# POWER GRID COMPANY OF BANGLADESH LIMITED

Construction of 230/132/33kV GIS Substation at Anwara, 230/33kV GIS Substation at Bangabandhu Hi-Tech City (Kaliakoir), 132/33kV GIS Substation at Cox’sbazar & Teknaf and 230kV GIS bay extension at existing Kaliakoir Substation (Package-1)

Under

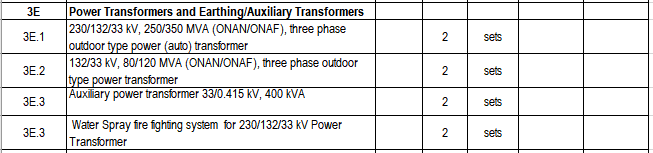
Southern Chattogram and Kaliakoir Transmission Infrastructure Development Project.

[ Bid Identification No.: PGCB/AIIB/000308-BGD/SS/Package-1]

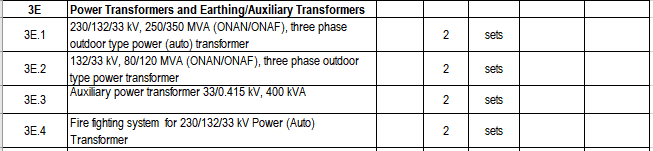
**Addendum No. 1**

1. The following items in price schedule (B1, B2 & B4) shall be replaced as mentioned below:

Current items:

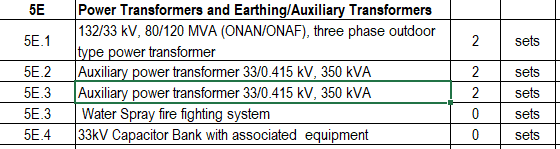


Shall be replaced by the following revised items:

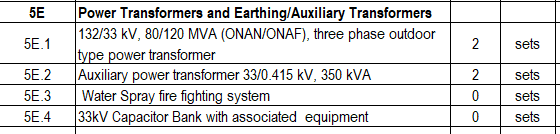


1. The following items in price schedule (B1, B2 & B4) shall be replaced as mentioned below:

Current items:

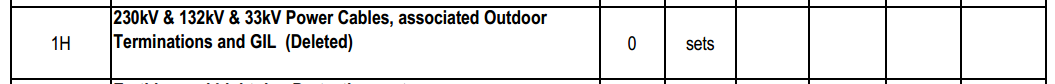


Shall be replaced by the following revised items:

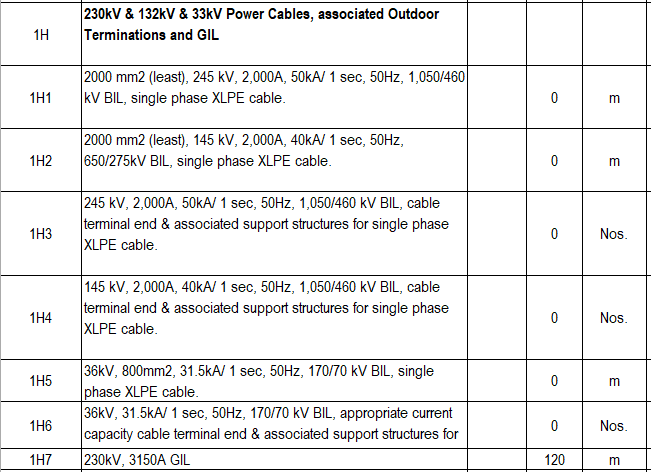


1. The item no. 1H in price schedule-B4 (only) shall be replaced as mentioned below:

Current items:

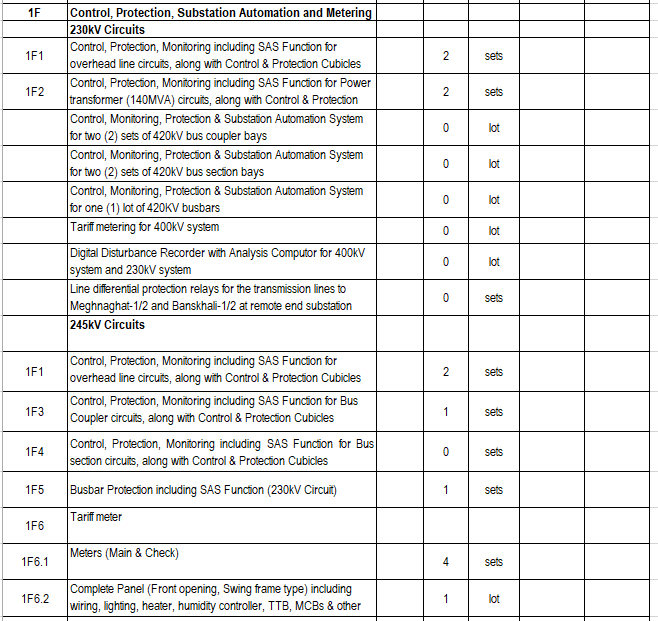


Shall be replaced by the following revised items:

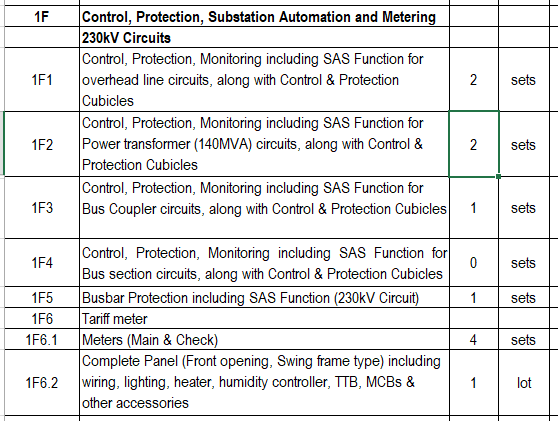


1. The item no. 1F in price schedule-B1 (only) shall be replaced as mentioned below:

Current items:



Shall be replaced by the following revised items:



1. The item no. 1I2 in price schedule-B1, B2 & B4 shall be revised as mentioned below:

Current items:

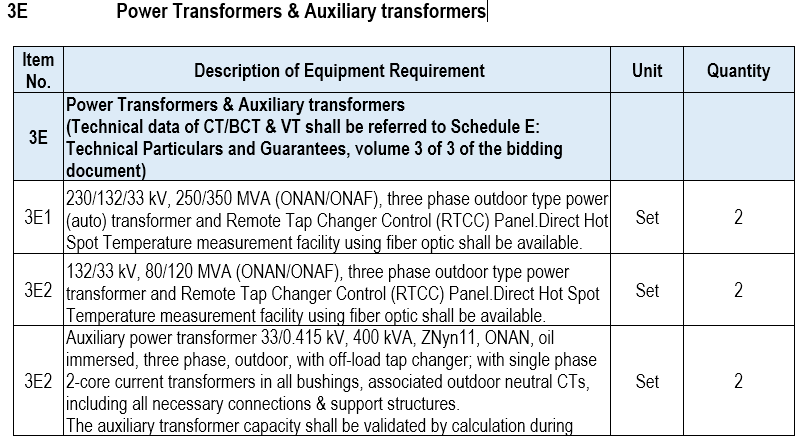


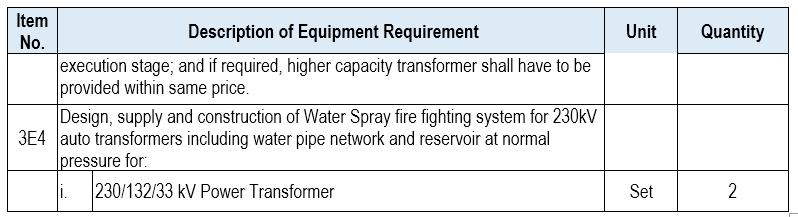
Shall be replaced by the following revised items:



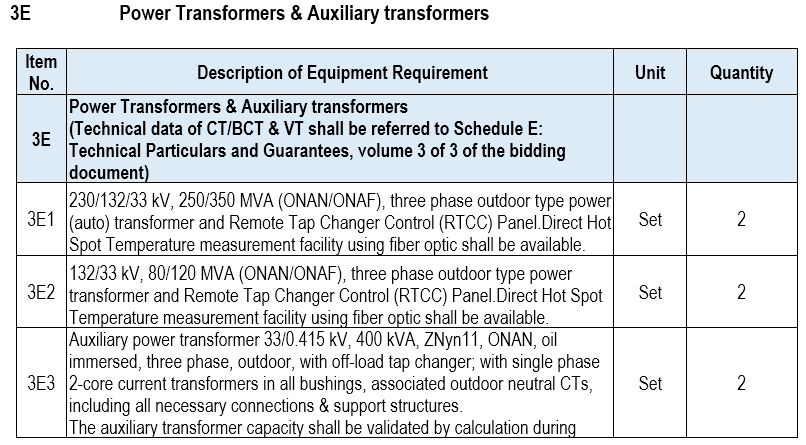
1. The following items in Schedule-A (Scope of Work) shall be replaced as mentioned below:

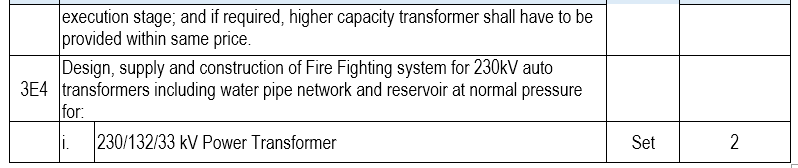
Current items:





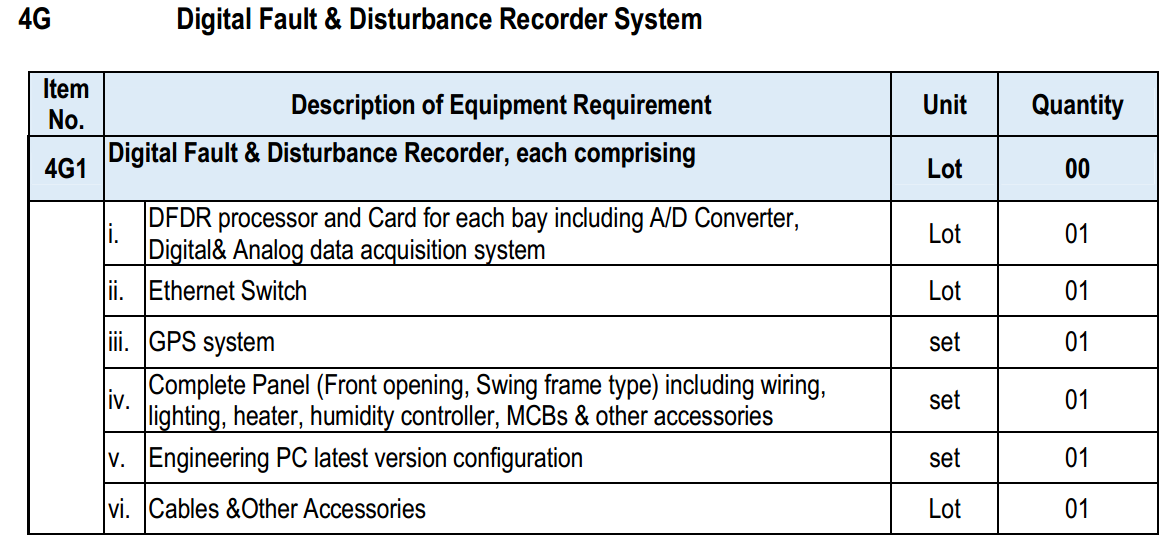
Shall be replaced by the following revised items:

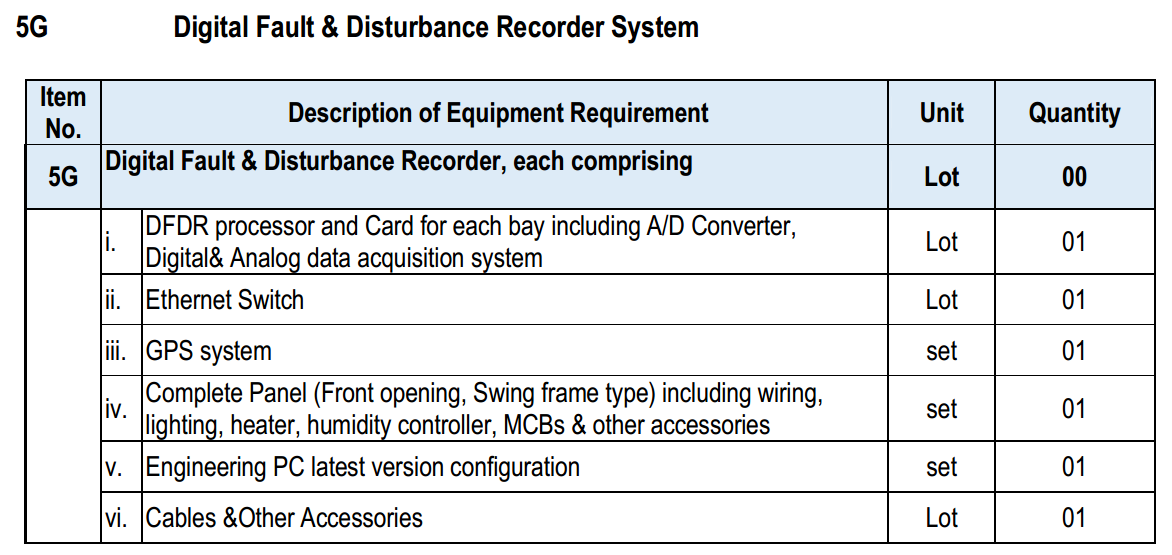




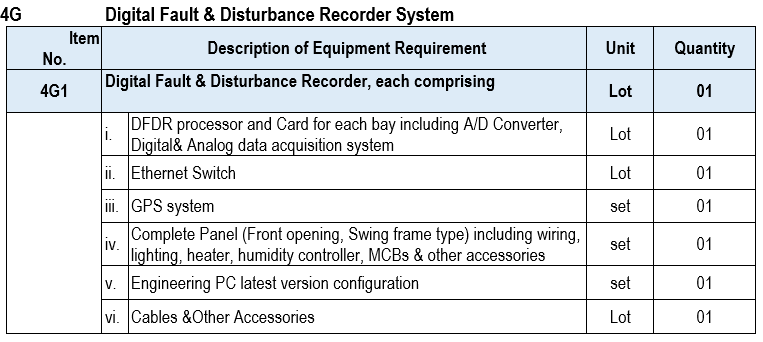
1. The following items in Schedule-A (Scope of Work) shall be revised as mentioned below:

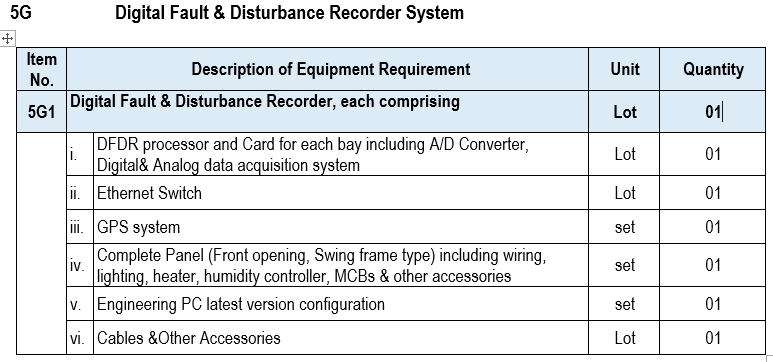
Current items:





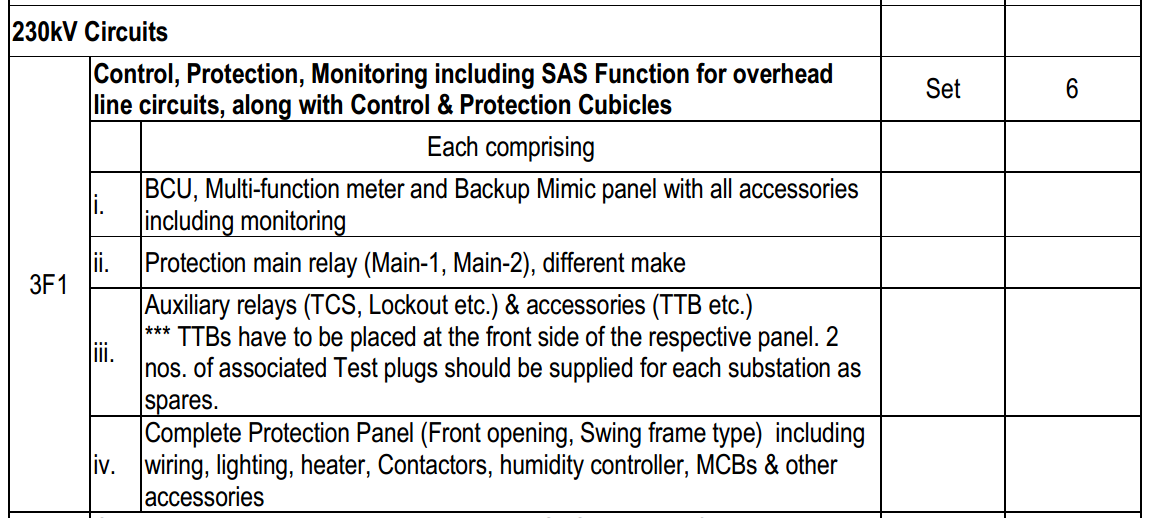
Shall be replaced by the following revised items:



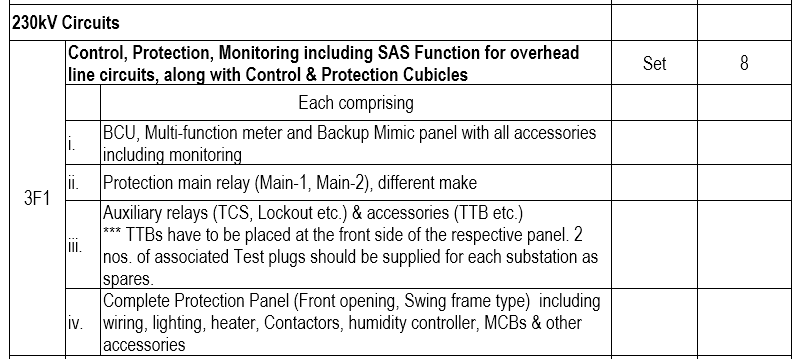


1. The following items in Schedule-A (Scope of Work) shall be revised as mentioned below:

Current items:

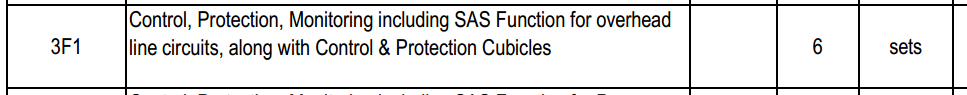


Shall be replaced by the following revised items:

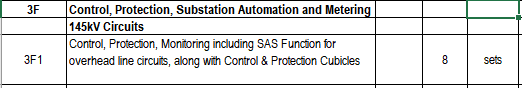


The item no. 4F1 in price schedule-B1, B2 & B4 shall be revised as mentioned below:

Current items:

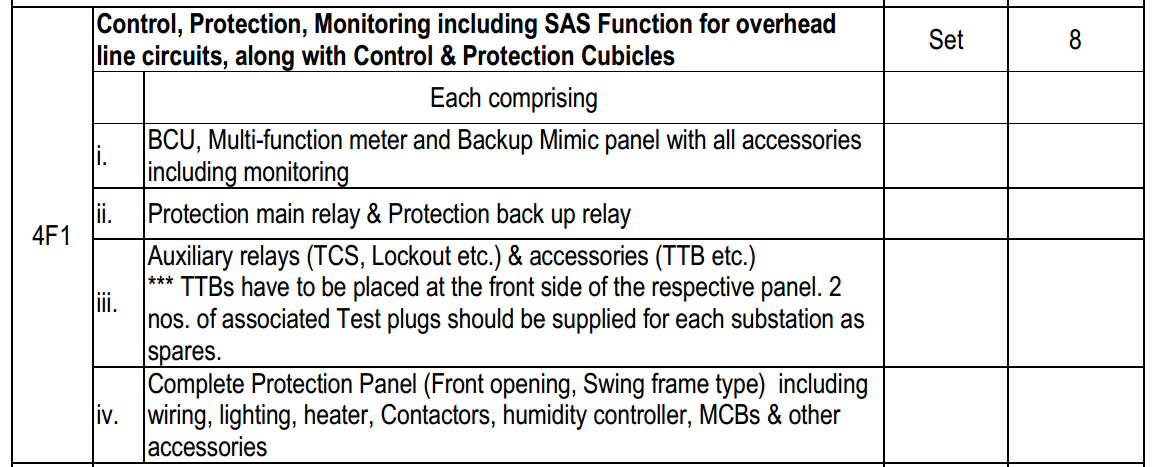


Shall be replaced by the following revised items:

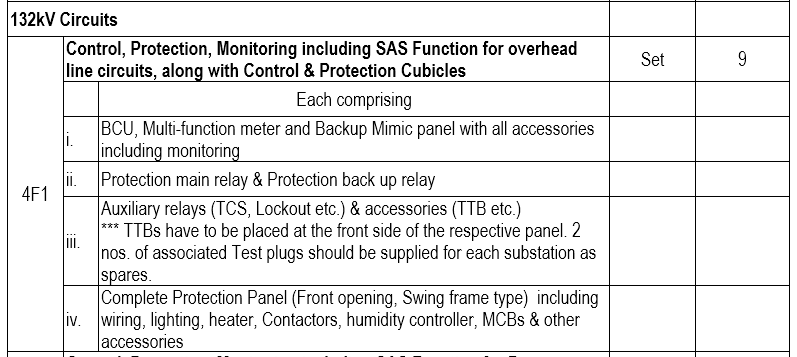


1. The item **3B7 & 3B.10.ii.a** in schedule-A and **3B7 & 3B.10.2.a** in price schedule (schedule B1, B2 & B4) shall have its quantity to be 30 instead of 24.
2. The following items in Schedule-A (Scope of Work) shall be revised as mentioned below:

Current items:

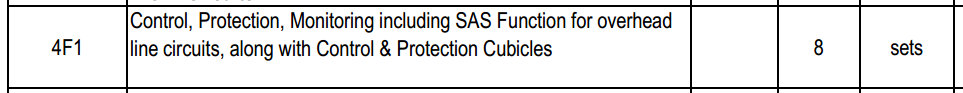


Shall be replaced by the following revised items:

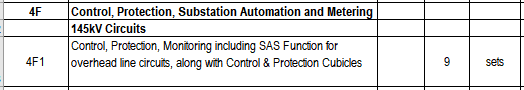


The item no. 4F1 in price schedule-B1, B2 & B4 shall be revised as mentioned below:

Current items:

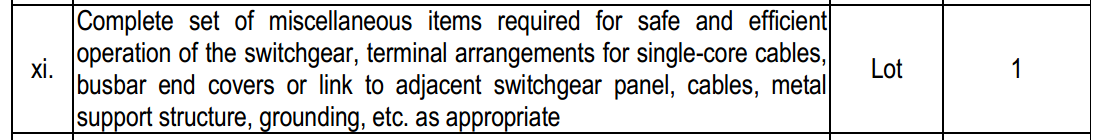


Shall be replaced by the following revised items:

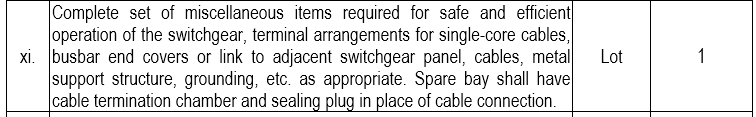


1. The description of the following sub-item 4C1 in Schedule-A (Scope of Work) shall be revised as mentioned below:

Current items:



Shall be replaced by the following revised items:



1. The following clause in Schedule-A (Scope of Work) shall be revised as mentioned below:

1.6 Training and Inspection

b) International Witnessing: The following engineers nominated by the Employer shall participate in the inspection and witnessing of factory acceptance tests at manufacturers' works as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SL** | **Description** | **No. of**  **Engineers** | **Duration (Days)**  **excluding travelling time** | **No. of Trip/ Visit**  **(Minimum)** |
|  |  | **Each Visit** |  |  |
|  | Transformers 230/132/33kV, 250/350MVA | 02 | 10 | 1 |
|  | Transformers 230/33kV, 120/140MVA | 02 | 10 | 1 |
|  | Transformers 132/33kV, 80/120MVA | 02 | 10 | 3 |
|  | 230kV GIS | 02 | 10 | 1 |
|  | 132kV GIS | 02 | 10 | 2 |
|  | Circuit Breaker (400 & 230kV) |  | 0 | 0 |
|  | Bus Reactor & Shunt Reactor |  | 0 | 0 |
|  | Disconnector (400 & 230kV) |  | 0 | 0 |
|  | Instrument Transformer (400 & 230kV) |  | 0 | 0 |
|  | Lightning Arrester (400 & 230 kV) |  | 0 | 0 |
|  | Control, protection & SAS | 02 | 7 | 1 |
|  | Communication Equipment and SCADA gateway | 02 | 7 | 1 |
|  | DC system (Battery & Charger system | 02 | 7 | 0 |

1. The following items in Schedule-E (GTP & requirement Form: Transformer 230/132/33kV, 250/350MVA, 3-Phase Auto Transformer, 230/33kV, 120/140MVA, 3-Phase Power Transformer and 132/33kV, 80/120MVA, 3-Phase Power Transformer) shall be replaced as mentioned below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **3.4** | **Guaranteed losses** |  |  |  |
| 3.4.1 | No-load losses with tap changer in nominal position:   1. at rated voltage and rated frequency 2. at 110 % rated voltage, at rated frequency | kW  kW | Insert  Insert |  |
|  | 1. No-load losses with tap changer in plus (+) extreme position:   (at 110 % rated voltage, at rated frequency) | kW | Insert |  |
| 1. No-load losses with tap changer in minus (-) extreme position:   (at 90 % rated voltage, at rated frequency) | kW | Insert |  |
|  | Average No-Load Loss of the above item no. a, b, c & d **(this average value will be evaluated)** | kW | Insert |  |
| 3.4.2 | No-load losses capitalized value | BDT/kW | As per Tender Requirement |  |
| 3.4.3 | Tolerance to be applied to no-load losses in % of the guaranteed value | % | 10 |  |
| 3.4.4 | On-load losses at 75°C |  |  |  |
| On-load losses at 75°C with tap changer in nominal position:   1. at rated voltage and rated frequency 2. at 110 % rated voltage, at rated frequency | kW  kW | Insert |  |
| 1. On-load losses at 75°C, with tap changer in plus (+) extreme position   (at 110 % rated voltage, at rated frequency) | kW | Insert |  |
| 1. On-load losses at 75°C, with tap changer in minus (-) extreme position   (at 90 % rated voltage, at rated frequency) | kW | Insert |  |
| Average On-load losses of the above item no. a, b, c & d **(this average value will be evaluated)** | kW | Insert |  |
| 3.4.5 | On-load losses capitalized value | BDT/kW | As per Tender Requirement |  |
| 3.4.6 | Tolerance to be applied to on-load losses in % on the guaranteed value | % | 10 |  |

1. The clause 4.3.11 Losses and Evaluation of Losses of Volume-2 of Bid Document shall be modified as follows:

Explanation of the N & L in the formula of Evaluated price of transformer loss = (N \* a + L \* b + M \* c) shall be revised as follows:

N= Average No-load loss (core-loss) at rated voltage in kW

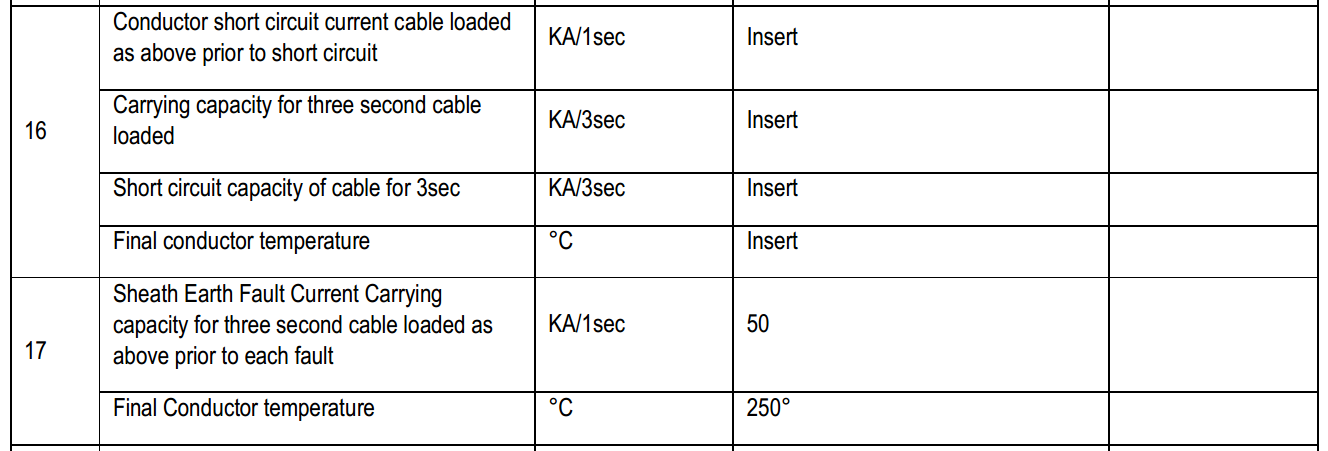
L= Average Load loss (copper-loss) at 75 °C, 50 Hz maximum continuous rating in kW

1. Volume 2 of 3, SECTION-17, Power Cables and Cable Terminating Accessories clause 17.3.3

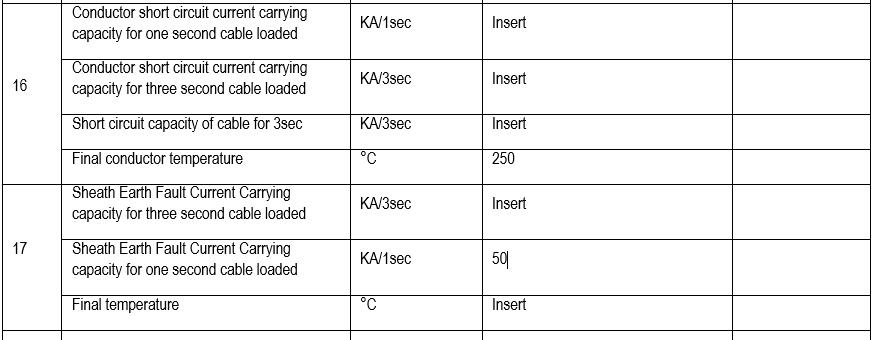
The referred clause (17.3.3) of V-2 shall be revised as “Short circuit earth fault rating of cable metal sheath or metallic screen for 400kV, 230kV, 132kV & 33kV cable shall be at least 63kA/1s, 50kA/1s, 40kA/1s and 31.5kA/1s respectively.”

1. The item 16 & 17 of the 230kV and 132kV XLPE Power Cables shall be revised as follows:

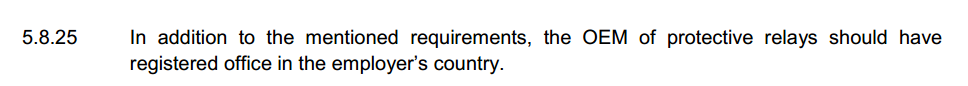
Current items:



Shall be replaced by the following revised items:



1. The following clause 5.8.25 of section-5 of volume-2 of bid document shall be modified as follows:

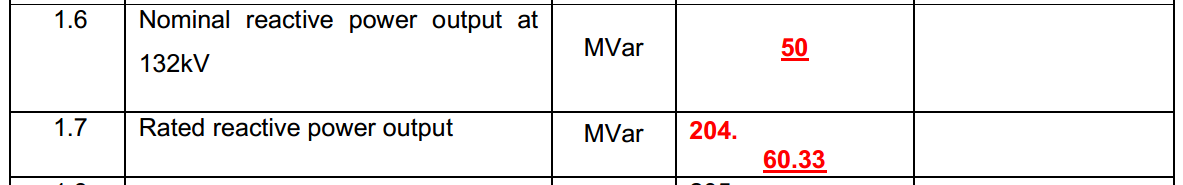


The above clause shall be replaced by-

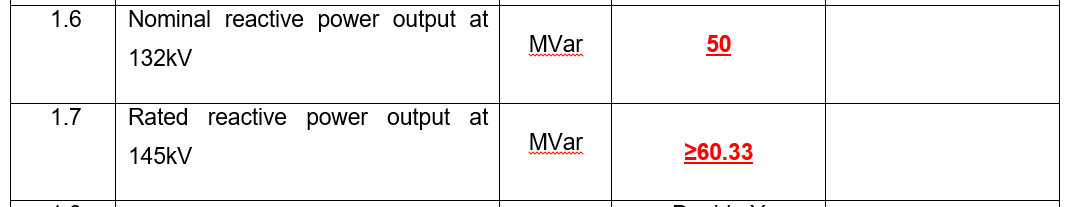
5.8.25 Deleted.

1. The following items in the GTP of capacitor bank and equipment 132kV (mentioned in schedule-E of V-3) shall be revised as follows:

Current items:



Shall be replaced by the following revised items:



1. Volume 3 of 3, Schedule B Tender PRICES & SCHEDULES, Schedule No. 4. Installation and Other Services, SECTION-I for Hi-Tech 230/33kV Gas Insulated Substation:

Item 1M1 is revised; Item 1M3 ii. b) is added after Item 1M3 ii. a) and Item 1M4 v. is revised as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1M** | **Civil Works, Building and Foundation** | |  |  |
| 1M1\* | Complete land development and slope protection | |  |  |
| i. | Complete compacted land development with carried/dredged earth filling including approach road | cubic meter | 10658 |
| ii. | Slpoe protection |  |  |
| a) | Slpoe (1V:2H) protection with turfing | sqm | 650 |
| 1M3\* | ii. | Outdoor equipment foundation in 230kV switchyard |  |  |
| b) | GIL support structure foundation | Lot | 1 |
| 1M4\*\* | GIS cum control room building & Ansar barack | |  |  |
| v. | Single Storied Ansar Barack (5.1mx19.75m) | sqm | 10.725 |
|  | \* actual payment shall be as per actual work at site during execution stage  \*\* measurement method = clear length x clear width x no. of story | | | |

1. The item no. 4E4 in price schedule-B1, B2 & B4 shall be revised as mentioned below:

Current items:



Shall be replaced by the following revised items:

