



**NEPAL ELECTRICITY AUTHORITY**  
**Transmission Directorate**  
**Grid Development Department**  
**New Modi Lekhnath 132kV Transmission Line Project**

Kharipati  
Kathmandu, Nepal  
Phone : 977-1-6614606

Letter Ref. No. 074/75-46

Date: 24<sup>th</sup> Sept, 2017

**To,**

**All Prospective Bidders**

**Subject: Issuance of Clarification-II and Addendum-II**

**Ref: Package ML2: Procurement of Plant Design, Supply and Installation of Laha Chowk 132 kV Substation, New Modi 132 kV Switching Station and 132 kV Line Bay expansion at Lekhnath Substation (IFB No: ML/SS/ /074/75- 1)**

Dear Sirs/Madams,

In reference to the captioned Tender Published on 1 September, 2017, we are hereby attaching the clarification-II sought by the bidders pursuant to clause 7.1 and addendum-II pursuant to clause 8.1 of Volume-1 of the bidding Documents.

It is hereby requested you all to acknowledge the receipt of the same.

With regards

Roshan Agrawal  
Project Manager

**NEPAL ELECTRICITY AUTHORITY**  
Transmission Directorate  
Grid Development Department  
New Modi-Lekhnath 132 kV Transmission Line Project

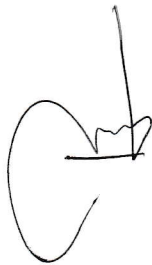
IFB No. ML/SS/074/75-01 : Procurement of Plant Design, Supply and Installation of Laha Chowk 132 kV Substation, New Modi 132 kV Switching Station and 132 kV Line Bay Expansion at Lekhnath Substation  
Clarification II

| S.No | Description/Clause of Reference for the required clarification             | Bidder's Request                                                                                                                                                                                                                                                                                                                                      | NEA Response                                                                                                                                                                                                              |
|------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Volume II, Single Line Diagram of Laha Chowk Substation, DWG No. 5         | Supply scope of 2 nos. 11/0.4KV LT transformer is not clear from SLD as it is showing tapping from same cable which will be used as an incomer of 11KV indoor switchgear. —Pl. confirm Or else<br>If we have to take 11KV supply from LV side of 33/11KV transformer for 2 nos. LT transformer then 11KV 3Ph. bus formation is required. —Pl. confirm | 11KV supply from LV side of 33/11KV transformer using XLPE cable for 2 nos. Station transformer and then 11KV 3Ph. Bus formation is required. Please refer Annexure-I: SLD of LahaChowk Substation                        |
| 2    | Volume II, Single Line Diagram of Laha Chowk Substation, DWG No. 5         | We understand that 11KV distribution transformer along with associated equipment i.e. 11KV CT, DS & PF these all are outdoor equipment and not a part of 11KV Indoor switchgear. —Please confirm.                                                                                                                                                     | Confirmed                                                                                                                                                                                                                 |
| 3    | Volume I(B), Price Schedule 1, A. LahaChowk Substation; Item No. 1.3/1.3.3 | 145 kV, 1250 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification<br>As per SLD 145KV Disconnecting Switch with grounding switch qty. is 4 set but in Price Schedule same is reflecting as 5 set.—Pl. confirm.                                                                                    | Refer Addendum-II                                                                                                                                                                                                         |
| 4    | Volume I(B), Price Schedule 1, A. LahaChowk Substation; Item No. 1.5/1.5.2 | 30 kV, 10 kA Lightning Arrestor complete with all accessories as per specification<br>As per SLD 30KV LA qty. is 9 nos. but in Price Schedule same is reflecting as 6 nos. —Pl. confirm.                                                                                                                                                              | Transformer mounted LA is purposed for transformer bay. So these (trf mounted) LA price shall be incorporated in Power Transformer price. Refer Addendum-II                                                               |
| 5    | Volume I(B), Price Schedule 1, A. LahaChowk Substation; Item No. 1.5/1.5.3 | 9 kV, 10 kA Lightning Arrestor complete with all accessories as per specification<br>As per SLD (Dwg No.: 5) 9KV LA qty. is 6 nos. but in Price Schedule same is reflecting as 15 nos.—Pl. confirm.                                                                                                                                                   | Transformer mounted LA is purposed for 33/11KV transformer bay. So these (trf mounted) LA price shall be incorporated in Power Transformer price. Other LA are pole mounting type for outgoing feeders. Refer Addendum-II |
| 6    | Volume I(B), Price Schedule 1, A. LahaChowk Substation; Item No. 1.6/1.6.6 | 33 kV Bus Sectionalizer Control and Relay Panel complete with all accessories as per specification<br>Bus section is not reflecting in SLD but it has been considered 1 no. CRP for 33KV Bus sectionalizer —Pl. check & confirm.                                                                                                                      | 33 kV Bus Sectionalizer Control and Relay Panel has been removed from the scope. Please refer Addendum-I                                                                                                                  |
| 7    | Volume I(B), Price Schedule 1, A. LahaChowk Substation; Item No. 1.8/1.8.4 | 11 kV HT cable termination alongwith accessories & jointing kit<br>As per SLD (Dwg No.: 5) 11KV HT cable termination kit qty. is qty. is 6 nos. but in Price Schedule same is reflecting as 8 nos. —Pl. check & confirm.                                                                                                                              | Refer Addendum-II                                                                                                                                                                                                         |



| S.No | Description/Clause of Reference for the required clarification                                                | Bidder's Request                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NEA Response                                                                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | Volume I(B), Price Schedule 1, A.<br>LahaChowk Substation; Item No. 1.8/1.8.3/1.8.4                           | 1.8.3) 12 kV, 600 sq. mm 3 x single core XLPE Copper Power Cable including Straight Joints with Accessories complete from LV sides of 33/11kV Power Transformers to indoor 11 kV Switchgear Room as per Drawings<br><br>1.8.4) 11 kV HT cable termination along with accessories & jointing kit. We would like to propose single run 1C X 630sq. mm. /Phase from LV sides of 33/11 kV Power Transformers to indoor 11 kV Switchgear Room as give cable size (1C X 600 sq. mm )is a nonstandard size. Kindly accept and confirm. | XLPE Cable size and type has been changed. Please Refer Addendum-II                                                                                |
| 9    | Volume I(B), Price Schedule 1, A.<br>LahaChowk Substation; Item No. 1.8/1.8.5/1.8.6                           | 1.8.5) 12 kV, 300 sq.mm single core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 4 nos. of Outgoing Distribution Feeders as specified<br><br>1.8.6) 11 kV HT cable termination along with accessories & jointing kit<br>As per Price schedule cable size for 11KV outgoing feeder is 1C X 300Sq. mm. but in SLD (Dwg No. 5) same has been mentioned as 3C X 120 sq. mm. -Pl. check & confirm.                                                                                             | Please Refer Addendum-II                                                                                                                           |
| 10   | Volume I(B), Price Schedule 1, A.<br>LahaChowk Substation; Item No. 1.9/1.9.1                                 | 145 kV Insulator Strings with necessary hardwares, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Gantrystructure, complete as per the specified scope of works<br>Pl. confirm the line side conductor type.<br><br>Construction, Installation and other Services:                                                                                                                                                                                                                 | Transmission Line Conductor Type: BEAR Conductor                                                                                                   |
| 11   | Volume I(B), Price Schedule 5                                                                                 | We understand that Sr. No 4 includes the prices for followings:<br>1) Sch-4A: Local Transportation, Insurance and other<br>Incidental services (including port clearance etc.)<br>2) Sch-4B: Installation Charges and Civil Works<br>Kindly Confirm.                                                                                                                                                                                                                                                                            | Refer Addendum-II & Annexure-VI                                                                                                                    |
| 12   | CIVIL WORKS; General<br>i) LahaChowk Substation<br>ii) New Modi Switching Station<br>iii) Lekhnath Substation | Please provide Contour Drawing for deciding FGL, and estimating Cutting / Filling volume                                                                                                                                                                                                                                                                                                                                                                                                                                        | Annexure-II (Contour Map)                                                                                                                          |
| 13   | CIVIL WORKS; General<br>i) LahaChowk Substation<br>ii) New Modi Switching Station<br>iii) Lekhnath Substation | Please provide Site Survey report – Site visit, Site Photograph, etc                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Bidders are encouraged to visit site for better understanding of site condition, Topography, access road etc. Annexure-III (Some Site Photographs) |
| 14   | CIVIL WORKS; General<br>i) LahaChowk Substation<br>ii) New Modi Switching Station<br>iii) Lekhnath Substation | Please provide Soil Investigation report                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Soil investigation is in the scope of Contractor.                                                                                                  |

| S.No | Description/Clause of Reference for the required clarification                                                | Bidder's Request                                                                                                  | NEA Response                                                    |
|------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| 15   | CIVIL WORKS; General<br>i) LahaChowk Substation<br>ii) New Modi Switching Station                             | Please confirm whether RCC Overhead water storage Tank shall be constructed for Quarter Buildings.                | Not in the scope of this tender                                 |
| 16   | CIVIL WORKS; General<br>i) LahaChowk Substation<br>ii) New Modi Switching Station                             | Please provide Building sizes & heights (Architectural Plan & Section Drawings) for Guard Post & Quarter Building | Shall be Finalized after award of contract.                     |
| 17   | CIVIL WORKS; General<br>i) LahaChowk Substation<br>ii) New Modi Switching Station                             | Outlet point of Storm water drainage system shall be identified at site.                                          | Confirmed                                                       |
| 18   | CIVIL WORKS; General<br>i) LahaChowk Substation<br>ii) New Modi Switching Station<br>iii) Lekhnath Substation | Pls. Confirm the type of Firefighting system, whether it is a water Sprinkler system or N2 system?                | Fire Detection and Alarm System with Portable Fire Extinguisher |



# NEPAL ELECTRICITY AUTHORITY

Transmission Directorate

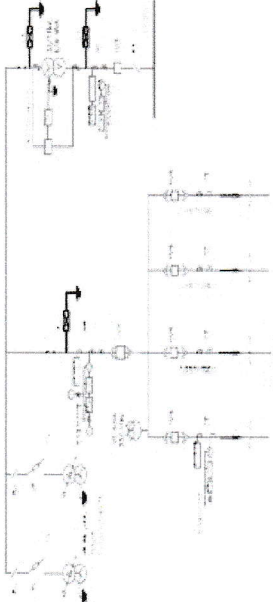
Grid Development Department

New Modi-Lekhnath 132 kV Transmission Line Project

IFB No. ML/SS/074/75-01 : Procurement of Plant Design, Supply and Installation of Laha Chowk 132 kV Substation, New Modi 132 kV Switching Station and 132 kV Line Bay Expansion at Lekhnath Substation

## ADDENDUM-II

In accordance with the ITB 8.1 of the Bidding Document for the "Procurement of Plant Design, Supply and Installation of Laha Chowk 132 kV Substation, New Modi 132 kV Switching Station and 132 kV Line Bay Expansion at Lekhnath Substation (Single Stage Two Envelope Bidding) (IFB No: ML/SS/074-75-01)", following amendments have been made in the bidding Document.

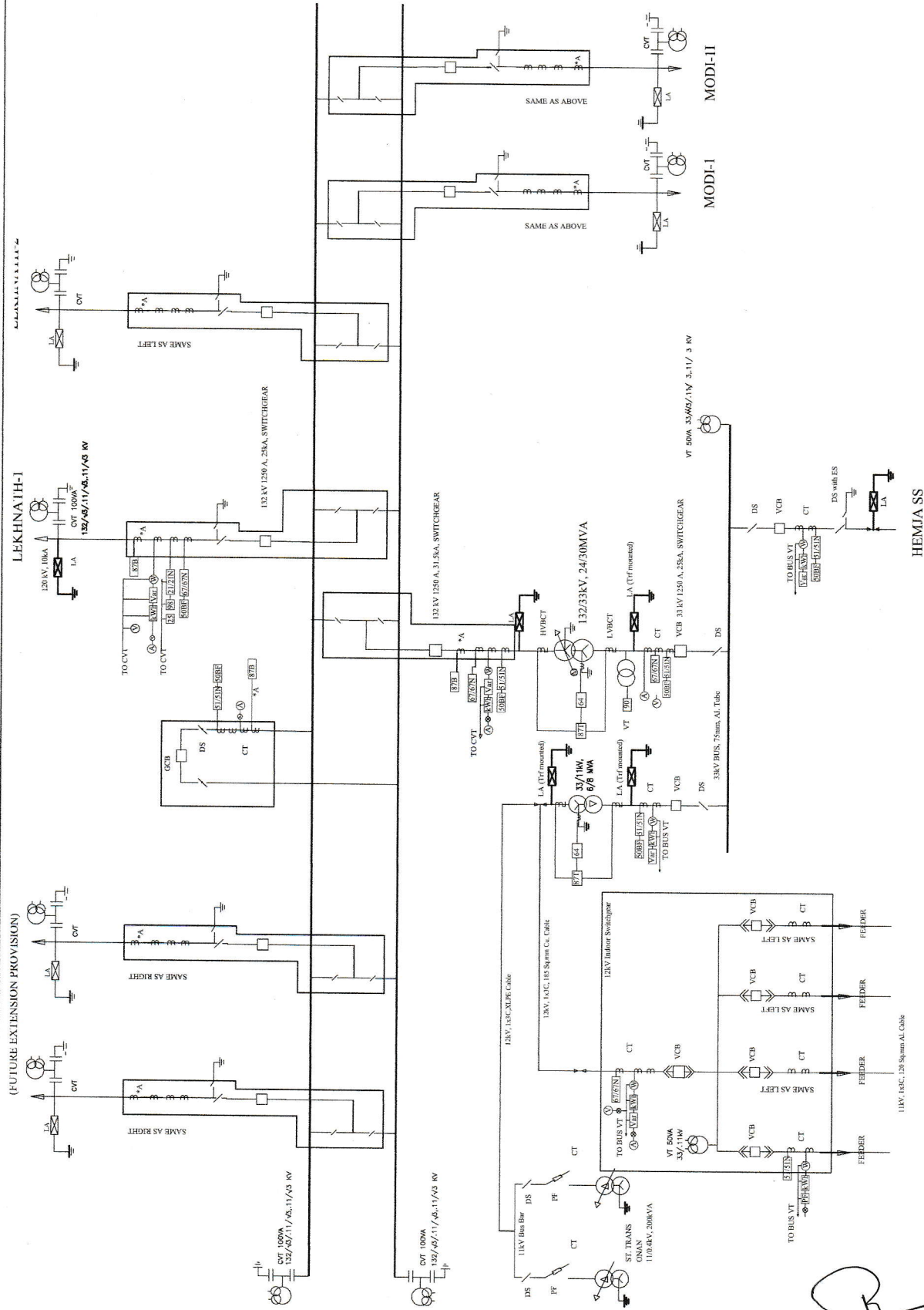
| S.No | Description/Clause of Reference for the required clarification                       | As in the Bidding Documents                                                                                                             | To Be Replaced as                                                                                                                                      |
|------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Volume II, Single Line Diagram of Laha Chowk Substation, DWG No. 5                   |                                                       | Replace by: As per Drawing @Annexure I                                                                                                                 |
| 2    | Volume I(B), Price Schedule 1,2,4A & 4B; A. LahaChowk Substation; Item No. 1.3/1.3.3 | 1.3.3) 145 kV, 1250 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification. Qty=5 Set | Replace By:<br>1.3.3) 145 kV, 1250 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification. Qty=4 Set |
| 3    | Volume I(B), Price Schedule 1,2,4A & 4B; A. LahaChowk Substation; Item No. 1.5/1.5.2 | 1.5.2) 30 kV, 10 kA Lightning Arrester complete with all accessories as per specification. Qty= 6 Nos.                                  | Replace By: 1.5.2) 30 kV, 10 kA Lightning Arrester complete with all accessories as per specification. Qty= 3 Nos.                                     |
| 4    | Volume I(B), Price Schedule 1,2,4A & 4B; A. LahaChowk Substation; Item No. 1.5/1.5.3 | 1.5.3) 9 kV, 10 kA Lightning Arrester complete with all accessories as per specification Qty= 15 Nos.                                   | Replace By: 1.5.3) 9 kV, 10 kA Pole mounting type Lightning Arrester complete with all accessories as per specification Quantity: 12 Nos.              |



| S.No | Description/Clause of Reference for the required clarification                                                | As in the Bidding Documents                                                                                                                                                                                                                                        | To Be Replaced as                                                                                                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | Volume I(B), Bid Price Schedule, Price Schedule No.1,2,4A & 4B; A. Laha Chowk Substation, Item No. 1.8.3      | 1.8.3) 12 kV, 600 sq. mm 3 x single core XLPE Copper Power Cable including Straight Joints with Accessories complete from LV sides of 33/11 kV Power Transformers to indoor 11 kV Switchgear Room as per Drawings. Quantity=300m                                   | Replace By: 1.8.3) 12 kV, <b>185 sq. mm Three core XLPE, Armoured</b> Copper Power Cable including Straight Joints with Accessories complete from LV sides of 33/11 kV Power Transformers to indoor 11 kV Switchgear Room as per Drawings. Quantity=300m                               |
|      | Volume I(B), Bid Price Schedule, Price Schedule No.1,2,4A & 4B; A. Laha Chowk Substation, Item No. 1.8.4      | 1.8.4) 11 kV HT cable termination alongwith accessories & jointing kit. Qty=8 Nos.                                                                                                                                                                                 | Replace By: 1.8.4) 11 kV HT cable termination alongwith accessories & jointing kit. Qty=6 Nos.                                                                                                                                                                                         |
| 6    | Volume I(B), Bid Price Schedule, Price Schedule No.1,2,4A & 4B; A. Laha Chowk Substation, Item No. 1.8.5      | 1.8.5) 12 kV, 300 sq.mm single core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 4 nos. of Outgoing Distribution Feeders as specified. Quantity=600m                                                                         | Replace By: 1.8.5) 12 kV, <b>120 sq.mm Three core XLPE, Armoured</b> Aluminium Power Cable including Straight Joints with Accessories complete for 4 nos. of Outgoing Distribution Feeders as specified. Quantity=600m                                                                 |
| 7    | Volume I(B), Bid Price Schedule, Price Schedule No.1,2,4A & 4B; A. Laha Chowk Substation, Item No. 1.8.6      | 1.8.6) 11 kV HT cable termination alongwith accessories & jointing kit. Qty=28 Nos.                                                                                                                                                                                | Replace By: 1.8.6) 11 kV HT cable termination alongwith accessories & jointing kit. Qty=24 Nos.                                                                                                                                                                                        |
| 8    | Volume I(B), Bid Price Schedule, Price Schedule No.1,2,4A & 4B; B. New Modi Switching Station, Item No. 1.8.3 | 12 kV, 300 sq.mm single core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for station transformer as specified. Qty=150 m                                                                                                        | Replace By: 12 kV, <b>16 sq.mm Three core XLPE</b> Copper Power Cable including Straight Joints with Accessories complete for station transformer as specified. Qty=150 m                                                                                                              |
| 9    | Volume I(B), Bid Price Schedule, Price Schedule No.1,2,4A & 4B; B. New Modi Switching Station, Item No. 1.8.4 | 1.8.4) 11 kV HT cable termination alongwith accessories & jointing kit. Qty=8 Nos.                                                                                                                                                                                 | Replace By: 1.8.4) 11 kV HT cable termination alongwith accessories & jointing kit. Qty=6 Nos.                                                                                                                                                                                         |
| 10   | Volume II, Chapter-4 Power Transformer;                                                                       | Table 1: technical particulars of power transformers                                                                                                                                                                                                               | Replace By: Table presented at <b>Annexure-IV</b>                                                                                                                                                                                                                                      |
| 11   | Volume II, Chapter-10, Power and Control Cables                                                               | 2.0 Technical Specification of 12kV XLPE single core, unarmoured Cable                                                                                                                                                                                             | Replace By: Technical Specification of 12kV XLPE Three core, armoured Cable as presented at <b>Annexure-V</b>                                                                                                                                                                          |
| 12   | Volume I(B), Bid Price Schedule, Price Schedule No.5                                                          | Price Schedule No.5; Grand Summary Table                                                                                                                                                                                                                           | Replace By: Table presented at <b>Annexure-VI</b>                                                                                                                                                                                                                                      |
| 13   | Volume I(B), Bid Price Schedule, Price Schedule No.1,2,4A & 4B; A. Laha Chowk Substation, Item No. 1.1/1.1.2  | 33/11 kV, Three phase 6/8 MVA, ONAN/ONAF Power Transformer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, star/star connected complete with all accessories as specified. Quantity=1 Set | Replace By: 33/11 kV, Three phase 6/8 MVA, ONAN/ONAF Power Transformer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, <b>Delta/star</b> connected complete with all accessories as specified. Quantity=1 Set |



# Annexure-I: SLD of LahaChowk Substation



NEPAL ELECTRICITY AUTHORITY  
TRANSMISSION DIRECTORATE  
GRID DEVELOPMENT DEPARTMENT  
NEW MODI LEKHNATH 132KV Transmission line Project

SINGLE LINE DIAGRAM OF  
LAHA CHOWK SUBSTATION

DWG NO.5  
SCALE  
Not in Scale

# Annexure-II: Contour Diagram of New Modi Substation



NEPAL ELECTRICITY AUTHORITY  
TRANSMISSION DIRECTORATE  
GRID DEVELOPMENT DEPARTMENT  
NEW MODI LEKHNATH 132kV Transmission line Project

CONTOUR DIAGRAM OF  
NEW MODI SUBSTATION

DWG NO.1

SCALE  
Not in Scale

### **ANNEXURE-III: SITE PHOTOGRAPHS**

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## 1. New Modi Substation



## 2. LahaChowk Substation



B

### 3. Lekhnath Substation



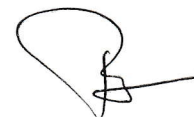
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## Annexure-IV

Table 1: Technical particulars of Power Transformers

| S.No. | Description                                                          | 132/33 kV                       | 33/11kV                        |
|-------|----------------------------------------------------------------------|---------------------------------|--------------------------------|
| 1.    | Rated capacity                                                       | 24/30 MVA                       | 6/8MVA                         |
| 2.    | Quantity required                                                    | One (1) no of three phase       | One (1) no of three phase      |
| 3.    | Type                                                                 | Outdoor, Oil-immersed           | Outdoor, Oil-immersed          |
| 4.    | Type of cooling                                                      | ONAN//ONAF2 (24/30 MVA)         | ONAN/ONAF (6/8 MVA)            |
| 5.    | Temperature rise above 40 degree C ambient temperature               |                                 |                                |
|       | a) In oil by thermometer                                             | 50 degree C                     | 50 degree C                    |
|       | b) In winding by resistance                                          | 55 degree C                     | 55 degree C                    |
| 7.    | Number of phases                                                     | 3(three)                        | 3(three)                       |
| 8.    | Maximum voltage (line to line)                                       |                                 |                                |
|       | a) Primary                                                           | 145 kV                          | 36 kV                          |
|       | b) Secondary                                                         | 36 kV                           | 12 kV                          |
| 9.    | Rated Voltage (line to line)                                         |                                 |                                |
|       | a) Primary                                                           | 132 kV                          | 33 kV                          |
|       | b) Secondary                                                         | 33 kV                           | 11 kV                          |
| 10.   | Insulation level of winding                                          |                                 |                                |
|       | a) Basic impulse level as per IEC 76                                 |                                 |                                |
|       | - Primary                                                            | 650 kV (crest)                  | 170kV (crest)                  |
|       | - Secondary                                                          | 170 kV (crest)                  | 75kV (crest)                   |
|       | b) Power frequency induced over voltage (1 minute)                   |                                 |                                |
|       | - Primary                                                            | 275 kV(rms)                     | 70kV(rms)                      |
|       | - Secondary                                                          | 70 kV(rms)                      | 28kV(rms)                      |
| 11.   | Connections                                                          |                                 |                                |
|       | a) Primary                                                           | Star                            | Delta                          |
|       | b) Secondary                                                         | Star                            | Star                           |
| 12.   | Vector group reference                                               | Ynyn0                           | Dyn 11                         |
| 13.   | Type of tap changer/make                                             | On-load/MR Germany              |                                |
| 14.   | Range of taps                                                        | $\pm 10 \%$                     | $\pm 10 \%$                    |
| 15.   | Number of taps                                                       | 17                              | 17                             |
| 16.   | Method of tap changer control                                        |                                 |                                |
|       | - Mechanical local                                                   | Yes                             | Yes                            |
|       | - Electrical local                                                   | Yes                             | Yes                            |
|       | - Electrical remote                                                  | Yes                             | Yes                            |
|       | "MASTER-FOLLOWER-INDEPENDENT" and "AUTO -MANUAL" selection           | Yes                             | Yes                            |
| 17.   | Percent impedance voltage at rated MVA and 75 degree C On normal tap | $\approx 11 \%$ (at normal tap) | $\approx 8 \%$ (at normal tap) |

| S.No. | Description                       | 132/33 kV        | 33/11kV          |
|-------|-----------------------------------|------------------|------------------|
| 18.   | System grounding                  |                  |                  |
|       | a) Primary                        | Solidly grounded | Solidly grounded |
|       | b) Secondary                      | Solidly grounded | Solidly grounded |
| 19.   | Neutral terminals & BCT           |                  |                  |
|       | - Primary                         | Required         | Required         |
|       | - Secondary                       | Required         | Required         |
| 20.   | Tank Mounted Lightning Arrester   |                  |                  |
|       | HV                                | -                | <b>Required</b>  |
|       | LV                                | Required         | <b>Required</b>  |
| 21.   | Bushing Current Transformers      |                  |                  |
|       | a) Number of core & current ratio | 1 * 200/1A &     | 1 * 200/1A &     |
|       | HV Phase                          | 1 * 200/1A       | 1 * 200/1A       |
|       | Neutral                           | 1 * 200/1A       | 1 * 200/1A       |
|       | b) Number of core & current ratio | 1 * 800/1A &     | 1 * 600/1A &     |
|       | LV Phase                          | 1 * 800/1A       | 1 * 800/1A       |
|       | Neutral                           | 1 * 200/1A       | 1 * 200/1A       |
|       | c) Accuracy class                 | <b>PS Class</b>  | <b>PS Class</b>  |



## **Annexure V: Technical Specification for 12kv XLPE Cable**

### **11 kV Power Cable**

a) General

The rated voltage of the power cables shall be 6/10(12) kV. The power cable shall be cross linked polyethylene insulated, screened and steel tape armored confirming IEC 60502-2 standard.

The scope shall include the supply, laying and connection of power cables to connect the power transformer secondary to the 11 kV incomer and also outgoing feeders. The cables shall be supplied with necessary terminations and accessories for both connecting ends. The scope of work covers supply and installation of the cable up to the first termination pole of the 11 kV overhead lines.

b) Conductor

Conductor for power cable shall consist of stranded annealed aluminum wires. They shall comply with IEC Publication.

c) Cable size

The contractor shall supply three cores 12kV XLPE insulated armoured cable with cross sectional area of Copper & Aluminum conductor as specified in the price schedule.

d) Anti-termite Covering

Anti-termite protection shall be applied to the cable and shall be black PVC suitable for the operating temperature of cable and shall meet the requirements of IEC standard.

e) Outer Covering

The outer covering of the cable shall be extruded, continuous black PVC suitable for the operating temperature of cable and shall meet the requirements of IEC standard.

f) Cable Drum

Cable drum shall be non- returnable and made of steel suitably protected against corrosion.

g) Outdoor and Indoor Termination



11 kV cable terminations shall be of the heat-shrinkable type / pre-moulded push on type. Terminations for cable shall be provided in sufficient quantities for complete installations of all feeders of the substations.

h) Jointing Accessories

Cables shall be installed in maximum possible lengths and straight-through jointing shall not be permitted without the prior written approval of the Employer.

i) Voltage Identification

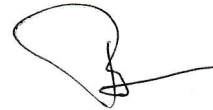
The plastic covering shall be embossed with the name of the manufacturer, number of conductors, the cross sections, type of insulation followed by:

Electric cable - (Corresponding) volts

j) Phase Identification

Phase identification for either triplex or multi-core conductor cable shall be in accordance with the following:

Phase A (R): Red  
Phase B (Y): Yellow  
Phase C (B): Blue

A handwritten signature or mark, possibly a stylized 'S' or 'Z' with a horizontal line extending to the right.

**Nepal Electricity Authority**  
**Transmission Directorate**  
**New Modi Lekhnath 132kV Transmission Line Project**

**PRICE SCHEDULE NO. 5**  
**GRAND SUMMARY**

| S.N. | Description                                                                                                                  | Total Amount                |
|------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
|      |                                                                                                                              | USD                         |
| 1    | Total of Price Schedule no.1: Plants and Mandatory Spare Parts Supplied from Aboard                                          |                             |
| 2    | Total of Price Schedule no.2: Plants and Mandatory Spare Parts Supplied from Within Employer's Country                       |                             |
| 3    | Total of Price Schedule no.3: Design Services                                                                                |                             |
| 4A   | Total of Price Schedule no.4A: Local Transportation, Insurance and other Incidental services (including port clearance etc.) |                             |
| 4B   | Construction ,Installation and other Services:                                                                               |                             |
| 4.1  | Total of Price Schedule no.4B, (A): Laha Chowk Substation                                                                    |                             |
| 4.2  | Total of Price Schedule no.4B, (B): New Modi Switching Substation                                                            |                             |
| 4.3  | Total of Price Schedule no.4B, (C): Lekhnath Substation                                                                      |                             |
|      | <b>Grand Total (excluding VAT)</b>                                                                                           |                             |
|      |                                                                                                                              | <b>Name of Bidder:</b>      |
|      |                                                                                                                              | <b>Signature of Bidder:</b> |

<sup>1</sup> Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1 .Create and use as many columns for Foreign Currency requirement as there are foreign currencies

| Item | Description | Code | Country |
|------|-------------|------|---------|
|      |             |      |         |



Bidder:  
Seal:

Signature: