857.00	42,857.00
4.	Providing all types of control cabling ( including supply of required cables) among DG Set, LT Panel for DG Control , HT (11kV ) Panel for DG Supply & Main HT (11kV ) Panel of SS-3 Substation, as per 'Technical Specification & Scope of Work'.	1	set	1,08,052.00	1,08,052.00
5.	1C X 300 mm <sup>2</sup> , 11 kV(E) grade, XLPE insulated, aluminium round armoured, stranded aluminium conductor power cable (FRLS) [as per IS 7098 Part-II (with latest amendments)] of single length, as per 'Technical Specification & Scope of Work'.				
	a) Supply	250	m	1,268.000	3,17,000.000
	b) Laying, Testing and Commissioning, through existing duct, trench, culvert, laid pipe, riser pipe, etc., for connecting DG Set, HT (11kV ) Panel for DG Supply & Main HT (11kV ) Panel of SS-3 Substation.	250	m	162.00	40,500.00
6.	Supplying and making indoor cable end termination with heat shrinkable jointing kit, complete with all accessories (including lugs) suitable for 1C X 300 mm <sup>2</sup> , 11 kV grade, Aluminium Conductor Cable.	16	set	5,574.00	89,184.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
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**II. 500 kVA, 415 V DG Set :**

7.	Outdoor type 500 kVA, 415 V, 3 Phase, 50 Hz Diesel Generator set, with acoustic enclosure and complete with Cooling System, Exhaust Tower ( including LA, etc.), Earthing & all accessories, as detailed in 'Technical Specification & Scope of Work'.				
a)	Supply	1	set	34,65,831.00	34,65,831.00
b)	Installation, Testing & Commissioning	1	set	1,76,475.00	1,76,475.00
8.	Microprocessor / PLC based Auto-Mains Failure (AMF) panel, with distribution cubicle switchboard [1600 A, 24 Way LT Distribution Panel, with 1250 A ACB Bus Coupler in between], including all accessories, as detailed in 'Technical Specification & Scope of Work'.				
a)	Supply	1	set	26,00,000.00	26,00,000.00
b)	Installation, Testing & Commissioning	1	set	2,50,000.00	2,50,000.00
9.	Providing all types of control cabling (including supply of required cables) between DG Set and AMF-cum-LT Distribution Panel, as per 'Technical Specification & Scope of Work'.	1	set	29,790.00	29,790.00
10.	1C X 240 mm <sup>2</sup> , 1.1 kV grade , XLPE insulated, galvanised steel armoured, stranded copper conductor power cable (FRLS) [as per IS 7098 Part-I (with latest amendments)] of single length, as per 'Technical Specification & Scope of Work'.				
a)	Supply	350	m	5,128.000	17,94,800.000

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	b) Laying, Testing and Commissioning, through existing duct, trench, culvert, laid pipe, riser pipe, etc., for connecting Mains panel, AMF panel, DG set and Load distribution panel.	350	m	162.00	56,700.00
11.	Connecting the leads of 1 C X 240 mm <sup>2</sup> , 1.1 kV grade, Copper Conductor Cable with DG Set, ACB, AMF Panel, etc. [after finishing the ends, including supplying & fixing sockets, tapes & jointing materials].	30	set	666.00	19,980.00

### III. 250 kVA, 415 V DG Set :

12.	Outdoor type 250 kVA, 415 V, 3 Phase, 50 Hz Diesel Generator set, with acoustic enclosure and complete with Cooling System, Exhaust Tower ( including LA, etc.), Earthing & all accessories, as detailed in 'Technical Specification & Scope of Work'.				
	a) Supply	1	set	19,87,186.00	19,87,186.00
	b) Installation, Testing & Commissioning	1	set	1,72,574.00	1,72,574.00
13.	Microprocessor / PLC based Auto-Mains Failure (AMF) panel, with distribution cubicle switchboard [1200 A, 38 Way LT Distribution Panel, with 800 A ACB Bus Coupler in between], including all accessories, as detailed in 'Technical Specification & Scope of Work'.				
	a) Supply	1	set	24,50,000.00	24,50,000.00
	b) Installation, Testing & Commissioning	1	set	2,50,000.00	2,50,000.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
14.	Providing all types of control cabling (including supply of required cables) between DG Set and AMF-cum-LT Distribution Panel, as per 'Technical Specification & Scope of Work'.	1	set	59,162.00	59,162.00
15.	1C X 240 mm <sup>2</sup> , 1.1 kV grade, XLPE insulated, galvanised steel armoured, stranded copper conductor power cable (FRLS) [as per IS 7098 Part-I (with latest amendments)] of single length, as per 'Technical Specification & Scope of Work'.				
	a) Supply	450	m	5,128.000	23,07,600.000
	b) Laying, Testing and Commissioning, through existing duct, trench, culvert, laid pipe, riser pipe, etc., for connecting Mains panel, AMF panel, DG set and Load distribution panel.	450	m	162.00	72,900.00
16.	Connecting the leads of 1 C X 240 mm <sup>2</sup> , 1.1 kV grade, Copper Conductor Cable with DG Set, ACB, AMF Panel, etc. [after finishing the ends, including supplying & fixing sockets, tapes & jointing materials].	20	set	666.00	13,320.00

**Sub-total (A) : ₹ 2,95,08,828.00**

**PART-B [Preparatory Electrical Work]**

1.	Supply & laying of 1.1 kV grade, XLPE insulated, galvanised steel armoured, aluminium conductor power cable (FRLS) [as per IS 7098 Part-I 1988 (with latest amendments)], as per 'Technical Specification & Scope of Work'.				
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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	a) Supply				
	i) 3 ½ Core X 240 mm <sup>2</sup>	2000	m	1,197.00	23,94,000.00
	b) Laying, Testing and Commissioning				
	I) When laid in underground trench. The scope includes excavation, sand cushioning, protective top covering by bricks, tiles or slabs, refilling the trench, levelling up, restoring surface (duly rammed), etc. [including supply of materials, as required], as per "Technical Specification".				
	i) 01 no. 3C / 3 ½ C / 4C cable, above 150 mm <sup>2</sup> [with 16 nos. bricks per metre]	1,850	RM	284.00	5,25,400.00
	II) When run through existing duct, trench, culvert, laid pipe, riser pipe, etc.				
	i) 01 no. 1C/ 3C / 3 ½ C / 4C cable, above 150 mm <sup>2</sup> & upto 300 mm <sup>2</sup> .	100	RM	162.00	16,200.00
	III) After cutting floor / pavement / wall and making holes, including embedding the cable at an average depth (through suitable casing pipe) and mending good the damages to original finish including removal of the rubbish.				
	i) 01 no. 3C / 3 ½ C / 4C cable, above 95 mm <sup>2</sup> , at an average depth of 100 mm.	40	RM	216.00	8,640.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	IV) When laid on existing Cable Tray and fixing by aluminium saddling (approx. 300 mm interval) [including supply of materials, as required].				
	i) 01 no. 3C / 3 ½ C / 4C cable, above 150 mm <sup>2</sup> and upto 240 mm <sup>2</sup> .	20	RM	23.00	460.00
	V) When laid on wall and fixing by aluminium saddling (approx. 300 mm interval), with earthing attachment in 10 SWG GI (Hot Dip) wire [including supply of materials, as required], as necessary, including mending good damages to building works.				
	i) 01 no. 3C / 3 ½ C / 4C cable, above 150 mm <sup>2</sup> and upto 240 mm <sup>2</sup> .	80	RM	103.00	8,240.00
2.	Supplying & laying of heavy, galvanized, mild steel tubes (including sockets) as per IS 1239 [with latest amendment].				
	a) Supply				
	i) 150 mm (nominal bore)	102	m	1,864.00	1,90,128.00
	b) Laying, including joining of tubes by sockets, if required.				
	I) Over the culvert, canal, etc. (fixing on existing structural supports) or through walls, roads, etc. (through open excavation & refilling) or with vertical structure (fixing using clamps / supports).				

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	The scope includes supply of materials, as required (excepting main support structure for crossing the canal), as per "Technical Specification".				
	i) above 50 mm (nominal bore) & upto 150 mm (nominal bore)	48	m	350.00	16,800.00
	II) Through boring process.				
	i) above 50 mm (nominal bore) & upto 150 mm (nominal bore)	54	m	1,950.00	1,05,300.00
3.	Connecting the leads of following PVC / XLPE armoured / unarmoured cables with ACB / MCCBs / MCBs / SDFU/ connectors [after finishing the ends by crimping method, including supplying & fixing solderless sockets, tapes, anticorrosive paste & jointing materials], at LT Panel / Distribution Board / Junction Box / SDFU:				
	a) 3 ½ C X 240 mm <sup>2</sup> , 1.1 kV grade, Aluminium Conductor Cable	20	set	848.00	16,960.00
4.	Providing double compression type gland complete with brass gland, brass ring & rubber ring for dust & moisture-proof entry of following XLPE insulated, armoured cables as given below :				
	a) 3 ½ C X 240 mm <sup>2</sup> , 1.1 kV grade, Aluminium Conductor Cable	20	set	513.00	10,260.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
5.	Providing Earthing Stations, using copper plate of size 600 mm X 600 mm X 3.15 mm [ to be buried in ground in a depth of 2 m from ground level, with alternate layer of charcoal & salt], including supply & fixing of 40 mm diameter perforated GI pipe funnelling for watering purpose and construction of suitable size Brick Masonry Inspection Chamber [with removable RCC Cover (75 mm thick) with handle], as per 'Technical Specification & Scope of Work'.	2	set	18,743.00	37,486.00
6.	Providing Earthing Stations, using Earth Electrode [made of 3 m long Medium Galvanised Mild Steel Tubes (as per IS:1239) of nominal bore 50 mm]. 260 mm long G.I. Strip of size 50 mm X 6 mm (with 4 nos. 10 mm dia tap hole, bend to shape of pipe) to be welded at 100 mm below the top of tube for connection of Earth Strip. G.I. Funnel / Cap to be provided on top of the tube. Earth Electrode to be driven in the Earth Pit filled up with alternate layer of Charcoal and Salt. Earth Pit should be provided with suitable size Brick Masonry Inspection Chamber with removable RCC Cover (75 mm thick) with handle.	8	set	3,617.00	28,936.00
7.	Providing G.I. Strip (Hot Dip) of size 50 mm X 6 mm, with bolts, nuts, washers, etc., for interconnection & equipment earthing.	100	m	225.00	22,500.00
8.	Providing G.I. Strip (Hot Dip) of size 25 mm X 6 mm, with bolts, nuts, washers, etc., for panel / equipment earthing.	100	m	216.00	21,600.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
9.	Providing earth busbar of galvanized (Hot Dip) MS flat 50 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.	6	no.	177.00	1,062.00
10.	a) Providing PVC pipe of following diameters [thickness not less than 2 mm] complete with fittings, as necessary, by cutting channel of suitable size on masonry wall / floor and fixing the pipe (approx. 18 mm below the top surface of the wall / floor) by means of iron hooks / binding wire, including mending good damages to building works.				
	i) 13 mm dia	10	RM	84.00	840.00
	ii) 19 mm dia	30	RM	99.00	2,970.00
	iii) 25 mm dia	20	RM	126.00	2,520.00
	b) Providing PVC pipe of following diameters [thickness not less than 2 mm] complete with fittings, as necessary, under ceiling / beam, bound with 22 SWG GI binding wire, including supplying & drawing 1X18 SWG GI wire as fish wire inside the pipes synchronizing with roof / beam casting work of building construction).				
	i) 13 mm dia	10	RM	39.00	390.00
	ii) 19 mm dia	20	RM	43.00	860.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	c) Providing 19 mm (nominal size) PVC Rigid Conduit [medium mechanical stresses, 'FR'] on surface of the wall / ceiling, with aluminium saddles and other accessories, as required and mending good damages to building works.	120	RM	61.00	7,320.00
	d) Providing Steel wire reinforced Flexible uPVC Conduit pipes on surface of the wall / ceiling / floor /structure, with aluminium saddles and other accessories, as required and mending good damages to building woks.				
	i) Size (ID): 40 mm	10	RM	119.00	1,190.00
	ii) Size (ID): 20 mm	10	RM	65.00	650.00
	e) Providing Steel wire reinforced Flexible uPVC Conduit glands.				
	i) Size (OD): 40 mm	5	no.	28.50	142.50
	ii) Size (OD): 20 mm	5	no.	13.50	67.50
11.	Supply & fixing of PVC casing-capping, including necessary PVC clips, fittings etc., on wall or ceiling and mending good damages to building woks.				
	a) 20 mm size	5	RM	38.00	190.00
	b) 25 mm size	5	RM	42.00	210.00
	c) 32 mm size	5	RM	42.00	210.00
12.	Providing 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked) of the following sizes, in the pre-laid PVC pipe / PVC casing-capping and making necessary connection, as required.				

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	a) 2 X 1.5 mm <sup>2</sup> (as phase & neutral wires)	10	RM	41.00	410.00
	b) 3 X 1.5 mm <sup>2</sup> (as phase & neutral wires and as Earth Continuity Conductor)	120	RM	57.00	6,840.00
	c) 2 X 2.5 mm <sup>2</sup> (as phase & neutral wires) and 1 X 1.5 mm <sup>2</sup> (as Earth Continuity Conductor)	60	RM	78.00	4,680.00
	d) 2 X 4.0 mm <sup>2</sup> (as phase & neutral wires) and 1 X 2.5 mm <sup>2</sup> (as Earth Continuity Conductor)	30	RM	113.00	3,390.00
	e) 2 X 4.0 mm <sup>2</sup> (as Earth Continuity Conductor)	10	RM	86.00	860.00
	f) 2 X 6.0 mm <sup>2</sup> (as Earth Continuity Conductor)	10	RM	126.00	1,260.00
13.	Wiring in 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked) of following sizes in 25 mm PVC casing-capping [including supply & fixing of PVC casing-capping, PVC clips, fittings, etc.] and making necessary connection, as required.				
	a) 3 X 1.5 mm <sup>2</sup> (as phase & neutral wires)	10	RM	101.00	1,010.00
	b) 2 X 2.5 mm <sup>2</sup> (as phase & neutral wires) and 1 X 1.5 mm <sup>2</sup> (as Earth Continuity Conductor)	10	RM	122.00	1,220.00
	c) 2 X 4.0 mm <sup>2</sup> (as phase & neutral wires) and 1 X 2.5 mm <sup>2</sup> (as Earth Continuity Conductor)	10	RM	157.00	1,570.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
14.	<b><u>Finishing Copper Wire ends</u></b> Finishing of the ends of 1.1 kV grade, copper (stranded) wire, by socketing with pin / ring type copper sockets, insulating tapes, etc., including supplying sockets, tapes, etc., as required.				
	a) 1.5 mm <sup>2</sup>	30	set	7.00	210.00
	b) 2.5 mm <sup>2</sup>	30	set	7.00	210.00
	c) 4 mm <sup>2</sup>	10	set	8.00	80.00
	d) 6 mm <sup>2</sup>	10	set	11.00	110.00
15.	Distribution wiring (alongwith earth wire) [average run 6 m], with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked), in suitable size (minimum 20 mm) PVC casing-capping [including necessary fittings / accessories], to light / fan / exhaust fan / call bell point [including supply & fixing of 3 terminal Ceiling Rose / Batten Holder / Angle Holder / Connector, as required ], including necessary connections & making earthing attachment and mending good damages to building works. <b>[PVC casing-capping and Switch board both on surface].</b> 2 X 1.5 mm <sup>2</sup> (as phase & neutral wires) and 1 X 1.5 mm <sup>2</sup> (as Earth Continuity Conductor), per point.				
	a) with Piano Key type switch fixed on PVC switch board (with top cover) on wall (including supply & fixing of switch & switch board).	1	point	787.00	787.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
16.	Distribution wiring (alongwith earth wire) [average run 6 m], with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked), in suitable size <b>[minimum 13 mm bore, 2 mm thick] PVC concealed pipe</b> [complete with all accessories] embedded in wall, to light / fan / exhaust fan / call bell point [including supply & fixing of 3 terminal Ceiling Rose / Batten Holder / Angle Holder / Connector, as required], including necessary connections & making earthing attachment and mending good damages to building works. 2 X 1.5 mm <sup>2</sup> (as phase & neutral wires) and 1 X 1.5 mm <sup>2</sup> (as Earth Continuity Conductor), per point.				
	a) with Piano Key type switch fixed on CRCA sheet metal (16 SWG) switch board with Perspex / Bakelite top cover (3 mm thick) flushed on wall, (including supply & fixing of switch & switch board).	15	point	930.00	13,950.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
17.	Distribution wiring (alongwith earth wire) [average run 6 m], with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked), in suitable size [minimum 13 mm bore, 2 mm thick] PVC concealed pipe [complete with all accessories] embedded in wall and in suitable size (minimum 20 mm) <b>PVC casing-capping for ceiling / beam portion only</b> , to light / fan / exhaust fan / call bell point [including supply & fixing of 3 terminal Ceiling Rose / Batten Holder / Angle Holder / Connector, as required], including necessary connections & making earthing attachment and mending good damages to building works. 2 X 1.5 mm <sup>2</sup> (as phase & neutral wires) and 1 X 1.5 mm <sup>2</sup> (as Earth Continuity Conductor), per point.				
	a) with Piano Key type switch fixed on CRCA sheet metal (16 SWG) switch board with Perspex / Bakelite top cover (3 mm thick) flushed on wall (including supply & fixing of switch & switch board).	2	point	1,005.00	2,010.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
18.	Distribution wiring (alongwith earth wire) [average run 6 m], with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked), in suitable size [minimum 13 mm bore, 2 mm thick] PVC concealed pipe [complete with all accessories] embedded in wall and in suitable size pre-laid pipe for ceiling / beam portion only, to light / fan / exhaust fan / call bell point [including supply & fixing of 3 terminal Ceiling Rose / Batten Holder / Angle Holder / Connector, as required], including necessary connections & making earthing attachment and mending good damages to building works. 2 X 1.5 mm <sup>2</sup> (as phase & neutral wires) and 1 X 1.5 mm <sup>2</sup> (as Earth Continuity Conductor), per point.				
	a) with Piano Key type switch fixed on CRCA sheet metal (16 SWG) switch board with Perspex / Bakelite top cover (3 mm thick) flushed on wall (including supply & fixing of switch & switch board).	4	point	849.00	3,396.00
19.	Distribution wiring (alongwith earth wire), with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked), in suitable size [minimum 13 mm bore, 2 mm thick] PVC concealed pipe [complete with all accessories] embedded in wall, to 240 V, 6 A, 5 pin socket outlet (plug) point, including necessary connections & making earthing attachment and mending good				

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	damages to building works. 2 X 1.5 mm <sup>2</sup> (as phase & neutral wires) and 1 X 1.5 mm <sup>2</sup> (as Earth Continuity Conductor), per point.				
	a) including supply & fixing of 240 V, 6 A, 5 pin socket outlet (plug) & Piano Key type switch on existing CRCA sheet metal (16 SWG) switch board with Perspex / Bakelite top cover (3 mm thick) {of light & fan} flushed on wall.	4	point	91.00	364.00
20.	Providing (after cutting the brick wall) CRCA sheet metal (16 SWG) JB-cum-Switch Board (having earthing attachment) of the following sizes, flushed in wall, including painting and mending good damages to building works.				
	a) 100 mm X 100 mm X 50 mm	12	no.	125.00	1,500.00
	b) 150 mm X 100 mm X 50 mm	10	no.	171.00	1,710.00
	c) 175 mm X 100 mm X 50 mm	6	no.	187.00	1,122.00
	d) 200 mm X 100 mm X 50 mm	2	no.	187.00	374.00
	e) 200 mm X 150 mm X 50 mm	2	no.	253.00	506.00
	f) 250 mm X 100 mm X 50 mm	2	no.	302.00	604.00
	g) 300 mm X 250 mm X 50 mm	2	no.	339.00	678.00
21.	Providing Bakelite / Perspex top cover (3 mm thick) on the existing sheet metal JB-cum-Switch Board of following sizes, fixing by Brass screws: <i>[The covers should be extended atleast 25 mm from the screw points]</i>				
	a) 100 mm X 100 mm X 50 mm	12	no.	42.00	504.00
	b) 150 mm X 100 mm X 50 mm	10	no.	50.00	500.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	c) 175 mm X 100 mm X 50 mm	6	no.	56.00	336.00
	d) 200 mm X 100 mm X 50 mm	2	no.	56.00	112.00
	e) 200 mm X 150 mm X 50 mm	2	no.	72.00	144.00
	f) 250 mm X 100 mm X 50 mm	2	no.	95.00	190.00
	g) 300 mm X 250 mm X 50 mm	2	no.	109.00	218.00
22.	Providing 240 V, 16 A Piano Key type switch on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for switch, by cutting Perspex / Bakelite top cover and making necessary connections [with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked) of size 4.0 mm <sup>2</sup> ], as required.	6	no.	87.00	522.00
23.	Providing 240 V, 16 A, 6 pin socket outlet (plug) [without switch & plug top] on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for socket outlet (plug), by cutting Perspex / Bakelite top cover and making necessary connections [with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked) of sizes 4.0 mm <sup>2</sup> (for phase & neutral wires) & 2.5 mm <sup>2</sup> (as Earth Continuity Conductor)], as required.	6	no.	87.00	522.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
24.	Providing 240 V, 6 A Piano Key type switch / bell push on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for switch, by cutting Perspex / Bakelite top cover and making necessary connections [with suitable size 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked)], as required.	6	no.	32.00	192.00
25.	Providing 240 V, 6 A, 5 pin flush type socket outlet (plug) [without switch & plug top] on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for socket outlet (plug), by cutting Perspex / Bakelite top cover and making necessary connections [with suitable size 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked)], as required.	6	no.	43.00	258.00
26.	Providing Socket type fan regulator (Step type) on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for regulator, by cutting Perspex / Bakelite top cover and making necessary connections, as required.	2	no.	281.00	562.00
27.	Supply and delivery of Ceiling Fan, suitable for suitable for 230 AC, 50 Hz supply system, complete with capacitor, canopy & all accessories and as per the 'Technical Specification':				
	a) 1400 mm sweep.	2	no.	2,542.00	5,084.00
	c) 1200 mm sweep.	1	no.	2,508.00	2,508.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
28.	Fixing only ceiling fan complete with blades, canopy, rubber bush, etc. and making connection [by providing required length of 'FR' 3 C X 0.5 mm <sup>2</sup> PVC insulated, PVC sheathed, copper conductor cable, conforming to IS: 694, with latest amendment (if any)], as required.	3	no.	168.00	504.00
29.	Supply and delivery of 300 mm sweep Exhaust Fan [metallic blade] suitable for 230 V AC, 50 Hz supply system, complete with all accessories and as per the 'Technical Specification'.	2	no.	2,339.00	4,678.00
30.	Installation of exhaust fan, wall cowl, etc.				
	a) Making hole in wall for fixing exhaust fan & making good damages to building works.				
	i) Exhaust fan of sweep 300 mm.	2	no.	269.00	538.00
	b) Providing aluminium louver shutter on wall, for exhaust fan of sweep 300 mm, with necessary bolts & nuts.	2	no.	230.00	460.00
	c) Providing G I Wall Cowl on wall, for exhaust fan, with necessary bolts & nuts.				
	i) Exhaust fan of sweep 300 mm.	2	no.	667.00	1,334.00
	d) Fixing only exhaust fan of sweep 150 mm / 200 mm / 300 mm / 450 mm and making connection [by providing required length of 'FR' 3 C X 0.5 mm <sup>2</sup> PVC insulated, PVC sheathed, copper conductor cable (if required), conforming	2	no.	110.00	220.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	to IS: 694, with latest amendment (if any)], as required.				
31.	Supply and delivery of 450 mm sweep Heavy Duty (Industrial Type) Wall Fan, with Sturdy close-mesh guards, suitable for 230 V AC, 50 Hz supply system, complete with all accessories.	2	no.	6,631.00	13,262.00
32.	Fixing only Wall Fan of sweep 300 mm / 400 mm / 450 mm and making connection [by providing required length of 'FR' 3 C X 0.5 mm <sup>2</sup> PVC insulated, PVC sheathed, copper conductor cable (if required), conforming to IS: 694, with latest amendment (if any)], as required.	2	no.	110.00	220.00
33.	a) Supply and delivery of tube light fittings [Surface Mounted, Box Type, suitable for 1 X 4 ft. (approx.) LED tubular lamp], complete with all accessories & Lamp [LED tubular lamp, with Al body & PC Diffuser Material & in-built driver; System wattage of luminaire: ≤ 22 W; Luminous flux : ≥ 2100 lumen ; suitable for 230 V AC, 50 Hz supply system], as per the 'Technical Specification'.	6	no.	1,205.00	7,230.00
	b) Supply and delivery of tube light fittings [Surface Mounted, Box Type, suitable for 2 X 4 ft (approx.) LED tubular lamp], complete with all accessories & Lamp [LED tubular lamp, with Al body & PC Diffuser Material & in-built driver; System wattage of each	6	no.	1,964.00	11,784.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	luminaire: $\leq 22$ W; Luminous flux of each luminaire : $\geq 2100$ lumen ; suitable for 230 V AC, 50 Hz supply system], as per the 'Technical Specification'.				
34.	Supply and delivery of 1 X 4 ft (approx.) tube light fittings [Integrated LED Batten, Surface Mounted; System wattage of luminaire: $\leq 20$ W; Luminous flux : $\geq 2000$ lumen], complete with all accessories, driver & Lamp , suitable for 230 V AC, 50 Hz supply system and as per the 'Technical Specification'.	2	no.	554.00	1,108.00
35.	Supply and delivery of 1 X 2 ft (approx.) tube light fittings [Integrated LED Batten, Surface Mounted; System wattage of luminaire: $\leq 10$ W; Luminous flux : $\geq 1000$ lumen ], complete with all accessories, driver & Lamp , suitable for 230 V AC, 50 Hz supply system and as per the 'Technical Specification'.	2	no.	455.00	910.00
36.	Supply & delivery of 10W-12W Bulkhead surface / wall mounted LED light fittings (IP 65), suitable for 230 V AC, 50 Hz supply system and as per the 'Technical Specification'.	4	no.	1,875.00	7,500.00
37.	Fixing only tube light fittings / post top light fittings / round light fittings / bracket lights / night lamp fittings / calling bell, complete with all accessories, directly on wall / ceiling / post top / PVC or HW Block by screws / MS fastener, including necessary connections [by providing required length of 'FR' 3 C X 0.5	20	no.	119.00	2,380.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	mm <sup>2</sup> PVC insulated, PVC sheathed, copper conductor cable, conforming to IS: 694, with latest amendment (if any) ] & mending good damages to the wall / ceiling / post .				
38.	Supply and delivery of Outdoor / Street light type [IP 66] LED Light fittings [suitable for 230 V AC, 50 Hz supply system], provided with suitable Driver & necessary safety protections [complete with all accessories] and as per "Technical Specification".				
	a) System wattage of luminaire: ≤ 30 W Luminous flux: ≥ 3000 lumen.	16	no.	2,768.00	44,288.00
39.	Providing GI pipe (ISI- Medium) of 1.2 m average length [having suitable bend & fixed / projected from the wall of the building, for fixing outdoor / street light type light fitting), including making holes / clamping arrangement & mending good damages to wall .				
	a) using 32 mm nominal bore GI pipe.	16	no.	636.00	10,176.00
40.	Fixing only outdoor / street light type LED light fitting, complete with all accessories, on the existing GI Pipe (fixed / projected from the wall of the building), including making connections [by providing 'FR' 3 C X 0.5 mm <sup>2</sup> PVC insulated, PVC sheathed, copper conductor cable {conforming to IS: 694 , with latest amendment (if any)} & flexible PVC conduit of length 1 m approx.]	16	no.	255.00	4,080.00
41.	Providing LED bulb, suitable for 230 V AC, 50 Hz supply system .				
	a) 9 W	2	no.	161.00	322.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
42.	Providing PVC Batten Type / Angle Type Lamp Holder, on PVC / HW Block, including mending good damages to the wall.	2	no.	89.00	178.00
43.	Providing 3 terminal Ceiling Rose on PVC / HW Block, including mending good damages to the wall.	2	no.	64.00	128.00
44.	Providing (after cutting the brick wall or fixing on wall surface) outdoor type PVC Junction Box [IP 66 with knockouts for cable entry] of following size [complete with 3 way terminals attached inside the box] and mending good damages to building works.				
	a) 125 mm X 115 mm X 60 mm (approx.)	16	no.	891.00	14,256.00
45.	Providing sheet steel, duly painted, MCB Distribution Board on wall / iron structure & mending good the damages to original finish, including provision for earthing attachment. (Without MCB / RCCB / Isolator).				
	a) 2 way	2	no.	508.00	1,016.00
	b) 4 way	2	no.	513.00	1,026.00
46.	Providing double door, sheet steel, powder painted, SPN MCB Distribution Board [IP-43 protection and complete with tinned copper bus bar, copper connecting leads, neutral bar, earth bar & din bar] on masonry wall (concealed) / iron structure & mending good the damages to original finish, including inter-connection and provision for earthing attachment. (Without MCB / RCCB / Isolator)				
	a) 6 way (2+6 module)	2	no.	1,902.00	3,804.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
47.	Providing double door, sheet steel, powder painted, TPN MCB Distribution board [IP-43 protection and complete with tinned copper bus bar, copper connecting leads, neutral bar, earth bar & din bar] on masonry wall (concealed) / iron structure & mending good the damages to original finish, including inter-connection and provision for earthing attachment. (without MCB / RCCB / Isolator).				
	a) 4 way (8+12 module)	1	no.	4,074.00	4,074.00
48.	Providing Four Pole, 415 V, 50 Hz, Residual Current Circuit Breaker (RCCB) [with Sensitivity: 30 mA] on din rail of existing DBs and necessary connection.				
	a) 63 A	1	no.	3,517.00	3,517.00
49.	Providing 240 V / 415 V, 50 Hz, MCB (C characteristics, 10 kA Breaking capacity) on din rail of existing DBs and necessary connection.				
	a) Single Pole, 6 A - 32 A	10	no.	225.00	2,250.00
	b) Double Pole, 6 A - 32 A	2	no.	636.00	1,272.00
	c) Four Pole , 6 A - 32 A	2	no.	1,297.00	2,594.00
	d) Four Pole , 40 A - 63 A	2	no.	1,983.00	3,966.00
50.	Design, Supply, Installation, Testing & commissioning of 415 V TPN Outdoor Junction Box [double door] with 2 nos. 400 A Switch Disconnector Fuse Unit (With HRC Fuses) as incomer / outgoing and 400 A busbar (with required holes) for connecting outgoing / incoming cables, fabricated from SS316 grade				

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	sheet steel (2 mm thick), as per 'Technical Specification & Scope of Work'.				
	i) Design, Supply & Delivery	3	no.	1,18,000.00	3,54,000.00
	ii) Erection / Installation, Testing & Commissioning	3	no.	15,100.00	45,300.00

**Sub-total (B) : ₹ 40,30,410.00**

**PART-C [Preparatory Civil Work]**

1.	<b>Earth work</b> in excavation in foundation in any soil including disposal of surplus excavated earth within a lead of 100 M include for bailing out subsoil or rain water, if required, all complete and as directed.	680	Cu.M.	120.46	81,912.80
2.	<b>Earthwork in filling</b> in foundation trenches or plinth with good earth obtained from excavation of foundation in layers including watering and raming etc. complete.	250	Cu.M.	78.32	19,580.00
3.	Supplying and filling in foundation or plinth by silver sand in layers not exceeding 150 mm as directed and consolidating the same by thorough saturation with water, ramming complete including the cost of supply of sand. (Payment to be made on measurement of finished quantity).	200	Cu.M.	548.95	1,09,790.00
4.	Dismantling <b>cement brick</b> work by carefully chiselling out as directed. Include for cleaning the serviceable bricks including stacking for reusing and disposal of unserviceable materials within a lead of 75 m. etc., all complete and as directed.	9	Cu.M.	451.47	4,063.23

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
5.	Dismantling all types of <b>reinforced cement concrete</b> works (of any thickness) by carefully chiseling out. Include for removing the debris within a lead of 75 m. etc., all complete and as directed.	3	Cu.M.	1,975.56	5,926.68
6.	Supplying and laying <b>Polythene Sheet</b> (150 gm / sq.m.) below flooring or in foundation or in foundation trenches.	700	Sq.M.	24.24	16,968.00
7.	Brick soling with picked jhama bricks including preparation of bed as necessary with brick joints properly filled in and packed with powdered earth and including necessary cushion of similar materials below the soling (and in between layers when more than one layer is used) completes per direction. a) Soling or dry pavement with one brick-on-edge laid in herring bone pattern over a layer of brick flat (thickness 125 mm plus 75 mm)	110	Sq. M.	890.82	97,990.20
8.	Providing and laying of Cement concrete (1:3:6) with 20 mm down stone chips in foundation and plinth protection etc. In proper line and level to superior finish etc. all complete and as directed.	108	Cu. M.	4,652.65	5,02,486.20
9.	Provide and build <b>brick work in foundation</b> and plinth etc. in cement and sand mortar 1:6 (1 cement : 6 coarse sand) with Ist class bricks, include for chiselling out/cutting teeth etc. in existing walls and floors for proper bonding, all complete and as directed.	97	Cu.M.	5,249.98	5,09,248.06

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
10.	Providing and building of <b>brick work</b> in cement and sand mortar 1:4 (1 cement : 4 coarse sand) with 1st class bricks include for chiseling out/cutting teeth etc. in existing walls and floors for proper bonding etc. all complete and as directed.	51	Cu.M.	5,745.89	2,93,040.39
11.	Provide and build <b>125 mm. thick brick work</b> with 1st class bricks in cement mortar 4:1 (4 sand :1 cement) include for chiselling out / cutting teeth etc. in existing walls and floors for proper bonding, all complete and as directed.	75	Sq.M.	719.12	53,934.00
12.	M.S./Tor <b>reinforcement</b> (TATA / SAIL / RINL or equivalent) including supply of rods, initial straightening and removal of loose rust, cutting to requisite length, bending, shaping and place in correct position, including welding if necy. for the above item etc., all complete & as directed.	18500	Kg.	56.07	10,37,295.00
13.	Providing and laying of ordinary cement concrete Mix (1:1.5:3) with graded stone chips excluding shuttering and reinforcement, if any, upto 3rd floor level as per relevant IS code with Pakur variety stone chips including application of epoxy based reactive joining agent for joining the old concrete with fresh concrete to be applied within manufacturer's specified time as per manufacturers specification (0.4 kg / sqm of concrete surface) etc., all complete and as directed.	270	Cu.M.	5,930.72	16,01,294.40
14.	Hire and labour charges for <b>shuttering</b> for building works for floor, beam, lintels, chajjas etc. for the above item.	1400	Sq.M.	327.24	4,58,136.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
15.	Providing and laying of cement plaster (1:4) with medium coarse sand to interior surfaces of walls and columns etc. Include for necessary curing etc. all complete and as directed. avg. 20 mm. thick cement plaster(1:4) (to match with existing plastered surface) upto 2nd floor level etc., all complete and as directed.	740	Sq.M.	180.79	1,33,784.60
16.	Providing and laying of 10 mm. thick cement plaster (1:4) with medium coarse sand at the ceiling surface Include for necessary scaffolding & curing upto 2nd floor level etc., all complete as directed.	120	Sq.M.	126.25	15,150.00
17.	Providing and laying of cement plaster to exterior surfaces 15 mm to 20 mm thick with (1:4) cement plaster with approved water proofing compound. Include for making scaffolding for working up to 2nd floor level and necessary curing etc., all complete and as directed.	300	Sq.M.	168.67	50,601.00
18.	Providing and laying of neat cement punning over the plastered surfaces of dado, skirting and floor surfaces upto 2nd floor level etc., all complete and as directed.	760	Sq.M.	34.34	26,098.40
19.	Provide and lay 25 mm. to 35 mm. thick cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone chips of 12.5 mm nominal size) finished smooth with a floating coat of neat cement including cement slurry, rounding off edges etc. in any floor etc., all complete and as directed.	310	Sq.M.	297.45	92,209.05

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
20.	Providing and laying of ordinary cement concrete mix (1:2:4) with graded stone chips excluding shuttering and reinforcement for slope correction for roof treatment alongwith water proofing compound (Sika Latex Power should be used @ 1 kg per 16 Sqm. In cement slurry before and after laying concrete and Plastocrete super should be used in concrete mix @ 0.20% by weight of cement) including cleaning and roughening of the roof surface properly as per manufacturer's direction and direction of EI.	6.50	Cu.M.	5,409.79	35,163.64
21.	Supplying,fitting & fixing of 2-Track / 3-Track Aluminium sliding Window of all Aluminium sections viz. window frame (top,bottom & side frame), shutter (top, bottom, side & interlock member) made of aluminium alloy extrusions conforming to IS 733-1983 & IS 1285-1975, annodised conforming to IS 1868-1983, fitted with all other accessories viz. PVC roller, EPDM gasket, maruti lock, screws etc. including labour charges for fitting & fixing of aluminium 2-track/3-track sliding window with fixing of glass (excluding cost of glass) all complete as per architecturaldrawings and direction of Engineer-in-charge. 10-12 Micron thickness Annodizing film				

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	For 3-Track window : Members for Bottom frame @ 1.233 Kg per Mtr. and for Top and Side frame @ 1.067 Kg per Mtr. and for shutter Bottom and Top member @ 0.472 Kg per Mtr., Style side member @ 0.493 Kg per Mtr. and Interlock member @ 0.612 Kg per Mtr.	110	Sq.M.	452.48	49,772.80
22.	Supplying best Indian sheet glass panes of 4 mm th. set in putty and fitted and fixed with nails and putty complete	20	Sq.M.	541.36	10,827.20
23.	Supplying, fitting and fixing steel rolling shutter profile type with 18 B.G. of approved type steel latch section 75mm wide, fitted with coil wire spring to necessitate the fitting of required Nos. of C.I. Pulleys on heavy type solid drawn seamless steel tube complete with locking arrangements both inside and outside specially builtup side guide channels including providing a hood for the steel rolling shutter in the room, painting two coats of approved aluminium paint over a coat of red lead primer complete.				
	1. (Measurement will be made on the area of opening covered by the rolling shutter corrected upto 2 decimal.) 2. Payment of painting to be separately.	7	Sq.M.	2,191.70	15,341.90
24.	Provide and fixing M.S or W.I. Ornamental grill of approved design joints continuously welded with M.S, W.I. Flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs.	300	Kg.	74.08	22,224.00

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
25.	<p>M.S. structural works in columns, beams etc. with simple rolled structural members (e.g. joists, angle, channel sections conforming to IS: 226, IS: 808 &amp; SP (6)- 1964 connected to one another with bracket, gussets, cleats as per design, direction of Engineer-in-charge complete including cutting to requisite shape and length, fabrication with necessary bolting, metal arc welding conforming to IS: 816- 1969 &amp; IS: 1995 using electrodes of approved make and brand conforming to IS:814- 2004, haulage, hoisting and erection all complete. The rate includes the cost of rolled steel section, consumables such as electrodes, gas and hire charge of all tools and plants and labour required for the work including all incidental chages such as electricity charges, labour insurance charges etc.</p> <p>Payment to be made on the basis of calculated weight of structural members only in finished work as per IS specified weight. Payment for gusset, bracket, cleat, rivets, bolts and nuts may be make by adding the actual weight of such items with the weight of finished structural members or 7% of weight for finished structural members weighing not less than 22.5 Kg. / m. or 15 % of weight for finished structal members weighing less than 22.5 Kg. / m. may be increased allow for bracket, cleat, rivet, bolts and nuts etc. and no separate payment</p>				

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	being made for these items, as per direction of Engineer In Charge. The rates are considered for a height of erection 8m. / 2nd floor level from the ground. Add 1.5% extra over the rate for each additional floor or 4m. beyond initial 8m. or part thereof.  For structural members of specified sections weighing less than 22.5 Kg./m	18.50	MT	59,710.19	11,04,638.52
26.	Supplying and fixing colour coated trapezoidal profile sheet conforming to IS:15965 of TATA / Bhushan / JSW make or approved equivalent make of 1015mm effective width & 1072mm supply width nominal 28mm deep ribs with subtle square fluting in the five pan at nominal 203mm C/C. The end rib shall be designed for anticapillary action to avoid any seepage of water through the lateral overlap, the feed material is manufactured out of nominal 0.45mm base metal thickness, and 0.50mm total coated thickness, Hi-strength steel with min. 550mpa yield strength, metallic hot dip coated with Al- Zinc alloy (55%Al., 43.5% Zn and 1.5% Silicon) as per As1397/IS 15961 etc with necessary hook bolts, washers, putty, nuts all complete.	510	Sq.M.	752.34	3,83,693.40

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
27.	Supplying and fixing Custom Flashings (ridge) manufactured out of nominal 0.45mm base metal thickness , 0.5mm total coating th., Hi- strength steel with min. 550mpa yield strength, metallic hot dip coated with Alluminium - Zinc alloy ( 55% Al., 43.5% Zn,1.5% Silicon) as per As1397/IS 15961 etc with necessary hook bolts, washers, putty, nuts all complete.	32	Running Mtr	570.03	18,240.96
28.	Galvanised or painted wind-tie made of M.S. flats, fitted and fixed complete including cost of necessary fittings. ade with 50 mm. X 10 mm. flats	195	Mtr.	228.26	44,510.70
29.	Providing and applying Synthetic Distemper to interior wall, ceiling with a coat of solvent based interior grade acrylic primer (as per manufacturer's specification) including cleaning and smoothing of surface. Two Coats, all complete and as directed.	230	Sq.M.	68.00	15,640.00
30.	Provide and apply one coat of ready mixed <b>zinc chromate yellow primer</b> of approved brand and manufacture to the <b>grills and gates</b> etc. include for scrapping, brushing, sand papering and cleaning the surfaces smooth before application of primer etc., all complete & as directed.	650	Sq.M.	29.29	19,038.50
31.	Provide and lay <b>paint on steel work</b> with two coats of approved synthetic enamel paint of first quality including scrapping, brushing and cleaning the surfaces if necessary etc. all complete & as directed.	650	Sq.M.	79.79	51,863.50

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
32.	Providing and applying of <b>1 (one) coat of cement based water proof paint on new surface</b> , of approved brand of required shades to give an even shade on all exterior surfaces of buildings and repairing the uneven surfaces by snowcem putty etc. and making scaffolding upto 4 th. floor level. Include for scrapping of marks, green moss, loose particles and preparing the base by sand papering before application of the cement based paint etc. all complete and as directed	200	Sq.M.	34.34	6,868.00
33.	Applying one coat <b>Exterior grade Acrylic primer</b> of approved quality and brand on plastered or concrete surface old or new surface to receive acrylic exterior emulsion paint including scraping and prepaaring the surface throughly complete as per manufacturer's specification and as per direction of the EIC.	200	Sq.M.	31.71	6,342.00
34.	Applying two coats of protective and decorative <b>Acrylic exterior emulsion paint</b> of approved quality, as per manufacturer's specification and as per direction of EIC.	200	Sq.M.	67.67	13,534.00
35.	Supply, fit and fix single socketed 110 mm. dia. of 3.00 M long <b>UPVC pipe (Type A)</b> granules as specified in IS 13592-1992 as Rain water pipe and fitted with all necessary clamps nails including making holes in walls, floors etc. and cutting trenches in any soil, through masonry concrete structures etc. if necessary and mending good damages including jointing with jointing materials and taking out damaged				

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Description of item	Quantity	Unit	Estimated Unit Rate [excluding GST] (in ₹)	Estimated Amount [excluding GST] (in ₹)
	pipe and returned to HDC Store upto 4th floor level etc. all complete as directed.				
(a)	110 mm dia.	20	Mtr	253.51	5,070.20
36.	Supply, fit & fix <b>UPVC (B Type) fittings</b> conforming to IS- 13592-1992 all complete as directed.				
(i)	110mm Bend	4	Each	161.60	646.40
(ii)	110mm Shoe	4	Each	112.11	448.44
37.	Supplying, fitting, fixing, Chain link fencing of approved quality with R.C.C posts wooden posts or iron posts by means of galvanised "C" clips to grid of horizontal strands of galvanised high tensile spring steel wire of 12 S.W.G which have to be tensioned and fixed to the vertical posts by means of galvanised special clips, bolts and nuts etc.				
	65 mm. x 65 mm. x 8 g.	325	Each	380.77	1,23,750.25
38.	<b>Remove debris</b> / building rubbish / concrete lumps / earth etc.	130	Cu.M.	167.66	21,795.80

**Sub-total (C) : ₹ 70,58,918.67**

**Total Estimated Amount (without GST) [PART-A+PART-B+PART-C]: ₹ 4,05,98,156.67**

**[Indian Rupees: Four Core five lakh ninety-eight thousand one hundred fifty-six and Paise Sixty-seven]**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **SECTION - X**

### **CHECKLIST**

**Tender No. : SDM(P&E)/TSEM/T05/2021-2022**

*Before scanning and upload the following required documents, all pages are to be signed by a person duly authorised to sign on behalf of the bidder, and are to be embossed with their official seal, owing responsibility for their correctness / authenticity. All pages of the aforesaid documents should be serially marked.*

*The offered percentage above / below / at par would be given in the “**Price Bid**” electronically, through the eNivida Portal of RailTel only.*

Sl. No.	Particulars	Submitted/ Not submitted [Put √ if submitted and put X if not submitted]	If submitted, <u>page numbers</u>
1.	<b>Filled up checklist.</b>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<b>Proof of Bid Document Fee.</b>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<b>Bid-securing Declaration, as per BIDDING FORM – II.</b>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<b>Certificate from MSME / DIC / SSI / National Small Industries Corporation (NSIC) or any empowered Central / State Govt. Authority, for exemption of Bid Document Fee [applicable for Micro &amp; Small Enterprises (MSEs) only].</b>	<input type="checkbox"/>	<input type="checkbox"/>
5.	<b>Bidding Forms:</b>		
	<b>Bidding Form-I:: FORM OF TENDER</b>		
i)	<b>[To be filled on Bidder's Letter Head and uploaded, duly signed &amp; stamped]</b>	<input type="checkbox"/>	<input type="checkbox"/>

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Sl. No.	Particulars	Submitted/ Not submitted [Put √ if submitted and put X if not submitted]	If submitted, page numbers
ii)	<b>Bidding Form-II :: BID-SECURING DECLARATION FORM AND DETAILS OF FEES &amp; DEPOSITS</b> [To be filled on Bidder's Letter Head and uploaded, duly signed & stamped]	<input type="checkbox"/>	<input type="checkbox"/>
iii)	<b>Bidding Form-III:: BIDDER'S DECLARATION FORM [General]</b> [To be filled on Bidder's Letter Head and uploaded, duly signed & stamped]	<input type="checkbox"/>	<input type="checkbox"/>
iv)	<b>Bidding Form – IV: INFORMATION RELATED TO PRE-QUALIFICATION CRITERIA</b> [To be filled up and uploaded, duly signed & stamped]	<input type="checkbox"/>	<input type="checkbox"/>
v)	<b>Bidding Form – V: FORMAT OF AFFIDAVIT [EPF]</b>	<input type="checkbox"/>	<input type="checkbox"/>
vi)	<b>Bidding Form – VI: FORMAT OF AFFIDAVIT [ESI]</b>	<input type="checkbox"/>	<input type="checkbox"/>
vii)	<b>Bidding Form – VII: BIDDER'S DECLARATION FORM [ESI]</b> [To be filled on Bidder's Letter Head and uploaded, duly signed & stamped]	<input type="checkbox"/>	<input type="checkbox"/>
viii)	<b>Bidding Form – VIII: GENERAL INFORMATION OF THE BIDDER</b> [To be filled up and uploaded, duly signed & stamped]	<input type="checkbox"/>	<input type="checkbox"/>
ix)	<b>Bidding Form – IX: PRICE SCHEDULE</b> [To be uploaded, duly signed & stamped]	<input type="checkbox"/>	<input type="checkbox"/>

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

## **SECTION – XI**

### **CONTRACT FORMS**

<b>Sl. No.</b>	<b>Contract Form No.</b>	<b>Description</b>
1)	CONTRACT FORM – I	FORMAT FOR INDEMNITY BOND [ ESI]
2)	CONTRACT FORM – II	FORMAT FOR INDEMNITY BOND [ for materials received by the Contractor]
3)	CONTRACT FORM – III	BANK GUARANTEE FOR SECURITY DEPOSIT / PERFORMANCE GUARANTEE
4)	CONTRACT FORM – IV	CERTIFICATE OF COMPLETION OF WORK
5)	CONTRACT FORM – V	CERTIFICATE OF FINAL COMPLETION
6)	CONTRACT FORM – VI	‘NO CLAIM CERTIFICATE’ FROM CONTRACTOR
7)	CONTRACT FORM – VII	FORM OF AGREEMENT

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**FORMAT FOR INDEMNITY BOND [ ESI]**

[To be submitted on Non-judicial Stamp Paper of worth not less than INR 50.00, **duly notarised**]

**INDEMNITY BOND**

This deed of **Indemnity Bond** made on ..... by ..... having their office at ..... (hereinafter called “the **Contractor**”).

**Whereas** the General Manager (Engineering), Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata, Dist.: Purba Medinipur, West Bengal (hereinafter call “the **Engineer**”) has placed an order, bearing no. .... / ...../...../O-... dated ..... for the work of ‘Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia’.

WHEREAS , the said Syama Prasad Mookerjee Port, Kolkata asked the every Bidder, who is not covered under E.S.I Act or exempted, to furnish an Indemnity Bond in favour of General Manager (Engineering), Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata, against all damages & accident occurring to their labourer (including that of sub-contractor’s labourers), in connection with the instant contract, in case they become a Successful Bidder.

AND

WHEREAS in consideration of the said contract, the Contractor has agreed to execute an Indemnity Bond and at all times keep indemnified Syama Prasad Mookerjee Port, Kolkata and its administrator and representative.

NOW THIS BOND OF INDEMNITY WITNESSTH THAT the Contractor named herein above shall indemnify Syama Prasad Mookerjee Port, Kolkata against all damages & accident occurring to their labourer (including that of sub-contractor’s labourers), in connection with the instant contract , as demanded by Syama Prasad Mookerjee Port, Kolkata and which shall be legal and /or claimed by the Syama Prasad Mookerjee Port, Kolkata during the execution of the work stated in the Tender no. **SDM(P&E)/TSEM/T05/2021-2022.**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

In the event the declaration is found to be wrong and false, the Contractor will be held responsible for all the consequences in respect of compliance of The Employees State Insurance Act, 1948 [amended up to date].

For and on behalf of (name of the Contractor), under the common seal of the company.

**WITNESS**

(Signature of the authorised person on behalf of the Contractor)

( Signature )

Name :

Designation

Name :

Designation

Signed in my presence and identified by me

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



**FORMAT FOR INDEMNITY BOND**

[ for materials received by the Contractor]

[To be submitted on Non-judicial Stamp Paper of worth not less than INR 50.00, **duly notarised**]

**INDEMNITY BOND**

**Reference:**

Order No.: ...../...../...../O-... dated ..... for ‘Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia’.

This deed of **Indemnity Bond** made on ..... by ..... having their office at ..... (hereinafter called “the **Contractor**”).

**Whereas** the General Manager (Engineering), Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata, Dist.: Purba Medinipur, West Bengal (hereinafter call “the **Engineer**”) has placed an order, bearing no. .... / ...../...../O-... dated ..... and some materials, spare parts, components, sub-assemblies, etc. are required to be taken **outside of Haldia Dock Complex** premises for some specialized servicing, repairing, overhauling, etc. or **fault diagnosis & remedial measures** by the Contractor, as per the terms & conditions mentioned in the said order, and which have been mutually agreed upon by the parties hereto,

AND

**Whereas** in consideration of the said contract, the Contractor has agreed to execute an **Indemnity Bond** for the safe custody on receipt of the said materials, spare parts, components, sub-assemblies, etc., from the **Engineer** until the **completion of servicing / overhauling / repairing / remedial work** and returning back to the Engineer as hereinafter appearing.

**Now** this deed witnessed that in pursuance of the said agreement and in the premises, the Contractor agrees to indemnify Engineer and at all the terms, to hold themselves liable for all the **damages, loss due to pilferage / fire** or negligence on the part of the Contractor or their employees, agents and representatives or from whatever cause, with all losses, interest charges and expenses incurred by the said Engineer on account of the material(s) issued to the Contractor,

AND

It is in terms of the said contract and this **Deed of Indemnity**, the material(s) issued free to the Contractor for servicing / overhauling / repairing / **fault diagnosis & remedial work**, thereon shall be deemed to be the **property of the Engineer**.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

It is hereby agreed that the Contractor shall be liable for all injury, losses and damages that may be caused to the ....., from whatever cause and further that the Contractor shall not part with or delivery possession of the said material(s) to any other party or person, save in compliance with and in performance & provision of contract in respect of which this **Indemnity Bond** is executed, the Contractor having undertaken to delivery the said material (s) in all respect in compliance with the terms of the contract.

This bond and the trust hereby created shall remain valid and binding on the Contractor till such time as the above said order has been fully and finally executed and Contractor has delivered the ..... complete thereon to the Engineer under the terms of the contract.

For and on behalf of (name of the Contractor), under the common seal of the company.

**WITNESS**

(Signature of the authorised person on behalf of the Contractor)

( Signature )

Name :

Name :

Designation

Designation

Signed in my presence and identified by me

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**BANK GUARANTEE FOR SECURITY DEPOSIT / PERFORMANCE GUARANTEE**

**[To be submitted on Non-judicial Stamp Paper of worth not less than INR 50.00]**

**To  
The Board of Trustees,  
for Syama Prasad Mookerjee Port, Kolkata (SMP, Kolkata).**

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

Name of Issuing Bank.....

Name of Branch.....

Address.....

In consideration of the **Board of Trustees** for Syama Prasad Mookerjee Port, Kolkata (SMP, Kolkata), a body corporate – duly constituted under the Major Port Trusts Act, 1963 (Act 38 of 1963), (hereinafter referred to as “**The Trustees**”) having awarded to Shri / Messrs ..... a Proprietary/ Partnership/Limited / Registered Company, having its Registered Office at ..... (hereinafter referred to as “**The Contractor**”, which expression shall unless repugnant to the context or meaning thereof include its successors, administrators, executors and assigns), a **CONTRACT** by issue of Trustees’ Work Order No. .... / ...../...../O-..... dated ..... for “*Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia*” and the same having been unequivocally accepted by the Contractor resulting in a **CONTRACT** bearing No. ..../...../ /AGMT/...../..... and the Contractor having agreed to provide a **BANK GUARANTEE** from a Nationalized / Scheduled Bank of India, in prescribed format for ₹..... (**Indian Rupees** ..... ) only, for the faithful and satisfactory performance of the entire contract.

We, ... Branch, Kolkata ...../Haldia, do, on the advice of the Contractor, hereby undertake to indemnify and keep indemnified the Trustees to the extent of the said sum of ₹..... (**Indian Rupees** ..... ) only. We, ..... Branch, Kolkata ...../Haldia, further agree that if a written demand is made by the Trustees through any of its officials for honouring 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

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

Trustees within a week from the date of such demand by an A/c Payee Banker's Cheque drawn in favour of " Syama Prasad Mookerjee Port, Kolkata ", 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 Guarantee 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 anytime 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 Guarantee 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 it 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 upto and inclusive of .....day of..... ..200.....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 upto.....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, Kolakta .. .. /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

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

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 do also agree that the Trustees at their option shall be entitled to enforce this Guarantee against us .... .. Branch, Kolkata ... .. /Haldia as principal debtor in the first instance without producing against the Contractor and notwithstanding any security or other guarantee that the Trustees may have in relation to the Contractor's liabilities.
6. 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)

Note :

In case of Bank Guarantee is submitted from a Branch of a Nationalized / Scheduled Bank of India, other than Kolkata / Haldia Branch, the same should be routed through any Kolkata / Haldia Branch of the said Nationalized / Scheduled Bank in India and such Branch shall confirm the same and standby for all the commitments under the Bank Guarantee. In all cases, any dispute regarding Bank Guarantee will be adjudicated under the jurisdiction of Calcutta High Court.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**CONTRACT FORM – IV**

**Syama Prasad Mookerjee Port, Kolkata**

**Haldia Dock Complex**

**CERTIFICATE OF COMPLETION OF WORK**

**Contractor** : \_\_\_\_\_  
**Address** : \_\_\_\_\_  
**Date of completion** : \_\_\_\_\_

Dear Sir,

**Subject** : Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**Reference** : i) **Work Order No.:** ...../...../...../O-... dated .....  
ii) **Contract No./Agreement No. :** ...../...../...../ AGMT/  
...../

This is to certify that the above work which was carried out by you is, in the opinion of the undersigned, complete in every respect on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_, in accordance with terms of the contract and you are required to maintain the work in accordance with the Clause No. 8.40 of the Special Conditions of Contract.

(Signature of the Engineer/Engineer's Representative)

Name: .....

Designation: .....

Date: .....

(OFFICIAL SEAL)

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**Syama Prasad Mookerjee Port, Kolkata**

**Haldia Dock Complex**

**CERTIFICATE OF FINAL COMPLETION**

**General Manager (Finance),**  
Haldia Dock Complex (HDC),  
Jawahar Tower Complex,  
P.O: Haldia Township,  
Dist.: Purba Medinipur,  
PIN – 721 607,  
West Bengal, India.

**Subject** : Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**Reference** : i) **Work Order No.:** ...../...../...../O-... dated .....  
ii) **Contract No./Agreement No. :** ...../...../...../ AGMT/  
...../

This is to certify that the above work, which was carried out by .....  
is now complete in every respect, in accordance with the terms of the contract and that all obligations under the contract have been fulfilled by the Contractor.

(Signature of the Engineer/Engineer's Representative)

Name: .....

Designation: .....

Date: .....

(OFFICIAL SEAL)

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**(“NO CLAIM CERTIFICATE” FROM CONTRACTOR)**

**[To be submitted on Contractor’s Letter Head]**

**General Manager(Engineering)**

Haldia Dock Complex,  
Syama Prasad Mookerjee Port, Kolkata,  
Engineering Department,  
Jawahar Tower Complex,  
P.O.: Haldia Township,  
Dist.: Purba Medinipur,  
PIN: –721607,  
West Bengal, India.

Dear Sir,

**Subject :** Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**Reference :** i) **Work Order No.:** ...../...../...../O-... dated .....  
ii) **Contract No./ Agreement No. :** ...../...../...../AGMT /  
...../

I/We do hereby declare that I/we have received full and final payment from Haldia Dock Complex, **Syama Prasad Mookerjee Port, Kolkata**, for the execution of the subject work, and I/we have no further claim against Haldia Dock Complex, **Syama Prasad Mookerjee Port, Kolkata** in respect of the above mentioned job.

Yours faithfully,

(Signature of Contractor)

Date : .....

Name of Contractor : .....

Address : .....

(OFFICIAL SEAL OF THE CONTRACTOR)

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.



**FORM OF AGREEMENT**

(To be submitted on Non- Stamp Paper of worth not less than ₹ 50.00)

**CONTRACT NO. : GM(E)/...../ /AGMT/...../.....**

**TENDER REFERENCE:**

Tender No. : SDM(P&E)/TSEM/T05/2021-2022

for

Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**ORDER REFERENCE:** ..... /...../ /O-... dated .....

**This agreement** made this ..... day of ..... , Two thousand ..... ,  
BETWEEN

**The Board of Trustees for the Port of Kolkata**, a body corporate -- constituted by the Major Port Trust Act, 1963 (hereinafter called the ‘**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

[Together hereinafter the ‘**Parties**’]

**WHEREAS**

The Trustees are desirous that certain works should be executed by the Contractor, viz. “Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia”.

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.

**NOW THIS AGREEMENT WITNESSETH as follows :**

1. In this agreement words and expression shall have the same meanings as are respectively assigned to them in **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:
  - a) The said bid / offer.
  - b) The Letter of Acceptance of the bid /offer [vide Order No. ....../...../...../O-... dated .....
  - c) The Conditions of Contract and Scope of Work [all terms and conditions of Tender No. **SDM(P&E)/TSEM/T05/2021-2022**].
  - d) Addenda [Please insert Addenda Nos. ....]
  - e) “Price Comparative Statement”, showing the prices quoted (electronically, through the **eNivida Portal of RailTel**) by the Successful Bidder, in the Price Bid.
  - f) 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, complete & maintain the work, including remedy any defects therein (during the Defect Liability Period”), in conformity with the provisions of the Contract, in all respects.

**IN WITNESS** whereof the parties hereto have caused this Agreement to be executed the day and year first before written.

The parties hereunto affixed their respective Common Seals (or have hereunto set their respective hands and seals).

For and on behalf of

For and on behalf of

HALDIA DOCK COMPLEX  
Syama Prasad Mookerjee Port, Kolkata  
(TRUSTEES)

(CONTRACTOR)

SEAL

SEAL

**In presence of**

**In presence of**

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Supply, Installation, Testing & Commissioning of 01 no. 1010 kVA, 11kV, DG Set (at Substation-3), 01 no. 500 kVA, 415V DG Set (for Guest House & Port House) and 01 no. 250 kVA, 415V DG Set (for Port Hospital), in the Residential Zone of Haldia Dock Complex, at Haldia.