Nepal Electricity Authority

(A Government of Nepal Undertaking)

Transmission Directorate

Grid Development Department

Burtibang Paudi-Amarai Tamghas Sandhikharka Gorushinge 132kv Transmission Line Project

Bidding Document

For

"Design, Supply, Construction, Testing and Commissioning of Motipur and Sandikharka 132/33/11 kV, Substation."

International Competitive Bidding (ICB)

(Single Stage, Two Envelope Bidding Procedure)

IFB No: BPTSG-074/75-02

Employer: Nepal Electricity Authority

Burtibang Paudi-Amarai Tamghas Sandhikharka Gorushinge 132kv Transmission Line Project

VOLUME III OF III

Date: 2017

Abbreviations

BD ..... Bidding Document

BDF……... Bidding Forms

BDS..... Bid Data Sheet

BOQ …….. Bill of Quantities

COF …….. Contract Forms

DP ……. Development Partners

DoLIDAR ……. Department of Local Infrastructure Development and Agricultural Roads

ELI ……. Eligibility

EQC ..... Evaluation and Qualification Criteria

EXP …… Experience

FIN ……. Financial

GCC ..... General Conditions of Contract

GoN ..... Government of Nepal

ICB ..... International Competitive Bidding

ICC..... International Chamber of Commerce

ITB ..... Instructions to Bidders

JV …….. Joint Venture

LIT …….. Litigation

NCB ……... National Competitive Bidding

NEA……... Nepal Electricity Authority

PAN …… Permanent Account Number

PPA …….. Public Procurement Act

PPMO …… Public Procurement Monitoring Office

PPR ……... Public Procurement Regulations

PL ..... Profit and Loss

SBD..... Standard Bidding Document

SCC …….. Special Conditions of Contract

TS..... Technical Specifications

VAT …… Value Added Tax

WRQ …….. Works Requirements

BIDDING DOCUMENT

PRICE BID

PROCUREMENT OF WORKS
International Competitive Bidding (ICB)
Single Stage two Envelope Bidding

"Design, Supply, Construction, Testing and Commissioning of Motipur and Sandikharka 132/33/11 kV, Substation. Substation."

Issued on:

Bid Document issued to:

Contract Identification No: BPTSG-074/75-02

Project Name : *Burtibang Paudi-Amarai Tamghas Sandhikharka Gorushinge 132kV Transmission Line Project*

Office Name : *Nepal Electricity Authority*

Office Address: *Kharipati, Bhaktapur, Nepal*

Financing Agency: Government of Nepal (GoN), Nepal

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Letter of Price Bid

The Bidder must accomplish the Letter of Price Bid in its letterhead clearly showing the Bidder's complete name and address.

Date: .....
Name of the contract: .....
Invitation for Bid No.: .....

To:
……
…....
We, the undersigned, declare that:

(a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) Clause 8;
(b) We offer to execute in conformity with the Bidding Documents the following Works:

(c) The total price of our Bid, excluding any discounts offered in item (d) below is:

(d) The discounts offered and the methodology for their application are:

(e) Our bid shall be valid for a period of ***[insert validity period as specified in ITB 18.1]*** days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(f) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document;

(g) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;

(h) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;

(i) We agree to permit the Employer/DP or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the Employer; and

(j) If awarded the contract, the person named below shall act as our Representative:

Name: .....
In the capacity of .....
Signed ……...
Duly authorized to sign the Bid for and on behalf of ……
Date ……....

Table of Price Adjustment Data

(Not Applicable)

[To be used if Price Adjustment is applicable as per GCC 13.8]

Code	Index Description	Source of Index*	Base Value and Date	Employer's Proposed Weighting Range (coefficient)	Bidder's Proposed Weighting (coefficient)**
1	2	3	4	5	6
	Non - adjustable (A)			0.15	0.15
	Labor (b)				
	Materials (c)				
	Equipment usage (d)				
		Total			**1.00**

*Normally following source of index shall apply. Public Entity shall choose applicable Index for each item.

(a) Labor: "National Salary and Wage Rate Index"- "Construction Labor" of Nepal Rastra Bank
or
rate fixed by District Rate Fixation Committee

(b) Material:"National Wholesale Price Index" - Construction Materials" of Nepal Rastra Bank

(c) Equipment usage:
"National Wholesale Price Index" - "Transport Vehicles and Machinery Goods" of Nepal Rastra Bank
or

"Fuel" Price fixed by Nepal Oil Corporation.

** Bidders proposed weightings should be within the range specified by the Employer in column - 5

Section 6:- Preamble of Bill of Quantities

Notes on the Bill of Quantities for Unit Rate Contracts
General

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General and Particular Conditions of Contract, Technical Specifications, and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices bid in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract
3. For any item for which measurement is based on records made before or during construction the records shall be prepared and agreed between the Engineer and the Contractor. Should the Contractor carry out such work without the prior agreement of the Engineer, the Engineer may request the Contractor to carry out investigations to confirm the extent of the work and the quantity of work certified for payment shall be solely at the Engineer's discretion. The cost of any such investigation shall be borne by the Contractor.
4. The rates and prices bid in the priced Bill of Quantities shall, except as otherwise provided under the Contract, include all construction equipment, labor, supervision, materials, erection, maintenance, insurance, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.
5. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
6. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
7. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.
8. Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with the Conditions of Contract.
9. The method of measurement of completed work for payment shall be in accordance with **[Insert the name of a standard reference guide, or specification to be used]**.
10. Arithmetic errors will be corrected by the Employer as follows:
    (a) if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.
    (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
    (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic errors, in which case the amount in figures shall prevail subject to (a) and (b) above.

Bill of Quantities

Nepal Electricity Authority

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHING 132 kV TRANSMISSION LINE PROJECT

Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
SS	***Motipur Substation***					
1	**ELECTRICAL WORKS**					
1.1	**Power Transformer**					
1.1.1	132/33 kV, Three Phase 24/27/30 MVA, ONAN/ONAF Power Transfromer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, complete with all accessories as specified	Set	1			
1.1.2	33/11 kV, Three phase 16 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, delta/star connected complete with all accessories as specified	Set	1			
1.2	**Circuit breakers/Switchgears**					
1.2.1	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (individual pole operation type), complete with all accessories as per specification for incoming lines	Sets	6			
1.2.2	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (three pole operation type), complete with all accessories as per specification for Transformer HT.	Sets	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.2.3	145 kV, 2000 A, 3 phase, SF6 Circuit Breaker, three pole operation type, complete with all accessories as per specification for Bus Coupler	Set	1			
1.2.4	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker for incomer, three pole operation type, complete with all accessories as per specification	Set	1			
1.2.5	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker for outgoing feeders, three pole operation type, complete with all accessories as per specification	Sets	5			
1.3	**Disconnecting Switches**					
1.3.1	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	6			
1.3.2	145 kV, 2000 A, 3 phase, Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	2			
1.3.3	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	20			
1.3.4	36 kV, 1250 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.3.5	36 kV, 800 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	5			
1.3.6	36 kV, 800 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.7	36 kV, 400 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Set	1			
1.4	**Instrument Transformers**					
1.4.1	145 kV, 50 VA, 132/√3 /110/√3 kV, Class 0.5/3P Capacitor Voltage Transformer complete with all accessories as per specification	Nos.	24			
1.4.2	145 kV, 30 VA, 5 core Current Transformer complete with all accessories as per specification	Nos.	21			
1.4.3	145 kV, 30 VA, 4 core Current Transformer complete with all accessories as per specification	Nos.	3			
1.4.4	36 kV, 30 VA, 33/√3/110/√3 kV Voltage Transformer complete with all accessories asp per specification	Nos.	3			
1.4.5	36 kV, 30 VA, 2 core Current Transformer complete with all accessories as per specification	Nos.	18			
1.5	**Lightening Arrestor**					

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.5.1	120 kV, 10 kA Lightening Arrestor including Discharge Counter complete with all accessories as per specification	Nos.	21			
1.5.2	30 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	18			
1.5.3	9 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	9			
1.6	**Control and relay panel**					
1.6.1	132 kV Transmission Line Control and Relay Panel complete with all accessories as per specification	Sets	6			
1.6.2	132/33 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.3	132 kV Bus Coupler Panel with Bus bar Protection Facilities	set	1			
1.6.4	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.5	33 kV Protection Control and Relay Panel complete with all accessories as per specification for Line Bays	Set	4			
1.7	**Grounding**					

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.7.1	Galvanized E.H.S. Steel wires of size 7/3.35 for Lightening Shield Wire in take off and internal structures, with accessories to complete the specified scope of works	lot	1			
1.7.2	Earthing of substation with conductors, electrode grounding materials and accessories to complete the specified scope of works	Lot	1			
1.8	**11 KV VCB Switchgear Panel with all accessories as per specified**					
1.8.1	11 kV Line Transformer incomer module (1250A) (IP-2) with all accessories as per specification	No.	1			
1.8.2	11 kV Line Module/LT Transformer (800A) (IP-1) with all accessories as per specification	Nos.	3			
1.8.3	11 kV PT module (IP-3) with all accessories as per specification	No.	1			
1.9	**Control and Power Cables**					
1.9.1	600 V power and lighting cable for all works to complete the specified scope of work	Lot	1			
1.9.2	600 V control cable to complete the specified scope of works	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.9.3	36 kV, 630 sq. mm 3 x single core XLPE Copper Power Cable including Termination and Accessories complete from LV sides of 132/33 kV Power Transformers to proposed 33 kV Switchyard Bays as per Drawings	m	200			
1.9.4	12 kV, 400 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	m	150			
1.9.5	12 kV, 185 sq.mm 3 core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 3 nos. of Outgoing Distribution Feeders as specified.	m	450			
1.10	**Miscellaneous material**					
1.10.1	145 kV Insulator Strings with necessary hardwares, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Gantry structure, complete as per the specified scope of works	Lot	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.2	36 kV Insulator Strings with necessary hardware, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Strucutre, complete as per the specified scope of works	Lot	1			
1.10.3	ACSR "BEAR" Conductors and Accessories to complete the specified scope of works including for Line Tower to Take Off and Internal Structure (including stringing of conductor between tower to gantry for 132kV & 33 kV .)	Lot	1			
1.10.4	132 kV Tubular Bus (Outer Dia 100 mm and thickness 10 mm) and Bus Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.5	145 kV Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.6	33 kV Tubular Bus (Dia 75 mm, thickness 8 mm) and Bus Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.7	33 kV Power Fuse with Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.8	11 kV Overhead Distribution Line with all Accessories complete from Substation to Outdoor existing lines including breakdown of existing line to separate feeder lines	Km	2.25			
1.10.9	Switchyard Lighting (including lighting for internal road)	Lot	1			
1.11	**Station Supply**					
1.11.1	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star with Current Limiting Fuse (DO Fuse) connected complete with all accessories as specified	Set	1			
1.11.2	400V AC distribution board panel	Lot	1			
1.12	**Battery / Battery Charger**					
1.12.1	110 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.2	48 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.3	Battery Charger for 110 V battery complete with all accessories	Set	1			
1.12.4	Battery Charger for 48 V battery complete with all accessories	Set	1			
1.12.5	110 V DC Distribution Board complete with all accessories	Set	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.12.6	48 V DC Distribution Board complete with all accessories	Set	1			
1.13	**Fire Detection & Alarm System**					
1.13.1	50 litre foam type, Portable/Trolley/Wheel mounted fire extinguishers	Nos.	2			
1.13.2	4.5 kg CO2 type, Fire Extinguisher	Nos.	10			
1.13.3	22.5 kg Dry Chemical Power (DCP) type, Trolley/Wheel mounted fire extinguishers	Nos.	3			
1.13.4	Smoke detection system in Control Room Building	set	1			
1.13.5	Fire detection and Alarm System in Control Room Building	set	1			
	Total of Electrical of Motipur S/S					
2	**SUBSTATION AUTOMATION/ COMMUNICATION / SCADA (Based on IEC 61850)**					
2.1	**SUBSTATION AUTOMATION**					
a.	Complete Substation automation system including hardware and software for the substation & remote control stations alongwith associated equipments for the followings as per Technical Specification.					
i.	132 kV System	Bays	6			
ii.	33kV system	Nos.	4			
iii.	11kV HT indoor switchgear	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
b.	Integration of all 132/33/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	Lot	1			
	Sub Total of 2.1					
2.2	**COMMUNICATION / SCADA**					
i	Digital Protection Coupler	Nos.	10			
ii	Communication Panel including allied equipment such as SDH Equipment (STM - 1 upgradable to STM-4 ADM, upto three directions) , Ethernet tributaries card (min. 4 port), Termination Equipment (Drop/Insert Multiplexer, Subscriber Line Interface Cards, Equipment Cabinets complete in all respects as per technical specifications & Drawings	Lot	1			
iii	Optical Distribution Frame complete in all respects as per technical specifications	Lot	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
iv	Optical Approach Cable -24 pair Fibre (DWSM - G.652D) along with Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable complete in all respects as per technical specifications	Lot	1			
	Sub Total of 2.2					
	Total of Communication of Motipur S/S					
3	**CIVIL AND ARCHITECTURAL WORKS**					
3.1	**Steel structure for post, beam and equipment supporting frame complete with bolts, nuts and all accessories**					
3.1.1	Rail Structure for 132/33 kV Power Transformer including access from Internal Road	Lot	1			
3.1.2	Rail Structure for 33/11 kV Power Transformer including access from Internal Road	Lot	1			
3.1.3	132 kV Take Off Gantry structure as per drawing	Bays	6			
3.1.4	132 kV SF6 Circuit Breaker	Sets	8			
3.1.5	132 kV Disconnecting Switch with Earth Switch	Sets	6			
3.1.6	132 kV Disconnecting Switch without Earth switch	Set	22			
3.1.7	132 kV Capacitive Voltage Transformer	No.	18			
3.1.8	132 kV Current Transformer	No.	24			
3.1.9	120 kV Lightening Arrestor	No.	21			
3.1.10	132 kV Bus Post Insulator/CVT	No.	54			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.11	132 kV Support Insulator	No.	16			
3.1.12	33 kV Vaccum Circuit Breaker	Sets	6			
3.1.13	33 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.14	33 kV Disconnecting Switch without Earth Switch	Sets	7			
3.1.15	33 kV Current Transformer	Nos.	18			
3.1.16	33 kV Voltage Transformer	Nos.	3			
3.1.17	30 kV Lightening Arrestor	Nos.	18			
3.1.18	33 kV Bus Support Insulator	Lot	1			
3.1.19	33 kV Power Fuse Support Insulator	Lot	1			
3.1.20	Earth mast	Lot	1			
3.1.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.1.22	Switchyard Fence as per Specificaitons (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.1.23	Identification plate, danger notice etc	Lot	1			
	Sub Total of Civil and Arichitectural Works of Motipur Substation					
4	**SPARE PARTS**					
4.1	**For 132/33 kV Transformer**					
4.1.1	132 kV and 33 kV Bushing(one of each type)	Set	1			
4.1.2	Dial type Thermometers (WTI & OTI)	Set	1			
4.1.3	Oil Level Gauges	Set	1			
4.1.4	Insulating Oil (10% of total supply)	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.1.5	Indicating Lamps (25% of used)	Lot	1			
4.1.6	All types of Fuses (25% of used)	Lot	1			
4.1.7	Complete set of Gaskets of each type	Set	1			
4.1.8	Complete set of Pressure Relief Devices	Set	1			
4.1.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.1.10	OLTC Motor Contactor	Set	2			
4.1.11	Complete set of Buchholz relay	Set	1			
4.1.12	OLTC Motor	Set	2			
4.2	**For 33/11 kV Transformer**					
4.2.1	33 kV and 11 kV Bushing(one of each type)	Set	1			
4.2.2	Dial type Thermometers	Set	1			
4.2.3	Oil Level Gauges	Set	1			
4.2.4	Insulating Oil (10% of total supply)	Lot	1			
4.2.5	Indicating Lamps (25% of used)	Lot	1			
4.2.6	All types of Fuses (25% of used)	Lot	1			
4.2.7	Complete set of Gaskets of each type	Set	1			
4.2.8	Complete set of Pressure Relief Devices	Set	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.2.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.2.10	OLTC Motor Contactor	Set	1			
4.2.11	Complete set of Buchholz relay	Set	1			
4.2.12	OLTC motor	Set	1			
4.3	**For 145kV SF6 Circuit Breaker**					
4.3.1	Complete set (one chamber) of interrupter	Sets	3			
4.3.2	Tripping Coils	Nos.	6			
4.3.3	Closing Coils	Nos.	6			
4.3.4	Pressure Switch, Relays and Contactors (one of each type)	Sets	2			
4.3.5	Motors for mechanism of each type	Nos.	2			
4.3.6	Gas filling equipment complete with accessories	Set	1			
4.3.7	Complete set(one chamber) of Sealing rings and Gaskets	Sets	2			
4.4	**For 36kV Vaccum Circuit Breaker**					
4.4.1	Tripping Coils	Nos.	4			
4.4.2	Closing Coils	Nos.	4			
4.4.3	Relays and Contactors (One of each type)	Sets	2			
4.4.4	Motors for Mechanism of each type	Set	1			
4.4.5	Interrupter for VCB	No.	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.5	**For 12kV VCB Switchgears**					
4.5.1	11 kV Vaccum Interrupter	Nos.	2			
4.5.2	Tripping Coils	Nos.	4			
4.5.3	Closing Coils	Nos.	4			
4.5.4	Spring Charging Motor	Set	2			
4.5.5	3 Phase Overcurrent Relay with ground fault for 11kV Side	Sets	1			
4.5.6	Ammeter	Nos.	1			
4.5.7	Voltmeter	Nos.	1			
4.5.8	kVA Meter	Nos.	1			
4.5.9	11 kV CTs as in Outgoing Feeder	Sets	1			
4.5.10	Operating Handle	Sets	1			
4.5.11	Indicating Lamps (100% of used)	Set	1			
4.6	**For 145kV Disconnecting Switches**					
4.6.1	Procelain Insulator	Nos.	4			
4.6.2	Main Contact Assemblies(one assembly)	Set	4			
4.6.3	Auxiliary Contacts	Sets	2			
4.6.4	Interlocking Coil	Nos.	2			
4.7	**For 36kV Disconnecting Switches**					
4.7.1	Procelain Insulator	Nos.	4			
4.7.2	Main Contact Assemblies(one assembly)	Sets	3			
4.7.3	Auxiliary Contacts	Sets	2			
4.7.4	Interlocking Coil	Nos.	2			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.8	**Instrument Transformers of used type**					
4.8.1	145 kV Current Transformer	Nos.	2			
4.8.2	145 kV Capacitive Voltage Transformer	Nos.	2			
4.8.3	36 kV Current Transformer	Nos.	2			
4.8.4	36 kV Potential Transformer	Nos.	2			
4.9	**Lightening Arrestor**					
4.9.1	120 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.9.2	30 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.10	**For 132/33 kV Control and Relay Panel**					
4.10.1	Indicating Lamps(50% of used)	Lot	1			
4.10.2	Fuses of each type(50% of used)	Lot	1			
4.10.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.10.4	One of each type of Switch, Timer and other special devices	Set	1			
4.10.5	3 Phase Overcurrent Relays with Earthfault Inbuilt	Set	1			
4.10.6	3 Phase Transformer Differential Relays	Set	1			
4.10.7	Each type of Auxiliary Relay	Set	1			
4.10.8	Ammeter	No.	2			
4.10.9	Voltmeter	No.	2			
4.11	**132 kV Control and Protection Panel**					

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.11.1	Indicating Lamps(50% of used)	Lot	1			
4.11.2	Fuses of each type(50% of used)	Lot	1			
4.11.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.11.4	One of each type of Switch, Timer and other special devices	Set	1			
4.11.5	Distance Relay for Line Protection	No.	1			
4.11.6	One of each type of Over current and earth fault relays	Lot	1			
4.11.7	Carrier Auxiliary Relay	No.	1			
4.11.8	Synchro Check Relay	No.	1			
4.11.9	Trip-Circuit Supervision Relay	No.	1			
4.11.10	Ammeter	Nos.	2			
4.11.11	Voltmeter	Nos.	2			
4.12	**For 33/11 kV Transformer Control and Relay Panel**					
4.12.1	Indicating Lamps (50% of used)	Lot	1			
4.12.2	Fuses of each type(50% of used)	Lot	1			
4.12.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.12.4	One of each type of Switch, Timer and other special devices	Set	1			
4.12.5	3 Phase Over Current Relays with Earthfault Inbuilt	Set	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.12.6	3 Phase Transformer Differential Relays	Set	1			
4.12.7	Each type of Auxiliary Relay	Set	1			
4.12.8	Ammeter	No.	2			
4.12.9	Voltmeter	No.	2			
4.13	**Communication/SCADA**					
4.13.1	Digital Protection Coupler	No.	1			
4.13.2	SDH and transmission equipments	No.	1			
4.14	**110 V Battery Charger**					
4.14.1	Fuses of each type(50% of used)	Lot	1			
4.14.2	Indicating Lamp (50% of used)	Lot	1			
4.14.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.14.4	Ammeter	No.	1			
4.14.5	Voltmeter	No.	1			
4.15	**48V Battery Charger**					
4.15.1	Fuses of each type(50% of used)	Lot	1			
4.15.2	Indicating Lamp (50% of used)	Lot	1			
4.15.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.15.4	Ammeter	No.	1			
4.15.5	Voltmeter	No.	1			
	Sub Total of Spare Parts					
	Total of Motipur Substation					

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
SS	***Sandhikharka Substation***					
1	**ELECTRICAL WORKS**					
1.1	**Power Transformer**					
1.1.1	132/33 kV, Three Phase 24/27/30 MVA, ONAN/ONAF Power Transfromer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, complete with all accessories as specified	Set	1			
1.1.2	33/11 kV, Three phase 16 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, delta/star connected complete with all accessories as specified	Set	1			
1.2	**Circuit breakers/Switchgears**					
1.2.1	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (individual pole operation type), complete with all accessories as per specification for incoming lines	Sets	4			
1.2.2	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (three pole operation type), complete with all accessories as per specification for Transformer HT.	Sets	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.2.3	145 kV, 2000 A, 3 phase, SF6 Circuit Breaker, three pole operation type, complete with all accessories as per specification for Bus Coupler	Set	1			
1.2.4	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker for incomer, three pole operation type, complete with all accessories as per specification	Set	1			
1.2.5	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker for outgoing feeders, three pole operation type, complete with all accessories as per specification	Sets	5			
1.3	**Disconnecting Switches**					
1.3.1	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.2	145 kV, 2000 A, 3 phase, Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	2			
1.3.3	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	14			
1.3.4	36 kV, 1250 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.3.5	36 kV, 800 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	5			
1.3.6	36 kV, 800 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.7	36 kV, 400 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Set	1			
1.4	**Instrument Transformers**					
1.4.1	145 kV, 50 VA, 132/√3 /110/√3 kV, Class 0.5/3P Capacitor Voltage Transformer complete with all accessories as per specification	Nos.	18			
1.4.2	145 kV, 30 VA, 5 core Current Transformer complete with all accessories as per specification	Nos.	15			
1.4.3	145 kV, 30 VA, 4 core Current Transformer complete with all accessories as per specification	Nos.	3			
1.4.4	36 kV, 30 VA, 33/√3/110/√3 kV Voltage Transformer complete with all accessories asp per specification	Nos.	3			
1.4.5	36 kV, 30 VA, 2 core Current Transformer complete with all accessories as per specification	Nos.	18			
1.5	**Lightening Arrestor**					

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.5.1	120 kV, 10 kA Lightening Arrestor including Discharge Counter complete with all accessories as per specification	Nos.	15			
1.5.2	30 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	18			
1.5.3	9 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	9			
1.6	**Control and relay panel**					
1.6.1	132 kV Transmission Line Control and Relay Panel complete with all accessories as per specification	Sets	4			
1.6.2	132/33 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.3	132 kV Bus Coupler Panel with Bus bar Protection Facilities	set	1			
1.6.4	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.5	33 kV Protection Control and Relay Panel complete with all accessories as per specification for Line Bays	Set	4			
1.7	**Grounding**					

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.7.1	Galvanized E.H.S. Steel wires of size 7/3.35 for Lightening Shield Wire in take off and internal structures, with accessories to complete the specified scope of works	lot	1			
1.7.2	Earthing of substation with conductors, electrode grounding materials and accessories to complete the specified scope of works	Lot	1			
1.8	**11 KV VCB Switchgear Panel with all accessories as per specified**					
1.8.1	11 kV Line Transformer incomer module (1250A) (IP-2) with all accessories as per specification	No.	1			
1.8.2	11 kV Line Module/LT Transformer (800A) (IP-1) with all accessories as per specification	Nos.	3			
1.8.3	11 kV PT module (IP-3) with all accessories as per specification	No.	1			
1.9	**Control and Power Cables**					
1.9.1	600 V power and lighting cable for all works to complete the specified scope of work	Lot	1			
1.9.2	600 V control cable to complete the specified scope of works	Lot	1			
1.9.3	36 kV, 630 sq. mm 3 x single core XLPE Copper Power Cable including Termination and Accessories complete from LV sides of 132/33 kV Power Transformers to proposed 33 kV Switchyard Bays as per Drawings	m	200			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.9.4	12 kV, 400 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	m	150			
1.9.5	12 kV, 185 sq.mm 3 core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 3 nos. of Outgoing Distribution Feeders as specified.	m	450			
1.10	**Miscellaneous material**					
1.10.1	145 kV Insulator Strings with necessary hardwares, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Gantry structure, complete as per the specified scope of works	Lot	1			
1.10.2	36 kV Insulator Strings with necessary hardware, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Strucutre, complete as per the specified scope of works	Lot	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.3	ACSR "BEAR" Conductors and Accessories to complete the specified scope of works including for Line Tower to Take Off and Internal Structure (including stringing of conductor between tower to gantry for 132kV & 33 kV .)	Lot	1			
1.10.4	132 kV Tubular Bus (Outer Dia 100 mm and thickness 10 mm) and Bus Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.5	145 kV Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.6	33 kV Tubular Bus (Dia 75 mm, thickness 8 mm) and Bus Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.7	33 kV Power Fuse with Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.8	11 kV Overhead Distribution Line with all Accessories complete from Substation to Outdoor existing lines including breakdown of existing line to separate feeder lines	Km	2.25			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.9	Switchyard Lighting (including lighting for internal road)	Lot	1			
1.11	**Station Supply**					
1.11.1	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star with Current Limiting Fuse (DO Fuse) connected complete with all accessories as specified	Set	1			
1.11.2	400V AC distribution board panel	Lot	1			
1.12	**Battery / Battery Charger**					
1.12.1	110 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.2	48 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.3	Battery Charger for 110 V battery complete with all accessories	Set	1			
1.12.4	Battery Charger for 48 V battery complete with all accessories	Set	1			
1.12.5	110 V DC Distribution Board complete with all accessories	Set	1			
1.12.6	48 V DC Distribution Board complete with all accessories	Set	1			
1.13	**Fire Detection & Alarm System**					

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.13.1	50 litre foam type, Portable/Trolley/Wheel mounted fire extinguishers	Nos.	2			
1.13.2	4.5 kg CO2 type, Fire Extinguisher	Nos.	10			
1.13.3	22.5 kg Dry Chemical Power (DCP) type, Trolley/Wheel mounted fire extinguishers	Nos.	3			
1.13.4	Smoke detection system in Control Room Building	set	1			
1.13.5	Fire detection and Alarm System in Control Room Building	set	1			
	Total of Electrical of Sandhikharka S/S					
2	**SUBSTATION AUTOMATION/ COMMUNICATION / SCADA (Based on IEC 61850)**					
2.1	**SUBSTATION AUTOMATION**					
a.	Complete Substation automation system including hardware and software for the substation & remote control stations alongwith associated equipments for the followings as per Technical Specification.					
i.	132 kV System	Bays	4			
ii.	33kV system	Nos.	4			
iii.	11kV HT indoor switchgear	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
b.	Integration of all 132/33/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	Lot	1			
	Sub Total of 2.1					
2.2	**COMMUNICATION / SCADA**					
i	Digital Protection Coupler	Nos.	4			
ii	Communication Panel including allied equipment such as SDH Equipment (STM - 1 upgradable to STM-4 ADM, upto two directions) , Ethernet tributaries card (min. 4 port), Termination Equipment (Drop/Insert Multiplexer, Subscriber Line Interface Cards, Equipment Cabinets complete in all respects as per technical specifications.	Lot	1			
iii	Optical Distribution Frame complete in all respects as per technical specifications	Lot	1			
iv	Optical Approach Cable -24 pair Fibre (DWSM - G.652D) along with Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable complete in all respects as per technical specifications	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
	Sub Total of 2.2					
	Total of Communication of sandhikharka S/S					
3	**CIVIL AND ARCHITECTURAL WORKS**					
3.1	**Steel structure for post, beam and equipment supporting frame complete with bolts, nuts and all accessories**					
3.1.1	Rail Structure for 132/33 kV Power Transformer including access from Internal Road	Lot	1			
3.1.2	Rail Structure for 33/11 kV Power Transformer including access from Internal Road	Lot	1			
3.1.3	132 kV Take Off Gantry structure as per drawing	Bays	4			
3.1.4	132 kV SF6 Circuit Breaker	Sets	6			
3.1.5	132 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.6	132 kV Disconnecting Switch without Earth switch	Set	16			
3.1.7	132 kV Capacitive Voltage Transformer	No.	12			
3.1.8	132 kV Current Transformer	No.	18			
3.1.9	120 kV Lightening Arrestor	No.	15			
3.1.10	132 kV Bus Post Insulator/CVT	No.	42			
3.1.11	132 kV Support Insulator	No.	12			
3.1.12	33 kV Vaccum Circuit Breaker	Sets	6			
3.1.13	33 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.14	33 kV Disconnecting Switch without Earth Switch	Sets	7			
3.1.15	33 kV Current Transformer	Nos.	18			

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHING 132 kV TRANSMISSION LINE PROJECT

Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.16	33 kV Voltage Transformer	Nos.	3			
3.1.17	30 kV Lightening Arrestor	Nos.	18			
3.1.18	33 kV Bus Support Insulator	Lot	1			
3.1.19	33 kV Power Fuse Support Insulator	Lot	1			
3.1.20	Earth mast	Lot	1			
3.1.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.1.22	Switchyard Fence as per Specificaitons (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.1.23	Identification plate, danger notice etc	Lot	1			
	Sub Total of Civil and Arichitectural Works of sandhikharka Substation					
4	**SPARE PARTS**					
4.1	**For 132/33 kV Transformer**					
4.1.1	132 kV and 33 kV Bushing(one of each type)	Set	1			
4.1.2	Dial type Thermometers (WTI & OTI)	Set	1			
4.1.3	Oil Level Gauges	Set	1			
4.1.4	Insulating Oil (10% of total supply)	Lot	1			
4.1.5	Indicating Lamps (25% of used)	Lot	1			
4.1.6	All types of Fuses (25% of used)	Lot	1			
4.1.7	Complete set of Gaskets of each type	Set	1			
4.1.8	Complete set of Pressure Relief Devices	Set	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.1.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.1.10	OLTC Motor Contactor	Set	2			
4.1.11	Complete set of Buchholz relay	Set	1			
4.1.12	OLTC Motor	Set	2			
4.2	**For 33/11 kV Transformer**					
4.2.1	33 kV and 11 kV Bushing(one of each type)	Set	1			
4.2.2	Dial type Thermometers	Set	1			
4.2.3	Oil Level Gauges	Set	1			
4.2.4	Insulating Oil (10% of total supply)	Lot	1			
4.2.5	Indicating Lamps (25% of used)	Lot	1			
4.2.6	All types of Fuses (25% of used)	Lot	1			
4.2.7	Complete set of Gaskets of each type	Set	1			
4.2.8	Complete set of Pressure Relief Devices	Set	1			
4.2.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.2.10	OLTC Motor Contactor	Set	1			
4.2.11	Complete set of Buchholz relay	Set	1			
4.2.12	OLTC motor	Set	1			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.3	**For 145kV SF6 Circuit Breaker**					
4.3.1	Complete set (one chamber) of interrupter	Sets	3			
4.3.2	Tripping Coils	Nos.	6			
4.3.3	Closing Coils	Nos.	6			
4.3.4	Pressure Switch, Relays and Contactors (one of each type)	Sets	2			
4.3.5	Motors for mechanism of each type	Nos.	2			
4.3.6	Gas filling equipment complete with accessories	Set	1			
4.3.7	Complete set(one chamber) of Sealing rings and Gaskets	Sets	2			
4.4	**For 36kV Vaccum Circuit Breaker**					
4.4.1	Tripping Coils	Nos.	4			
4.4.2	Closing Coils	Nos.	4			
4.4.3	Relays and Contactors (One of each type)	Sets	2			
4.4.4	Motors for Mechanism of each type	Set	1			
4.4.5	Interrupter for VCB	No.	1			
4.5	**For 12kV VCB Switchgears**					
4.5.1	11 kV Vaccum Interrupter	Nos.	2			
4.5.2	Tripping Coils	Nos.	4			
4.5.3	Closing Coils	Nos.	4			
4.5.4	Spring Charging Motor	Set	2			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.5.5	3 Phase Overcurrent Relay with ground fault for 11kV Side	Sets	1			
4.5.6	Ammeter	Nos.	1			
4.5.7	Voltmeter	Nos.	1			
4.5.8	kVA Meter	Nos.	1			
4.5.9	11 kV CTs as in Outgoing Feeder	Sets	1			
4.5.10	Operating Handle	Sets	1			
4.5.11	Indicating Lamps (100% of used)	Set	1			
4.5.12	**For 145kV Disconnecting Switches**					
4.6.1	Procelain Insulator	Nos.	4			
4.6.2	Main Contact Assemblies(one assembly)	Set	4			
4.6.3	Auxiliary Contacts	Sets	2			
4.6.4	Interlocking Coil	Nos.	2			
4.7	**For 36kV Disconnecting Switches**					
4.7.1	Procelain Insulator	Nos.	4			
4.7.2	Main Contact Assemblies(one assembly)	Sets	3			
4.7.3	Auxiliary Contacts	Sets	2			
4.7.4	Interlocking Coil	Nos.	2			
4.8	**Instrument Transformers of used type**					
4.8.1	145 kV Current Transformer	Nos.	2			
4.8.2	145 kV Capacitive Voltage Transformer	Nos.	2			
4.8.3	36 kV Current Transformer	Nos.	2			
4.8.4	36 kV Potential Transformer	Nos.	2			

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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.9	**Lightening Arrestor**					
4.9.1	120 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.9.2	30 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.9.3	9 kV Single phase Lightening Arrestor (Pedestal-type)	Nos.	2			
4.10	**For 132/33 kV Control and Relay Panel**					
4.10.1	Indicating Lamps(50% of used)	Lot	1			
4.10.2	Fuses of each type(50% of used)	Lot	1			
4.10.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.10.4	One of each type of Switch, Timer and other special devices	Set	1			
4.10.5	3 Phase Overcurrent Relays with Earthfault Inbuilt	Set	1			
4.10.6	3 Phase Transformer Differential Relays	Set	1			
4.10.7	Each type of Auxiliary Relay	Set	1			
4.10.8	Ammeter	No.	2			
4.10.9	Voltmeter	No.	2			
4.11	**132 kV Control and Protection Panel**					
4.11.1	Indicating Lamps(50% of used)	Lot	1			
4.11.2	Fuses of each type(50% of used)	Lot	1			

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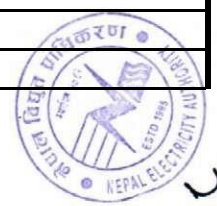
Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.11.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.11.4	One of each type of Switch, Timer and other special devices	Set	1			
4.11.5	Distance Relay for Line Protection	No.	1			
4.11.6	One of each type of Over current and earth fault relays	Lot	1			
4.11.7	Carrier Auxiliary Relay	No.	1			
4.11.8	Synchro Check Relay	No.	1			
4.11.9	Trip-Circuit Supervision Relay	No.	1			
4.11.10	Ammeter	Nos.	2			
4.11.11	Voltmeter	Nos.	2			
4.12	**For 33/11 kV Transformer Control and Relay Panel**					
4.12.1	Indicating Lamps (50% of used)	Lot	1			
4.12.2	Fuses of each type(50% of used)	Lot	1			
4.12.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.12.4	One of each type of Switch, Timer and other special devices	Set	1			
4.12.5	3 Phase Over Current Relays with Earthfault Inbuilt	Set	1			
4.12.6	3 Phase Transformer Differential Relays	Set	1			
4.12.7	Each type of Auxiliary Relay	Set	1			



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Price Schedule 1: Supply and Delivery of Plant and Equipment Foreign Origin

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		CIP-Nepal Border (Excluding Taxes & Duties) F/C (USD/INR)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.12.8	Ammeter	No.	2			
4.12.9	Voltmeter	No.	2			
4.13	**Communication/SCADA**					
4.13.1	Digital Protection Coupler	Lot	1			
4.13.2	SDH and transmission equipments	Lot	1			
4.14	**110 V Battery Charger**					
4.14.1	Fuses of each type(50% of used)	Lot	1			
4.14.2	Indicating Lamp (50% of used)	Lot	1			
4.14.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.14.4	Ammeter	No.	1			
4.14.5	Voltmeter	No.	1			
4.15	**48V Battery Charger**					
4.15.1	Fuses of each type(50% of used)	Lot	1			
4.15.2	Indicating Lamp (50% of used)	Lot	1			
4.15.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.15.4	Ammeter	No.	1			
4.15.5	Voltmeter	No.	1			
	Sub Total of Spare Parts					
	Total of Sandhikharka Substation					
Total of Motipur & Sandhikharka Substation						

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
SS	***Motipur Substation***					
1	**ELECTRICAL WORKS**					
1.1	**Power Transformer**					
1.1.1	132/33 kV, Three Phase 24/27/30 MVA, ONAN/ONAF Power Transfromer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, complete with all accessories as specified	Set	1			
1.1.2	33/11 kV, Three phase 16 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, delta/star connected complete with all accessories as specified	Set	1			
1.2	**Circuit breakers/Switchgears**					
1.2.1	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (individual pole operation type), complete with all accessories as per specification for incoming lines	Sets	6			
1.2.2	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (three pole operation type), complete with all accessories as per specification for Transformer HT.	Sets	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.2.3	145 kV, 2000 A, 3 phase, SF6 Circuit Breaker, three pole operation type, complete with all accessories as per specification for Bus Coupler	Set	1			
1.2.4	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker for incomer, three pole operation type, complete with all accessories as per specification	Set	1			
1.2.5	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker for outgoing feeders, three pole operation type, complete with all accessories as per specification	Sets	5			
1.3	**Disconnecting Switches**					
1.3.1	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	6			
1.3.2	145 kV, 2000 A, 3 phase, Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	2			
1.3.3	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	20			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.3.4	36 kV, 1250 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	1			
1.3.5	36 kV, 800 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	5			
1.3.6	36 kV, 800 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.7	36 kV, 400 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Set	1			
1.4	**Instrument Transformers**					
1.4.1	145 kV, 50 VA, 132/√3 /110/√3 kV, Class 0.5/3P Capacitor Voltage Transformer complete with all accessories as per specification	Nos.	24			
1.4.2	145 kV, 30 VA, 5 core Current Transformer complete with all accessories as per specification	Nos.	21			
1.4.3	145 kV, 30 VA, 4 core Current Transformer complete with all accessories as per specification	Nos.	3			
1.4.4	36 kV, 30 VA, 33/√3/110/√3 kV Voltage Transformer complete with all accessories asp per specification	Nos.	3			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.4.5	36 kV, 30 VA, 2 core Current Transformer complete with all accessories as per specification	Nos.	18			
1.5	**Lightening Arrestor**					
1.5.1	120 kV, 10 kA Lightening Arrestor including Discharge Counter complete with all accessories as per specification	Nos.	21			
1.5.2	30 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	18			
1.5.3	9 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	9			
1.6	**Control and relay panel**					
1.6.1	132 kV Transmission Line Control and Relay Panel complete with all accessories as per specification	Sets	6			
1.6.2	132/33 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.3	132 kV Bus Coupler Panel with Bus bar Protection Facilities	set	1			
1.6.4	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.6.5	33 kV Protection Control and Relay Panel complete with all accessories as per specification for Line Bays	Set	4			
1.7	**Grounding**					
1.7.1	Galvanized E.H.S. Steel wires of size 7/3.35 for Lightening Shield Wire in take off and internal structures, with accessories to complete the specified scope of works	lot	1			
1.7.2	Earthing of substation with conductors, electrode grounding materials and accessories to complete the specified scope of works	Lot	1			
1.8	**11 KV VCB Switchgear Panel with all accessories as per specified**					
1.8.1	11 kV Line Transformer incomer module (1250A) (IP-2) with all accessories as per specification	No.	1			
1.8.2	11 kV Line Module/LT Transformer (800A) (IP-1) with all accessories as per specification	Nos.	3			
1.8.3	11 kV PT module (IP-3) with all accessories as per specification	No.	1			
1.9	**Control and Power Cables**					
1.9.1	600 V power and lighting cable for all works to complete the specified scope of work	Lot	1			
1.9.2	600 V control cable to complete the specified scope of works	Lot	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.9.3	36 kV, 630 sq. mm 3 x single core XLPE Copper Power Cable including Termination and Accessories complete from LV sides of 132/33 kV Power Transformers to proposed 33 kV Switchyard Bays as per Drawings	m	200			
1.9.4	12 kV, 400 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	m	150			
1.9.5	12 kV, 185 sq.mm 3 core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 3 nos. of Outgoing Distribution Feeders as specified.	m	450			
1.10	**Miscellaneous material**					
1.10.1	145 kV Insulator Strings with necessary hardwares, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Gantry structure, complete as per the specified scope of works	Lot	1			
1.10.2	36 kV Insulator Strings with necessary hardware, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Strucutre, complete as per the specified scope of works	Lot	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.3	ACSR "BEAR" Conductors and Accessories to complete the specified scope of works including for Line Tower to Take Off and Internal Structure (including stringing of conductor between tower to gantry for 132kV & 33 kV .)	Lot	1			
1.10.4	132 kV Tubular Bus (Outer Dia 100 mm and thickness 10 mm) and Bus Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.5	145 kV Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.6	33 kV Tubular Bus (Dia 75 mm, thickness 8 mm) and Bus Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.7	33 kV Power Fuse with Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.8	11 kV Overhead Distribution Line with all Accessories complete from Substation to Outdoor existing lines including breakdown of existing line to separate feeder lines	Km	2.25			
1.10.9	Switchyard Lighting (including lighting for internal road)	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.11	**Station Supply**					
1.11.1	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star with Current Limiting Fuse (DO Fuse) connected complete with all accessories as specified	Set	1			
1.11.2	400V AC distribution board panel	Lot	1			
1.12	**Battery / Battery Charger**					
1.12.1	110 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.2	48 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.3	Battery Charger for 110 V battery complete with all accessories	Set	1			
1.12.4	Battery Charger for 48 V battery complete with all accessories	Set	1			
1.12.5	110 V DC Distribution Board complete with all accessories	Set	1			
1.12.6	48 V DC Distribution Board complete with all accessories	Set	1			
1.13	**Fire Detection & Alarm System**					
1.13.1	50 litre foam type, Portable/Trolley/Wheel mounted fire extinguishers	Nos.	2			
1.13.2	4.5 kg CO2 type, Fire Extinguisher	Nos.	10			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.13.3	22.5 kg Dry Chemical Power (DCP) type, Trolley/Wheel mounted fire extinguishers	Nos.	3			
1.13.4	Smoke detection system in Control Room Building	set	1			
1.13.5	Fire detection and Alarm System in Control Room Building	set	1			
	Total of Electrical of Motipur S/S					
2	**SUBSTATION AUTOMATION/ COMMUNICATION / SCADA (Based on IEC 61850)**					
2.1	**SUBSTATION AUTOMATION**					
a.	Complete Substation automation system including hardware and software for the substation & remote control stations alongwith associated equipments for the followings as per Technical Specification.					
i.	132 kV System	Bays	6			
ii.	33kV system	Nos.	4			
iii.	11kV HT indoor switchgear	Lot	1			
b.	Integration of all 132/33/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	Lot	1			
	Sub Total of 2.1					

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
2.2	**COMMUNICATION / SCADA**					
i	Digital Protection Coupler	Nos.	10			
ii	Communication Panel including allied equipment such as SDH Equipment (STM - 1 upgradable to STM-4 ADM, upto three directions) , Ethernet tributaries card (min. 4 port), Termination Equipment (Drop/Insert Multiplexer, Subscriber Line Interface Cards, Equipment Cabinets complete in all respects as per technical specifications & Drawings	Lot	1			
iii	Optical Distribution Frame complete in all respects as per technical specifications	Lot	1			
iv	Optical Approach Cable -24 pair Fibre (DWSM - G.652D) along with Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable complete in all respects as per technical specifications	Lot	1			
	Sub Total of 2.2					
	Total of Communication of Motipur S/S					
3	**CIVIL AND ARCHITECTURAL WORKS**					
3.1	**Steel structure for post, beam and equipment supporting frame complete with bolts, nuts and all accessories**					

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.1	Rail Structure for 132/33 kV Power Transformer including access from Internal Road	Lot	1			
3.1.2	Rail Structure for 33/11 kV Power Transformer including access from Internal Road	Lot	1			
3.1.3	132 kV Take Off Gantry structure as per drawing	Bays	6			
3.1.4	132 kV SF6 Circuit Breaker	Sets	8			
3.1.5	132 kV Disconnecting Switch with Earth Switch	Sets	6			
3.1.6	132 kV Disconnecting Switch without Earth switch	Set	22			
3.1.7	132 kV Capacitive Voltage Transformer	No.	18			
3.1.8	132 kV Current Transformer	No.	24			
3.1.9	120 kV Lightening Arrestor	No.	21			
3.1.10	132 kV Bus Post Insulator/CVT	No.	54			
3.1.11	132 kV Support Insulator	No.	16			
3.1.12	33 kV Vaccum Circuit Breaker	Sets	6			
3.1.13	33 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.14	33 kV Disconnecting Switch without Earth Switch	Sets	7			
3.1.15	33 kV Current Transformer	Nos.	18			
3.1.16	33 kV Voltage Transformer	Nos.	3			
3.1.17	30 kV Lightening Arrestor	Nos.	18			
3.1.18	33 kV Bus Support Insulator	Lot	1			
3.1.19	33 kV Power Fuse Support Insulator	Lot	1			
3.1.20	Earth mast	Lot	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.1.22	Switchyard Fence as per Specificaitons (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.1.23	Identification plate, danger notice etc	Lot	1			
	Sub Total of Civil and Arichitectural Works of Motipur Substation					
4	**SPARE PARTS**					
4.1	**For 132/33 kV Transformer**					
4.1.1	132 kV and 33 kV Bushing(one of each type)	Set	1			
4.1.2	Dial type Thermometers (WTI & OTI)	Set	1			
4.1.3	Oil Level Gauges	Set	1			
4.1.4	Insulating Oil (10% of total supply)	Lot	1			
4.1.5	Indicating Lamps (25% of used)	Lot	1			
4.1.6	All types of Fuses (25% of used)	Lot	1			
4.1.7	Complete set of Gaskets of each type	Set	1			
4.1.8	Complete set of Pressure Relief Devices	Set	1			
4.1.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.1.10	OLTC Motor Contactor	Set	2			
4.1.11	Complete set of Buchholz relay	Set	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.1.12	OLTC Motor	Set	2			
4.2	**For 33/11 kV Transformer**					
4.2.1	33 kV and 11 kV Bushing(one of each type)	Set	1			
4.2.2	Dial type Thermometers	Set	1			
4.2.3	Oil Level Gauges	Set	1			
4.2.4	Insulating Oil (10% of total supply)	Lot	1			
4.2.5	Indicating Lamps (25% of used)	Lot	1			
4.2.6	All types of Fuses (25% of used)	Lot	1			
4.2.7	Complete set of Gaskets of each type	Set	1			
4.2.8	Complete set of Pressure Relief Devices	Set	1			
4.2.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.2.10	OLTC Motor Contactor	Set	1			
4.2.11	Complete set of Buchholz relay	Set	1			
4.2.12	OLTC motor	Set	1			
4.3	**For 145kV SF6 Circuit Breaker**					
4.3.1	Complete set (one chamber) of interrupter	Sets	3			
4.3.2	Tripping Coils	Nos.	6			
4.3.3	Closing Coils	Nos.	6			
4.3.4	Pressure Switch, Relays and Contactors (one of each type)	Sets	2			
4.3.5	Motors for mechanism of each type	Nos.	2			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.3.6	Gas filling equipment complete with accessories	Set	1			
4.3.7	Complete set(one chamber) of Sealing rings and Gaskets	Sets	2			
4.4	**For 36kV Vaccum Circuit Breaker**					
4.4.1	Tripping Coils	Nos.	4			
4.4.2	Closing Coils	Nos.	4			
4.4.3	Relays and Contactors (One of each type)	Sets	2			
4.4.4	Motors for Mechanism of each type	Set	1			
4.4.5	Interrupter for VCB	No.	1			
4.5	**For 12kV VCB Switchgears**					
4.5.1	11 kV Vaccum Interrupter	Nos.	2			
4.5.2	Tripping Coils	Nos.	4			
4.5.3	Closing Coils	Nos.	4			
4.5.4	Spring Charging Motor	Set	2			
4.5.5	3 Phase Overcurrent Relay with ground fault for 11kV Side	Sets	1			
4.5.6	Ammeter	Nos.	1			
4.5.7	Voltmeter	Nos.	1			
4.5.8	kVA Meter	Nos.	1			
4.5.9	11 kV CTs as in Outgoing Feeder	Sets	1			
4.5.10	Operating Handle	Sets	1			
4.5.11	Indicating Lamps (100% of used)	Set	1			
4.6	**For 145kV Disconnecting Switches**					

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.6.1	Procelain Insulator	Nos.	4			
4.6.2	Main Contact Assemblies(one assembly)	Set	4			
4.6.3	Auxiliary Contacts	Sets	2			
4.6.4	Interlocking Coil	Nos.	2			
4.7	**For 36kV Disconnecting Switches**					
4.7.1	Procelain Insulator	Nos.	4			
4.7.2	Main Contact Assemblies(one assembly)	Sets	3			
4.7.3	Auxiliary Contacts	Sets	2			
4.7.4	Interlocking Coil	Nos.	2			
4.8	**Instrument Transformers of used type**					
4.8.1	145 kV Current Transformer	Nos.	2			
4.8.2	145 kV Capacitive Voltage Transformer	Nos.	2			
4.8.3	36 kV Current Transformer	Nos.	2			
4.8.4	36 kV Potential Transformer	Nos.	2			
4.9	**Lightening Arrestor**					
4.9.1	120 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.9.2	30 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.10	**For 132/33 kV Control and Relay Panel**					
4.10.1	Indicating Lamps(50% of used)	Lot	1			
4.10.2	Fuses of each type(50% of used)	Lot	1			
4.10.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.10.4	One of each type of Switch, Timer and other special devices	Set	1			
4.10.5	3 Phase Overcurrent Relays with Earthfault Inbuilt	Set	1			
4.10.6	3 Phase Transformer Differential Relays	Set	1			
4.10.7	Each type of Auxiliary Relay	Set	1			
4.10.8	Ammeter	No.	2			
4.10.9	Voltmeter	No.	2			
4.11	**132 kV Control and Protection Panel**					
4.11.1	Indicating Lamps(50% of used)	Lot	1			
4.11.2	Fuses of each type(50% of used)	Lot	1			
4.11.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.11.4	One of each type of Switch, Timer and other special devices	Set	1			
4.11.5	Distance Relay for Line Protection	No.	1			
4.11.6	One of each type of Over current and earth fault relays	Lot	1			
4.11.7	Carrier Auxiliary Relay	No.	1			
4.11.8	Synchro Check Relay	No.	1			
4.11.9	Trip-Circuit Supervision Relay	No.	1			
4.11.10	Ammeter	Nos.	2			
4.11.11	Voltmeter	Nos.	2			
4.12	**For 33/11 kV Transformer Control and Relay Panel**					

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.12.1	Indicating Lamps (50% of used)	Lot	1			
4.12.2	Fuses of each type(50% of used)	Lot	1			
4.12.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.12.4	One of each type of Switch, Timer and other special devices	Set	1			
4.12.5	3 Phase Over Current Relays with Earthfault Inbuilt	Set	1			
4.12.6	3 Phase Transformer Differential Relays	Set	1			
4.12.7	Each type of Auxiliary Relay	Set	1			
4.12.8	Ammeter	No.	2			
4.12.9	Voltmeter	No.	2			
4.13	**Communication/SCADA**					
4.13.1	Digital Protection Coupler	No.	1			
4.13.2	SDH and transmission equipments	No.	1			
4.14	**110 V Battery Charger**					
4.14.1	Fuses of each type(50% of used)	Lot	1			
4.14.2	Indicating Lamp (50% of used)	Lot	1			
4.14.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.14.4	Ammeter	No.	1			
4.14.5	Voltmeter	No.	1			
4.15	**48V Battery Charger**					
4.15.1	Fuses of each type(50% of used)	Lot	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.15.2	Indicating Lamp (50% of used)	Lot	1			
4.15.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.15.4	Ammeter	No.	1			
4.15.5	Voltmeter	No.	1			
	Sub Total of Spare Parts					
	Total of Motipur Substation					
SS	***Sandhikharka Substation***					
1	**ELECTRICAL WORKS**					
1.1	**Power Transformer**					
1.1.1	132/33 kV, Three Phase 24/27/30 MVA, ONAN/ONAF Power Transfromer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, complete with all accessories as specified	Set	1			
1.1.2	33/11 kV, Three phase 16 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, delta/star connected complete with all accessories as specified	Set	1			
1.2	**Circuit breakers/Switchgears**					

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.2.1	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (individual pole operation type), complete with all accessories as per specification for incoming lines	Sets	4			
1.2.2	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (three pole operation type), complete with all accessories as per specification for Transformer HT.	Sets	1			
1.2.3	145 kV, 2000 A, 3 phase, SF6 Circuit Breaker, three pole operation type, complete with all accessories as per specification for Bus Coupler	Set	1			
1.2.4	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker for incomer, three pole operation type, complete with all accessories as per specification	Set	1			
1.2.5	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker for outgoing feeders, three pole operation type, complete with all accessories as per specification	Sets	5			
1.3	**Disconnecting Switches**					
1.3.1	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.3.2	145 kV, 2000 A, 3 phase, Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	2			
1.3.3	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	14			
1.3.4	36 kV, 1250 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	1			
1.3.5	36 kV, 800 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	5			
1.3.6	36 kV, 800 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.7	36 kV, 400 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Set	1			
1.4	**Instrument Transformers**					
1.4.1	145 kV, 50 VA, 132/√3 /110/√3 kV, Class 0.5/3P Capacitor Voltage Transformer complete with all accessories as per specification	Nos.	18			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.4.2	145 kV, 30 VA, 5 core Current Transformer complete with all accessories as per specification	Nos.	15			
1.4.3	145 kV, 30 VA, 4 core Current Transformer complete with all accessories as per specification	Nos.	3			
1.4.4	36 kV, 30 VA, 33/√3/110/√3 kV Voltage Transformer complete with all accessories asp per specification	Nos.	3			
1.4.5	36 kV, 30 VA, 2 core Current Transformer complete with all accessories as per specification	Nos.	18			
1.5	**Lightening Arrestor**					
1.5.1	120 kV, 10 kA Lightening Arrestor including Discharge Counter complete with all accessories as per specification	Nos.	15			
1.5.2	30 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	18			
1.5.3	9 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	9			
1.6	**Control and relay panel**					
1.6.1	132 kV Transmission Line Control and Relay Panel complete with all accessories as per specification	Sets	4			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.6.2	132/33 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.3	132 kV Bus Coupler Panel with Bus bar Protection Facilities	set	1			
1.6.4	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.5	33 kV Protection Control and Relay Panel complete with all accessories as per specification for Line Bays	Set	4			
1.7	**Grounding**					
1.7.1	Galvanized E.H.S. Steel wires of size 7/3.35 for Lightening Shield Wire in take off and internal structures, with accessories to complete the specified scope of works	lot	1			
1.7.2	Earthing of substation with conductors, electrode grounding materials and accessories to complete the specified scope of works	Lot	1			
1.8	**11 KV VCB Switchgear Panel with all accessories as per specified**					
1.8.1	11 kV Line Transformer incomer module (1250A) (IP-2) with all accessories as per specification	No.	1			
1.8.2	11 kV Line Module/LT Transformer (800A) (IP-1) with all accessories as per specification	Nos.	3			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.8.3	11 kV PT module (IP-3) with all accessories as per specification	No.	1			
1.9	**Control and Power Cables**					
1.9.1	600 V power and lighting cable for all works to complete the specified scope of work	Lot	1			
1.9.2	600 V control cable to complete the specified scope of works	Lot	1			
1.9.3	36 kV, 630 sq. mm 3 x single core XLPE Copper Power Cable including Termination and Accessories complete from LV sides of 132/33 kV Power Transformers to proposed 33 kV Switchyard Bays as per Drawings	m	200			
1.9.4	12 kV, 400 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	m	150			
1.9.5	12 kV, 185 sq.mm 3 core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 3 nos. of Outgoing Distribution Feeders as specified.	m	450			
1.10	**Miscellaneous material**					

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.1	145 kV Insulator Strings with necessary hardwares, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Gantry structure, complete as per the specified scope of works	Lot	1			
1.10.2	36 kV Insulator Strings with necessary hardware, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Strucutre, complete as per the specified scope of works	Lot	1			
1.10.3	ACSR "BEAR" Conductors and Accessories to complete the specified scope of works including for Line Tower to Take Off and Internal Structure (including stringing of conductor between tower to gantry for 132kV & 33 kV .)	Lot	1			
1.10.4	132 kV Tubular Bus (Outer Dia 100 mm and thickness 10 mm) and Bus Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.5	145 kV Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.6	33 kV Tubular Bus (Dia 75 mm, thickness 8 mm) and Bus Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.7	33 kV Power Fuse with Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.8	11 kV Overhead Distribution Line with all Accessories complete from Substation to Outdoor existing lines including breakdown of existing line to separate feeder lines	Km	2.25			
1.10.9	Switchyard Lighting (including lighting for internal road)	Lot	1			
1.11	**Station Supply**					
1.11.1	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star with Current Limiting Fuse (DO Fuse) connected complete with all accessories as specified	Set	1			
1.11.2	400V AC distribution board panel	Lot	1			
1.12	**Battery / Battery Charger**					
1.12.1	110 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.2	48 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.12.3	Battery Charger for 110 V battery complete with all accessories	Set	1			
1.12.4	Battery Charger for 48 V battery complete with all accessories	Set	1			
1.12.5	110 V DC Distribution Board complete with all accessories	Set	1			
1.12.6	48 V DC Distribution Board complete with all accessories	Set	1			
1.13	**Fire Detection & Alarm System**					
1.13.1	50 litre foam type, Portable/Trolley/Wheel mounted fire extinguishers	Nos.	2			
1.13.2	4.5 kg CO2 type, Fire Extinguisher	Nos.	10			
1.13.3	22.5 kg Dry Chemical Power (DCP) type, Trolley/Wheel mounted fire extinguishers	Nos.	3			
1.13.4	Smoke detection system in Control Room Building	set	1			
1.13.5	Fire detection and Alarm System in Control Room Building	set	1			
	Total of Electrical of Sandhikharka S/S					
2	**SUBSTATION AUTOMATION/ COMMUNICATION / SCADA (Based on IEC 61850)**					
2.1	**SUBSTATION AUTOMATION**					

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHING 132 kV TRANSMISSION LINE PROJECT

Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
a.	Complete Substation automation system including hardware and software for the substation & remote control stations alongwith associated equipments for the followings as per Technical Specification.					
i.	132 kV System	Bays	4			
ii.	33kV system	Nos.	4			
iii.	11kV HT indoor switchgear	Lot	1			
b.	Integration of all 132/33/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	Lot	1			
	Sub Total of 2.1					
2.2	**COMMUNICATION / SCADA**					
i	Digital Protection Coupler	Nos.	4			
ii	Communication Panel including allied equipment such as SDH Equipment (STM - 1 upgradable to STM-4 ADM, upto two directions) , Ethernet tributaries card (min. 4 port), Termination Equipment (Drop/Insert Multiplexer, Subscriber Line Interface Cards, Equipment Cabinets complete in all respects as per technical specifications.	Lot	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
iii	Optical Distribution Frame complete in all respects as per technical specifications	Lot	1			
iv	Optical Approach Cable -24 pair Fibre (DWSM - G.652D) along with Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable complete in all respects as per technical specifications	Lot	1			
	Sub Total of 2.2					
	Total of Communication of sandhikharka S/S					
3	**CIVIL AND ARCHITECTURAL WORKS**					
3.1	**Steel structure for post, beam and equipment supporting frame complete with bolts, nuts and all accessories**					
3.1.1	Rail Structure for 132/33 kV Power Transformer including access from Internal Road	Lot	1			
3.1.2	Rail Structure for 33/11 kV Power Transformer including access from Internal Road	Lot	1			
3.1.3	132 kV Take Off Gantry structure as per drawing	Bays	4			
3.1.4	132 kV SF6 Circuit Breaker	Sets	6			
3.1.5	132 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.6	132 kV Disconnecting Switch without Earth switch	Set	16			
3.1.7	132 kV Capacitive Voltage Transformer	No.	12			
3.1.8	132 kV Current Transformer	No.	18			
3.1.9	120 kV Lightening Arrestor	No.	15			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.10	132 kV Bus Post Insulator/CVT	No.	42			
3.1.11	132 kV Support Insulator	No.	12			
3.1.12	33 kV Vaccum Circuit Breaker	Sets	6			
3.1.13	33 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.14	33 kV Disconnecting Switch without Earth Switch	Sets	7			
3.1.15	33 kV Current Transformer	Nos.	18			
3.1.16	33 kV Voltage Transformer	Nos.	3			
3.1.17	30 kV Lightening Arrestor	Nos.	18			
3.1.18	33 kV Bus Support Insulator	Lot	1			
3.1.19	33 kV Power Fuse Support Insulator	Lot	1			
3.1.20	Earth mast	Lot	1			
3.1.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.1.22	Switchyard Fence as per Specificaitons (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.1.23	Identification plate, danger notice etc	Lot	1			
	Sub Total of Civil and Arichitectural Works of sandhikharka Substation					
4	**SPARE PARTS**					
4.1	**For 132/33 kV Transformer**					
4.1.1	132 kV and 33 kV Bushing(one of each type)	Set	1			
4.1.2	Dial type Thermometers (WTI & OTI)	Set	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.1.3	Oil Level Gauges	Set	1			
4.1.4	Insulating Oil (10% of total supply)	Lot	1			
4.1.5	Indicating Lamps (25% of used)	Lot	1			
4.1.6	All types of Fuses (25% of used)	Lot	1			
4.1.7	Complete set of Gaskets of each type	Set	1			
4.1.8	Complete set of Pressure Relief Devices	Set	1			
4.1.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.1.10	OLTC Motor Contactor	Set	2			
4.1.11	Complete set of Buchholz relay	Set	1			
4.1.12	OLTC Motor	Set	2			
4.2	**For 33/11 kV Transformer**					
4.2.1	33 kV and 11 kV Bushing(one of each type)	Set	1			
4.2.2	Dial type Thermometers	Set	1			
4.2.3	Oil Level Gauges	Set	1			
4.2.4	Insulating Oil (10% of total supply)	Lot	1			
4.2.5	Indicating Lamps (25% of used)	Lot	1			
4.2.6	All types of Fuses (25% of used)	Lot	1			
4.2.7	Complete set of Gaskets of each type	Set	1			
4.2.8	Complete set of Pressure Relief Devices	Set	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.2.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.2.10	OLTC Motor Contactor	Set	1			
4.2.11	Complete set of Buchholz relay	Set	1			
4.2.12	OLTC motor	Set	1			
4.3	**For 145kV SF6 Circuit Breaker**					
4.3.1	Complete set (one chamber) of interrupter	Sets	3			
4.3.2	Tripping Coils	Nos.	6			
4.3.3	Closing Coils	Nos.	6			
4.3.4	Pressure Switch, Relays and Contactors (one of each type)	Sets	2			
4.3.5	Motors for mechanism of each type	Nos.	2			
4.3.6	Gas filling equipment complete with accessories	Set	1			
4.3.7	Complete set(one chamber) of Sealing rings and Gaskets	Sets	2			
4.4	**For 36kV Vaccum Circuit Breaker**					
4.4.1	Tripping Coils	Nos.	4			
4.4.2	Closing Coils	Nos.	4			
4.4.3	Relays and Contactors (One of each type)	Sets	2			
4.4.4	Motors for Mechanism of each type	Set	1			
4.4.5	Interrupter for VCB	No.	1			
4.5	**For 12kV VCB Switchgears**					

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.5.1	11 kV Vaccum Interrupter	Nos.	2			
4.5.2	Tripping Coils	Nos.	4			
4.5.3	Closing Coils	Nos.	4			
4.5.4	Spring Charging Motor	Set	2			
4.5.5	3 Phase Overcurrent Relay with ground fault for 11kV Side	Sets	1			
4.5.6	Ammeter	Nos.	1			
4.5.7	Voltmeter	Nos.	1			
4.5.8	kVA Meter	Nos.	1			
4.5.9	11 kV CTs as in Outgoing Feeder	Sets	1			
4.5.10	Operating Handle	Sets	1			
4.5.11	Indicating Lamps (100% of used)	Set	1			
4.5.12	**For 145kV Disconnecting Switches**					
4.6.1	Procelain Insulator	Nos.	4			
4.6.2	Main Contact Assemblies(one assembly)	Set	4			
4.6.3	Auxiliary Contacts	Sets	2			
4.6.4	Interlocking Coil	Nos.	2			
4.7	**For 36kV Disconnecting Switches**					
4.7.1	Procelain Insulator	Nos.	4			
4.7.2	Main Contact Assemblies(one assembly)	Sets	3			
4.7.3	Auxiliary Contacts	Sets	2			
4.7.4	Interlocking Coil	Nos.	2			
4.8	**Instrument Transformers of used type**					
4.8.1	145 kV Current Transformer	Nos.	2			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.8.2	145 kV Capacitive Voltage Transformer	Nos.	2			
4.8.3	36 kV Current Transformer	Nos.	2			
4.8.4	36 kV Potential Transformer	Nos.	2			
4.9	**Lightening Arrestor**					
4.9.1	120 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.9.2	30 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.9.3	9 kV Single phase Lightening Arrestor (Pedestal-type)	Nos.	2			
4.10	**For 132/33 kV Control and Relay Panel**					
4.10.1	Indicating Lamps(50% of used)	Lot	1			
4.10.2	Fuses of each type(50% of used)	Lot	1			
4.10.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.10.4	One of each type of Switch, Timer and other special devices	Set	1			
4.10.5	3 Phase Overcurrent Relays with Earthfault Inbuilt	Set	1			
4.10.6	3 Phase Transformer Differential Relays	Set	1			
4.10.7	Each type of Auxiliary Relay	Set	1			
4.10.8	Ammeter	No.	2			
4.10.9	Voltmeter	No.	2			
4.11	**132 kV Control and Protection Panel**					
4.11.1	Indicating Lamps(50% of used)	Lot	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.11.2	Fuses of each type(50% of used)	Lot	1			
4.11.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.11.4	One of each type of Switch, Timer and other special devices	Set	1			
4.11.5	Distance Relay for Line Protection	No.	1			
4.11.6	One of each type of Over current and earth fault relays	Lot	1			
4.11.7	Carrier Auxiliary Relay	No.	1			
4.11.8	Synchro Check Relay	No.	1			
4.11.9	Trip-Circuit Supervision Relay	No.	1			
4.11.10	Ammeter	Nos.	2			
4.11.11	Voltmeter	Nos.	2			
4.12	**For 33/11 kV Transformer Control and Relay Panel**					
4.12.1	Indicating Lamps (50% of used)	Lot	1			
4.12.2	Fuses of each type(50% of used)	Lot	1			
4.12.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.12.4	One of each type of Switch, Timer and other special devices	Set	1			
4.12.5	3 Phase Over Current Relays with Earthfault Inbuilt	Set	1			
4.12.6	3 Phase Transformer Differential Relays	Set	1			
4.12.7	Each type of Auxiliary Relay	Set	1			

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Price Schedule 2: Supply and Delivery of Plant and Equipment from within the employer's country

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.12.8	Ammeter	No.	2			
4.12.9	Voltmeter	No.	2			
4.13	**Communication/SCADA**					
4.13.1	Digital Protection Coupler	Lot	1			
4.13.2	SDH and transmission equipments	Lot	1			
4.14	**110 V Battery Charger**					
4.14.1	Fuses of each type(50% of used)	Lot	1			
4.14.2	Indicating Lamp (50% of used)	Lot	1			
4.14.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.14.4	Ammeter	No.	1			
4.14.5	Voltmeter	No.	1			
4.15	**48V Battery Charger**					
4.15.1	Fuses of each type(50% of used)	Lot	1			
4.15.2	Indicating Lamp (50% of used)	Lot	1			
4.15.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.15.4	Ammeter	No.	1			
4.15.5	Voltmeter	No.	1			
	Sub Total of Spare Parts					
	Total of Sandhikharka Substation					
Total of Motipur & Sandhikharka Substation						

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHING 132 kV TRANSMISSION LINE PROJECT

Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
SS	***Motipur Substation***					
1	**ELECTRICAL WORKS**					
1.1	**Power Transformer**					
1.1.1	132/33 kV, Three Phase 24/27/30 MVA, ONAN/ONAF Power Transfromer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, complete with all accessories as specified	Set	1			
1.1.2	33/11 kV, Three phase 16 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, delta/star connected complete with all accessories as specified	Set	1			
1.2	**Circuit breakers/Switchgears**					
1.2.1	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (individual pole operation type), complete with all accessories as per specification for incoming lines	Sets	6			
1.2.2	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (three pole operation type), complete with all accessories as per specification for Transformer HT.	Sets	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.2.3	145 kV, 2000 A, 3 phase, SF6 Circuit Breaker, three pole operation type, complete with all accessories as per specification for Bus Coupler	Set	1			
1.2.4	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker for incomer, three pole operation type, complete with all accessories as per specification	Set	1			
1.2.5	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker for outgoing feeders, three pole operation type, complete with all accessories as per specification	Sets	5			
1.3	**Disconnecting Switches**					
1.3.1	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	6			
1.3.2	145 kV, 2000 A, 3 phase, Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	2			
1.3.3	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	20			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.3.4	36 kV, 1250 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	1			
1.3.5	36 kV, 800 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	5			
1.3.6	36 kV, 800 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.7	36 kV, 400 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Set	1			
1.4	**Instrument Transformers**					
1.4.1	145 kV, 50 VA, 132/√3 /110/√3 kV, Class 0.5/3P Capacitor Voltage Transformer complete with all accessories as per specification	Nos.	24			
1.4.2	145 kV, 30 VA, 5 core Current Transformer complete with all accessories as per specification	Nos.	21			
1.4.3	145 kV, 30 VA, 4 core Current Transformer complete with all accessories as per specification	Nos.	3			
1.4.4	36 kV, 30 VA, 33/√3/110/√3 kV Voltage Transformer complete with all accessories asp per specification	Nos.	3			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.4.5	36 kV, 30 VA, 2 core Current Transformer complete with all accessories as per specification	Nos.	18			
1.5	**Lightening Arrestor**					
1.5.1	120 kV, 10 kA Lightening Arrestor including Discharge Counter complete with all accessories as per specification	Nos.	21			
1.5.2	30 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	18			
1.5.3	9 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	9			
1.6	**Control and relay panel**					
1.6.1	132 kV Transmission Line Control and Relay Panel complete with all accessories as per specification	Sets	6			
1.6.2	132/33 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.3	132 kV Bus Coupler Panel with Bus bar Protection Facilities	set	1			
1.6.4	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.6.5	33 kV Protection Control and Relay Panel complete with all accessories as per specification for Line Bays	Set	4			
1.7	**Grounding**					
1.7.1	Galvanized E.H.S. Steel wires of size 7/3.35 for Lightening Shield Wire in take off and internal structures, with accessories to complete the specified scope of works	lot	1			
1.7.2	Earthing of substation with conductors, electrode grounding materials and accessories to complete the specified scope of works	Lot	1			
1.8	**11 KV VCB Switchgear Panel with all accessories as per specified**					
1.8.1	11 kV Line Transformer incomer module (1250A) (IP-2) with all accessories as per specification	No.	1			
1.8.2	11 kV Line Module/LT Transformer (800A) (IP-1) with all accessories as per specification	Nos.	3			
1.8.3	11 kV PT module (IP-3) with all accessories as per specification	No.	1			
1.9	**Control and Power Cables**					
1.9.1	600 V power and lighting cable for all works to complete the specified scope of work	Lot	1			
1.9.2	600 V control cable to complete the specified scope of works	Lot	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.9.3	36 kV, 630 sq. mm 3 x single core XLPE Copper Power Cable including Termination and Accessories complete from LV sides of 132/33 kV Power Transformers to proposed 33 kV Switchyard Bays as per Drawings	m	200			
1.9.4	12 kV, 400 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	m	150			
1.9.5	12 kV, 185 sq.mm 3 core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 3 nos. of Outgoing Distribution Feeders as specified.	m	450			
1.10	**Miscellaneous material**					
1.10.1	145 kV Insulator Strings with necessary hardwares, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Gantry structure, complete as per the specified scope of works	Lot	1			
1.10.2	36 kV Insulator Strings with necessary hardware, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Strucutre, complete as per the specified scope of works	Lot	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.3	ACSR "BEAR" Conductors and Accessories to complete the specified scope of works including for Line Tower to Take Off and Internal Structure (including stringing of conductor between tower to gantry for 132kV & 33 kV .)	Lot	1			
1.10.4	132 kV Tubular Bus (Outer Dia 100 mm and thickness 10 mm) and Bus Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.5	145 kV Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.6	33 kV Tubular Bus (Dia 75 mm, thickness 8 mm) and Bus Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.7	33 kV Power Fuse with Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.8	11 kV Overhead Distribution Line with all Accessories complete from Substation to Outdoor existing lines including breakdown of existing line to separate feeder lines	Km	2.25			
1.10.9	Switchyard Lighting (including lighting for internal road)	Lot	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.11	**Station Supply**					
1.11.1	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star with Current Limiting Fuse (DO Fuse) connected complete with all accessories as specified	Set	1			
1.11.2	400V AC distribution board panel	Lot	1			
1.12	**Battery / Battery Charger**					
1.12.1	110 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.2	48 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.3	Battery Charger for 110 V battery complete with all accessories	Set	1			
1.12.4	Battery Charger for 48 V battery complete with all accessories	Set	1			
1.12.5	110 V DC Distribution Board complete with all accessories	Set	1			
1.12.6	48 V DC Distribution Board complete with all accessories	Set	1			
1.13	**Fire Detection & Alarm System**					
1.13.1	50 litre foam type, Portable/Trolley/Wheel mounted fire extinguishers	Nos.	2			
1.13.2	4.5 kg CO2 type, Fire Extinguisher	Nos.	10			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.13.3	22.5 kg Dry Chemical Power (DCP) type, Trolley/Wheel mounted fire extinguishers	Nos.	3			
1.13.4	Smoke detection system in Control Room Building	set	1			
1.13.5	Fire detection and Alarm System in Control Room Building	set	1			
	Total of Electrical of Motipur S/S					
2	**SUBSTATION AUTOMATION/ COMMUNICATION / SCADA (Based on IEC 61850)**					
2.1	**SUBSTATION AUTOMATION**					
a.	Complete Substation automation system including hardware and software for the substation & remote control stations alongwith associated equipments for the followings as per Technical Specification.					
i.	132 kV System	Bays	6			
ii.	33kV system	Nos.	4			
iii.	11kV HT indoor switchgear	Lot	1			
b.	Integration of all 132/33/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	Lot	1			
	Sub Total of 2.1					

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
2.2	**COMMUNICATION / SCADA**					
i	Digital Protection Coupler	Nos.	10			
ii	Communication Panel including allied equipment such as SDH Equipment (STM - 1 upgradable to STM-4 ADM, upto three directions) , Ethernet tributaries card (min. 4 port), Termination Equipment (Drop/Insert Multiplexer, Subscriber Line Interface Cards, Equipment Cabinets complete in all respects as per technical specifications & Drawings	Lot	1			
iii	Optical Distribution Frame complete in all respects as per technical specifications	Lot	1			
iv	Optical Approach Cable -24 pair Fibre (DWSM - G.652D) along with Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable complete in all respects as per technical specifications	Lot	1			
	Sub Total of 2.2					
	Total of Communication of Motipur S/S					
3	**CIVIL AND ARCHITECTURAL WORKS**					
3.1	**Steel structure for post, beam and equipment supporting frame complete with bolts, nuts and all accessories**					

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.1	Rail Structure for 132/33 kV Power Transformer including access from Internal Road	Lot	1			
3.1.2	Rail Structure for 33/11 kV Power Transformer including access from Internal Road	Lot	1			
3.1.3	132 kV Take Off Gantry structure as per drawing	Bays	6			
3.1.4	132 kV SF6 Circuit Breaker	Sets	8			
3.1.5	132 kV Disconnecting Switch with Earth Switch	Sets	6			
3.1.6	132 kV Disconnecting Switch without Earth switch	Set	22			
3.1.7	132 kV Capacitive Voltage Transformer	No.	18			
3.1.8	132 kV Current Transformer	No.	24			
3.1.9	120 kV Lightening Arrestor	No.	21			
3.1.10	132 kV Bus Post Insulator/CVT	No.	54			
3.1.11	132 kV Support Insulator	No.	16			
3.1.12	33 kV Vaccum Circuit Breaker	Sets	6			
3.1.13	33 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.14	33 kV Disconnecting Switch without Earth Switch	Sets	7			
3.1.15	33 kV Current Transformer	Nos.	18			
3.1.16	33 kV Voltage Transformer	Nos.	3			
3.1.17	30 kV Lightening Arrestor	Nos.	18			
3.1.18	33 kV Bus Support Insulator	Lot	1			
3.1.19	33 kV Power Fuse Support Insulator	Lot	1			
3.1.20	Earth mast	Lot	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.1.22	Switchyard Fence as per Specificaitons (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.1.23	Identification plate, danger notice etc	Lot	1			
	Sub Total of Civil and Arichitectural Works of Motipur Substation					
4	**SPARE PARTS**					
4.1	**For 132/33 kV Transformer**					
4.1.1	132 kV and 33 kV Bushing(one of each type)	Set	1			
4.1.2	Dial type Thermometers (WTI & OTI)	Set	1			
4.1.3	Oil Level Gauges	Set	1			
4.1.4	Insulating Oil (10% of total supply)	Lot	1			
4.1.5	Indicating Lamps (25% of used)	Lot	1			
4.1.6	All types of Fuses (25% of used)	Lot	1			
4.1.7	Complete set of Gaskets of each type	Set	1			
4.1.8	Complete set of Pressure Relief Devices	Set	1			
4.1.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.1.10	OLTC Motor Contactor	Set	2			
4.1.11	Complete set of Buchholz relay	Set	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.1.12	OLTC Motor	Set	2			
4.2	**For 33/11 kV Transformer**					
4.2.1	33 kV and 11 kV Bushing(one of each type)	Set	1			
4.2.2	Dial type Thermometers	Set	1			
4.2.3	Oil Level Gauges	Set	1			
4.2.4	Insulating Oil (10% of total supply)	Lot	1			
4.2.5	Indicating Lamps (25% of used)	Lot	1			
4.2.6	All types of Fuses (25% of used)	Lot	1			
4.2.7	Complete set of Gaskets of each type	Set	1			
4.2.8	Complete set of Pressure Relief Devices	Set	1			
4.2.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.2.10	OLTC Motor Contactor	Set	1			
4.2.11	Complete set of Buchholz relay	Set	1			
4.2.12	OLTC motor	Set	1			
4.3	**For 145kV SF6 Circuit Breaker**					
4.3.1	Complete set (one chamber) of interrupter	Sets	3			
4.3.2	Tripping Coils	Nos.	6			
4.3.3	Closing Coils	Nos.	6			
4.3.4	Pressure Switch, Relays and Contactors (one of each type)	Sets	2			
4.3.5	Motors for mechanism of each type	Nos.	2			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.3.6	Gas filling equipment complete with accessories	Set	1			
4.3.7	Complete set(one chamber) of Sealing rings and Gaskets	Sets	2			
4.4	**For 36kV Vaccum Circuit Breaker**					
4.4.1	Tripping Coils	Nos.	4			
4.4.2	Closing Coils	Nos.	4			
4.4.3	Relays and Contactors (One of each type)	Sets	2			
4.4.4	Motors for Mechanism of each type	Set	1			
4.4.5	Interrupter for VCB	No.	1			
4.5	**For 12kV VCB Switchgears**					
4.5.1	11 kV Vaccum Interrupter	Nos.	2			
4.5.2	Tripping Coils	Nos.	4			
4.5.3	Closing Coils	Nos.	4			
4.5.4	Spring Charging Motor	Set	2			
4.5.5	3 Phase Overcurrent Relay with ground fault for 11kV Side	Sets	1			
4.5.6	Ammeter	Nos.	1			
4.5.7	Voltmeter	Nos.	1			
4.5.8	kVA Meter	Nos.	1			
4.5.9	11 kV CTs as in Outgoing Feeder	Sets	1			
4.5.10	Operating Handle	Sets	1			
4.5.11	Indicating Lamps (100% of used)	Set	1			
4.6	**For 145kV Disconnecting Switches**					

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.6.1	Procelain Insulator	Nos.	4			
4.6.2	Main Contact Assemblies(one assembly)	Set	4			
4.6.3	Auxiliary Contacts	Sets	2			
4.6.4	Interlocking Coil	Nos.	2			
4.7	**For 36kV Disconnecting Switches**					
4.7.1	Procelain Insulator	Nos.	4			
4.7.2	Main Contact Assemblies(one assembly)	Sets	3			
4.7.3	Auxiliary Contacts	Sets	2			
4.7.4	Interlocking Coil	Nos.	2			
4.8	**Instrument Transformers of used type**					
4.8.1	145 kV Current Transformer	Nos.	2			
4.8.2	145 kV Capacitive Voltage Transformer	Nos.	2			
4.8.3	36 kV Current Transformer	Nos.	2			
4.8.4	36 kV Potential Transformer	Nos.	2			
4.9	**Lightening Arrestor**					
4.9.1	120 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.9.2	30 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.10	**For 132/33 kV Control and Relay Panel**					
4.10.1	Indicating Lamps(50% of used)	Lot	1			
4.10.2	Fuses of each type(50% of used)	Lot	1			
4.10.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.10.4	One of each type of Switch, Timer and other special devices	Set	1			
4.10.5	3 Phase Overcurrent Relays with Earthfault Inbuilt	Set	1			
4.10.6	3 Phase Transformer Differential Relays	Set	1			
4.10.7	Each type of Auxiliary Relay	Set	1			
4.10.8	Ammeter	No.	2			
4.10.9	Voltmeter	No.	2			
4.11	**132 kV Control and Protection Panel**					
4.11.1	Indicating Lamps(50% of used)	Lot	1			
4.11.2	Fuses of each type(50% of used)	Lot	1			
4.11.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.11.4	One of each type of Switch, Timer and other special devices	Set	1			
4.11.5	Distance Relay for Line Protection	No.	1			
4.11.6	One of each type of Over current and earth fault relays	Lot	1			
4.11.7	Carrier Auxiliary Relay	No.	1			
4.11.8	Synchro Check Relay	No.	1			
4.11.9	Trip-Circuit Supervision Relay	No.	1			
4.11.10	Ammeter	Nos.	2			
4.11.11	Voltmeter	Nos.	2			
4.12	**For 33/11 kV Transformer Control and Relay Panel**					

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.12.1	Indicating Lamps (50% of used)	Lot	1			
4.12.2	Fuses of each type(50% of used)	Lot	1			
4.12.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.12.4	One of each type of Switch, Timer and other special devices	Set	1			
4.12.5	3 Phase Over Current Relays with Earthfault Inbuilt	Set	1			
4.12.6	3 Phase Transformer Differential Relays	Set	1			
4.12.7	Each type of Auxiliary Relay	Set	1			
4.12.8	Ammeter	No.	2			
4.12.9	Voltmeter	No.	2			
4.13	**Communication/SCADA**					
4.13.1	Digital Protection Coupler	No.	1			
4.13.2	SDH and transmission equipments	No.	1			
4.14	**110 V Battery Charger**					
4.14.1	Fuses of each type(50% of used)	Lot	1			
4.14.2	Indicating Lamp (50% of used)	Lot	1			
4.14.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.14.4	Ammeter	No.	1			
4.14.5	Voltmeter	No.	1			
4.15	**48V Battery Charger**					
4.15.1	Fuses of each type(50% of used)	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.15.2	Indicating Lamp (50% of used)	Lot	1			
4.15.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.15.4	Ammeter	No.	1			
4.15.5	Voltmeter	No.	1			
	Sub Total of Spare Parts					
	Total of Motipur Substation					
SS	***Sandhikharka Substation***					
1	**ELECTRICAL WORKS**					
1.1	**Power Transformer**					
1.1.1	132/33 kV, Three Phase 24/27/30 MVA, ONAN/ONAF Power Transfromer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, complete with all accessories as specified	Set	1			
1.1.2	33/11 kV, Three phase 16 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, delta/star connected complete with all accessories as specified	Set	1			
1.2	**Circuit breakers/Switchgears**					

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.2.1	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (individual pole operation type), complete with all accessories as per specification for incoming lines	Sets	4			
1.2.2	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (three pole operation type), complete with all accessories as per specification for Transformer HT.	Sets	1			
1.2.3	145 kV, 2000 A, 3 phase, SF6 Circuit Breaker, three pole operation type, complete with all accessories as per specification for Bus Coupler	Set	1			
1.2.4	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker for incomer, three pole operation type, complete with all accessories as per specification	Set	1			
1.2.5	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker for outgoing feeders, three pole operation type, complete with all accessories as per specification	Sets	5			
1.3	**Disconnecting Switches**					
1.3.1	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.3.2	145 kV, 2000 A, 3 phase, Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	2			
1.3.3	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	14			
1.3.4	36 kV, 1250 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	1			
1.3.5	36 kV, 800 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	5			
1.3.6	36 kV, 800 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.7	36 kV, 400 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Set	1			
1.4	**Instrument Transformers**					
1.4.1	145 kV, 50 VA, 132/√3 /110/√3 kV, Class 0.5/3P Capacitor Voltage Transformer complete with all accessories as per specification	Nos.	18			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.4.2	145 kV, 30 VA, 5 core Current Transformer complete with all accessories as per specification	Nos.	15			
1.4.3	145 kV, 30 VA, 4 core Current Transformer complete with all accessories as per specification	Nos.	3			
1.4.4	36 kV, 30 VA, 33/√3/110/√3 kV Voltage Transformer complete with all accessories asp per specification	Nos.	3			
1.4.5	36 kV, 30 VA, 2 core Current Transformer complete with all accessories as per specification	Nos.	18			
1.5	**Lightening Arrestor**					
1.5.1	120 kV, 10 kA Lightening Arrestor including Discharge Counter complete with all accessories as per specification	Nos.	15			
1.5.2	30 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	18			
1.5.3	9 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	9			
1.6	**Control and relay panel**					
1.6.1	132 kV Transmission Line Control and Relay Panel complete with all accessories as per specification	Sets	4			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.6.2	132/33 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.3	132 kV Bus Coupler Panel with Bus bar Protection Facilities	set	1			
1.6.4	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.5	33 kV Protection Control and Relay Panel complete with all accessories as per specification for Line Bays	Set	4			
1.7	**Grounding**					
1.7.1	Galvanized E.H.S. Steel wires of size 7/3.35 for Lightening Shield Wire in take off and internal structures, with accessories to complete the specified scope of works	lot	1			
1.7.2	Earthing of substation with conductors, electrode grounding materials and accessories to complete the specified scope of works	Lot	1			
1.8	**11 KV VCB Switchgear Panel with all accessories as per specified**					
1.8.1	11 kV Line Transformer incomer module (1250A) (IP-2) with all accessories as per specification	No.	1			
1.8.2	11 kV Line Module/LT Transformer (800A) (IP-1) with all accessories as per specification	Nos.	3			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.8.3	11 kV PT module (IP-3) with all accessories as per specification	No.	1			
1.9	**Control and Power Cables**					
1.9.1	600 V power and lighting cable for all works to complete the specified scope of work	Lot	1			
1.9.2	600 V control cable to complete the specified scope of works	Lot	1			
1.9.3	36 kV, 630 sq. mm 3 x single core XLPE Copper Power Cable including Termination and Accessories complete from LV sides of 132/33 kV Power Transformers to proposed 33 kV Switchyard Bays as per Drawings	m	200			
1.9.4	12 kV, 400 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	m	150			
1.9.5	12 kV, 185 sq.mm 3 core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 3 nos. of Outgoing Distribution Feeders as specified.	m	450			
1.10	**Miscellaneous material**					

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.1	145 kV Insulator Strings with necessary hardwares, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Gantry structure, complete as per the specified scope of works	Lot	1			
1.10.2	36 kV Insulator Strings with necessary hardware, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Strucutre, complete as per the specified scope of works	Lot	1			
1.10.3	ACSR "BEAR" Conductors and Accessories to complete the specified scope of works including for Line Tower to Take Off and Internal Structure (including stringing of conductor between tower to gantry for 132kV & 33 kV .)	Lot	1			
1.10.4	132 kV Tubular Bus (Outer Dia 100 mm and thickness 10 mm) and Bus Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.5	145 kV Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.6	33 kV Tubular Bus (Dia 75 mm, thickness 8 mm) and Bus Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.7	33 kV Power Fuse with Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.8	11 kV Overhead Distribution Line with all Accessories complete from Substation to Outdoor existing lines including breakdown of existing line to separate feeder lines	Km	2.25			
1.10.9	Switchyard Lighting (including lighting for internal road)	Lot	1			
1.11	**Station Supply**					
1.11.1	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star with Current Limiting Fuse (DO Fuse) connected complete with all accessories as specified	Set	1			
1.11.2	400V AC distribution board panel	Lot	1			
1.12	**Battery / Battery Charger**					
1.12.1	110 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.2	48 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.12.3	Battery Charger for 110 V battery complete with all accessories	Set	1			
1.12.4	Battery Charger for 48 V battery complete with all accessories	Set	1			
1.12.5	110 V DC Distribution Board complete with all accessories	Set	1			
1.12.6	48 V DC Distribution Board complete with all accessories	Set	1			
1.13	**Fire Detection & Alarm System**					
1.13.1	50 litre foam type, Portable/Trolley/Wheel mounted fire extinguishers	Nos.	2			
1.13.2	4.5 kg CO2 type, Fire Extinguisher	Nos.	10			
1.13.3	22.5 kg Dry Chemical Power (DCP) type, Trolley/Wheel mounted fire extinguishers	Nos.	3			
1.13.4	Smoke detection system in Control Room Building	set	1			
1.13.5	Fire detection and Alarm System in Control Room Building	set	1			
	Total of Electrical of Sandhikharka S/S					
2	**SUBSTATION AUTOMATION/ COMMUNICATION / SCADA (Based on IEC 61850)**					
2.1	**SUBSTATION AUTOMATION**					

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
a.	Complete Substation automation system including hardware and software for the substation & remote control stations alongwith associated equipments for the followings as per Technical Specification.					
i.	132 kV System	Bays	4			
ii.	33kV system	Nos.	4			
iii.	11kV HT indoor switchgear	Lot	1			
b.	Integration of all 132/33/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	Lot	1			
	Sub Total of 2.1					
2.2	**COMMUNICATION / SCADA**					
i	Digital Protection Coupler	Nos.	4			
ii	Communication Panel including allied equipment such as SDH Equipment (STM - 1 upgradable to STM-4 ADM, upto two directions) , Ethernet tributaries card (min. 4 port), Termination Equipment (Drop/Insert Multiplexer, Subscriber Line Interface Cards, Equipment Cabinets complete in all respects as per technical specifications.	Lot	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
iii	Optical Distribution Frame complete in all respects as per technical specifications	Lot	1			
iv	Optical Approach Cable -24 pair Fibre (DWSM - G.652D) along with Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable complete in all respects as per technical specifications	Lot	1			
	Sub Total of 2.2					
	Total of Communication of sandhikharka S/S					
3	**CIVIL AND ARCHITECTURAL WORKS**					
3.1	**Steel structure for post, beam and equipment supporting frame complete with bolts, nuts and all accessories**					
3.1.1	Rail Structure for 132/33 kV Power Transformer including access from Internal Road	Lot	1			
3.1.2	Rail Structure for 33/11 kV Power Transformer including access from Internal Road	Lot	1			
3.1.3	132 kV Take Off Gantry structure as per drawing	Bays	4			
3.1.4	132 kV SF6 Circuit Breaker	Sets	6			
3.1.5	132 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.6	132 kV Disconnecting Switch without Earth switch	Set	16			
3.1.7	132 kV Capacitive Voltage Transformer	No.	12			
3.1.8	132 kV Current Transformer	No.	18			
3.1.9	120 kV Lightening Arrestor	No.	15			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.10	132 kV Bus Post Insulator/CVT	No.	42			
3.1.11	132 kV Support Insulator	No.	12			
3.1.12	33 kV Vaccum Circuit Breaker	Sets	6			
3.1.13	33 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.14	33 kV Disconnecting Switch without Earth Switch	Sets	7			
3.1.15	33 kV Current Transformer	Nos.	18			
3.1.16	33 kV Voltage Transformer	Nos.	3			
3.1.17	30 kV Lightening Arrestor	Nos.	18			
3.1.18	33 kV Bus Support Insulator	Lot	1			
3.1.19	33 kV Power Fuse Support Insulator	Lot	1			
3.1.20	Earth mast	Lot	1			
3.1.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.1.22	Switchyard Fence as per Specificaitons (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.1.23	Identification plate, danger notice etc	Lot	1			
	Sub Total of Civil and Arichitectural Works of sandhikharka Substation					
4	**SPARE PARTS**					
4.1	**For 132/33 kV Transformer**					
4.1.1	132 kV and 33 kV Bushing(one of each type)	Set	1			
4.1.2	Dial type Thermometers (WTI & OTI)	Set	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.1.3	Oil Level Gauges	Set	1			
4.1.4	Insulating Oil (10% of total supply)	Lot	1			
4.1.5	Indicating Lamps (25% of used)	Lot	1			
4.1.6	All types of Fuses (25% of used)	Lot	1			
4.1.7	Complete set of Gaskets of each type	Set	1			
4.1.8	Complete set of Pressure Relief Devices	Set	1			
4.1.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.1.10	OLTC Motor Contactor	Set	2			
4.1.11	Complete set of Buchholz relay	Set	1			
4.1.12	OLTC Motor	Set	2			
4.2	**For 33/11 kV Transformer**					
4.2.1	33 kV and 11 kV Bushing(one of each type)	Set	1			
4.2.2	Dial type Thermometers	Set	1			
4.2.3	Oil Level Gauges	Set	1			
4.2.4	Insulating Oil (10% of total supply)	Lot	1			
4.2.5	Indicating Lamps (25% of used)	Lot	1			
4.2.6	All types of Fuses (25% of used)	Lot	1			
4.2.7	Complete set of Gaskets of each type	Set	1			
4.2.8	Complete set of Pressure Relief Devices	Set	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.2.9	All type of Auxiliary, Current, Voltage and Thermal Relays, Contactors and Timers for control, protection and cooling circuit(one of each type)	Set	1			
4.2.10	OLTC Motor Contactor	Set	1			
4.2.11	Complete set of Buchholz relay	Set	1			
4.2.12	OLTC motor	Set	1			
4.3	**For 145kV SF6 Circuit Breaker**					
4.3.1	Complete set (one chamber) of interrupter	Sets	3			
4.3.2	Tripping Coils	Nos.	6			
4.3.3	Closing Coils	Nos.	6			
4.3.4	Pressure Switch, Relays and Contactors (one of each type)	Sets	2			
4.3.5	Motors for mechanism of each type	Nos.	2			
4.3.6	Gas filling equipment complete with accessories	Set	1			
4.3.7	Complete set(one chamber) of Sealing rings and Gaskets	Sets	2			
4.4	**For 36kV Vaccum Circuit Breaker**					
4.4.1	Tripping Coils	Nos.	4			
4.4.2	Closing Coils	Nos.	4			
4.4.3	Relays and Contactors (One of each type)	Sets	2			
4.4.4	Motors for Mechanism of each type	Set	1			
4.4.5	Interrupter for VCB	No.	1			
4.5	**For 12kV VCB Switchgears**					

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.5.1	11 kV Vaccum Interrupter	Nos.	2			
4.5.2	Tripping Coils	Nos.	4			
4.5.3	Closing Coils	Nos.	4			
4.5.4	Spring Charging Motor	Set	2			
4.5.5	3 Phase Overcurrent Relay with ground fault for 11kV Side	Sets	1			
4.5.6	Ammeter	Nos.	1			
4.5.7	Voltmeter	Nos.	1			
4.5.8	kVA Meter	Nos.	1			
4.5.9	11 kV CTs as in Outgoing Feeder	Sets	1			
4.5.10	Operating Handle	Sets	1			
4.5.11	Indicating Lamps (100% of used)	Set	1			
4.5.12	**For 145kV Disconnecting Switches**					
4.6.1	Procelain Insulator	Nos.	4			
4.6.2	Main Contact Assemblies(one assembly)	Set	4			
4.6.3	Auxiliary Contacts	Sets	2			
4.6.4	Interlocking Coil	Nos.	2			
4.7	**For 36kV Disconnecting Switches**					
4.7.1	Procelain Insulator	Nos.	4			
4.7.2	Main Contact Assemblies(one assembly)	Sets	3			
4.7.3	Auxiliary Contacts	Sets	2			
4.7.4	Interlocking Coil	Nos.	2			
4.8	**Instrument Transformers of used type**					
4.8.1	145 kV Current Transformer	Nos.	2			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.8.2	145 kV Capacitive Voltage Transformer	Nos.	2			
4.8.3	36 kV Current Transformer	Nos.	2			
4.8.4	36 kV Potential Transformer	Nos.	2			
4.9	**Lightening Arrestor**					
4.9.1	120 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.9.2	30 kV Single Phase Lightening Arrestor (pedestal-type)	Nos.	2			
4.9.3	9 kV Single phase Lightening Arrestor (Pedestal-type)	Nos.	2			
4.10	**For 132/33 kV Control and Relay Panel**					
4.10.1	Indicating Lamps(50% of used)	Lot	1			
4.10.2	Fuses of each type(50% of used)	Lot	1			
4.10.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.10.4	One of each type of Switch, Timer and other special devices	Set	1			
4.10.5	3 Phase Overcurrent Relays with Earthfault Inbuilt	Set	1			
4.10.6	3 Phase Transformer Differential Relays	Set	1			
4.10.7	Each type of Auxiliary Relay	Set	1			
4.10.8	Ammeter	No.	2			
4.10.9	Voltmeter	No.	2			
4.11	**132 kV Control and Protection Panel**					
4.11.1	Indicating Lamps(50% of used)	Lot	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.11.2	Fuses of each type(50% of used)	Lot	1			
4.11.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.11.4	One of each type of Switch, Timer and other special devices	Set	1			
4.11.5	Distance Relay for Line Protection	No.	1			
4.11.6	One of each type of Over current and earth fault relays	Lot	1			
4.11.7	Carrier Auxiliary Relay	No.	1			
4.11.8	Synchro Check Relay	No.	1			
4.11.9	Trip-Circuit Supervision Relay	No.	1			
4.11.10	Ammeter	Nos.	2			
4.11.11	Voltmeter	Nos.	2			
4.12	**For 33/11 kV Transformer Control and Relay Panel**					
4.12.1	Indicating Lamps (50% of used)	Lot	1			
4.12.2	Fuses of each type(50% of used)	Lot	1			
4.12.3	Color Caps of each color for indicating lamps (30% of used)	Lot	1			
4.12.4	One of each type of Switch, Timer and other special devices	Set	1			
4.12.5	3 Phase Over Current Relays with Earthfault Inbuilt	Set	1			
4.12.6	3 Phase Transformer Differential Relays	Set	1			
4.12.7	Each type of Auxiliary Relay	Set	1			

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Price Schedule 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
4.12.8	Ammeter	No.	2			
4.12.9	Voltmeter	No.	2			
4.13	**Communication/SCADA**					
4.13.1	Digital Protection Coupler	Lot	1			
4.13.2	SDH and transmission equipments	Lot	1			
4.14	**110 V Battery Charger**					
4.14.1	Fuses of each type(50% of used)	Lot	1			
4.14.2	Indicating Lamp (50% of used)	Lot	1			
4.14.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.14.4	Ammeter	No.	1			
4.14.5	Voltmeter	No.	1			
4.15	**48V Battery Charger**					
4.15.1	Fuses of each type(50% of used)	Lot	1			
4.15.2	Indicating Lamp (50% of used)	Lot	1			
4.15.3	One of each type of Switch, Timer and other special devices	Lot	1			
4.15.4	Ammeter	No.	1			
4.15.5	Voltmeter	No.	1			
	Sub Total of Spare Parts					
	Total of Sandhikharka Substation					
Total of Motipur & Sandhikharka Substation						

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHINGE 132 kV TRANSMISSION LINE PROJECT

Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
SS	***Motipur Substation***					
1	**ELECTRICAL WORKS**					
1.1	**Power Transformer**					
1.1.1	132/33 kV, Three Phase 24/27/30 MVA, ONAN/ONAF Power Transfromer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, complete with all accessories as specified	Set	1			
1.1.2	33/11 kV, Three phase 16 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, delta/star connected complete with all accessories as specified	Set	1			
1.2	**Circuit breakers/Switchgears**					
1.2.1	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (individual pole operation type), complete with all accessories as per specification for incoming lines	Sets	6			
1.2.2	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (three pole operation type), complete with all accessories as per specification for Transformer HT.	Sets	1			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.2.3	145 kV, 2000 A, 3 phase, SF6 Circuit Breaker, three pole operation type, complete with all accessories as per specification for Bus Coupler	Set	1			
1.2.4	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker for incomer, three pole operation type, complete with all accessories as per specification	Set	1			
1.2.5	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker for outgoing feeders, three pole operation type, complete with all accessories as per specification	Sets	5			
1.3	**Disconnecting Switches**					
1.3.1	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	6			
1.3.2	145 kV, 2000 A, 3 phase, Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	2			
1.3.3	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	20			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.3.4	36 kV, 1250 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	1			
1.3.5	36 kV, 800 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	5			
1.3.6	36 kV, 800 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.7	36 kV, 400 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Set	1			
1.4	**Instrument Transformers**					
1.4.1	145 kV, 50 VA, 132/√3 /110/√3 kV, Class 0.5/3P Capacitor Voltage Transformer complete with all accessories as per specification	Nos.	24			
1.4.2	145 kV, 30 VA, 5 core Current Transformer complete with all accessories as per specification	Nos.	21			
1.4.3	145 kV, 30 VA, 4 core Current Transformer complete with all accessories as per specification	Nos.	3			
1.4.4	36 kV, 30 VA, 33/√3/110/√3 kV Voltage Transformer complete with all accessories asp per specification	Nos.	3			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.4.5	36 kV, 30 VA, 2 core Current Transformer complete with all accessories as per specification	Nos.	18			
1.5	**Lightening Arrestor**					
1.5.1	120 kV, 10 kA Lightening Arrestor including Discharge Counter complete with all accessories as per specification	Nos.	21			
1.5.2	30 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	18			
1.5.3	9 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	9			
1.6	**Control and relay panel**					
1.6.1	132 kV Transmission Line Control and Relay Panel complete with all accessories as per specification	Sets	6			
1.6.2	132/33 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.3	132 kV Bus Coupler Panel with Bus bar Protection Facilities	set	1			
1.6.4	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.5	33 kV Protection Control and Relay Panel complete with all accessories as per specification for Line Bays	Set	4			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.7	**Grounding**					
1.7.1	Galvanized E.H.S. Steel wires of size 7/3.35 for Lightening Shield Wire in take off and internal structures, with accessories to complete the specified scope of works	lot	1			
1.7.2	Earthing of substation with conductors, electrode grounding materials and accessories to complete the specified scope of works	Lot	1			
1.8	**11 KV VCB Switchgear Panel with all accessories as per specified**					
1.8.1	11 kV Line Transformer incomer module (1250A) (IP-2) with all accessories as per specification	No.	1			
1.8.2	11 kV Line Module/LT Transformer (800A) (IP-1) with all accessories as per specification	Nos.	3			
1.8.3	11 kV PT module (IP-3) with all accessories as per specification	No.	1			
1.9	**Control and Power Cables**					
1.9.1	600 V power and lighting cable for all works to complete the specified scope of work	Lot	1			
1.9.2	600 V control cable to complete the specified scope of works	Lot	1			
1.9.3	36 kV, 630 sq. mm 3 x single core XLPE Copper Power Cable including Termination and Accessories complete from LV sides of 132/33 kV Power Transformers to proposed 33 kV Switchyard Bays as per Drawings	m	200			

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHINGE 132 kV TRANSMISSION LINE PROJECT

Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.9.4	12 kV, 400 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	m	150			
1.9.5	12 kV, 185 sq.mm 3 core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 3 nos. of Outgoing Distribution Feeders as specified.	m	450			
1.10	**Miscellaneous material**					
1.10.1	145 kV Insulator Strings with necessary hardwares, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Gantry structure, complete as per the specified scope of works	Lot	1			
1.10.2	36 kV Insulator Strings with necessary hardware, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Strucutre, complete as per the specified scope of works	Lot	1			
1.10.3	ACSR "BEAR" Conductors and Accessories to complete the specified scope of works including for Line Tower to Take Off and Internal Structure (including stringing of conductor between tower to gantry for 132kV & 33 kV .)	Lot	1			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.4	132 kV Tubular Bus (Outer Dia 100 mm and thickness 10 mm) and Bus Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.5	145 kV Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.6	33 kV Tubular Bus (Dia 75 mm, thickness 8 mm) and Bus Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.7	33 kV Power Fuse with Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.8	11 kV Overhead Distribution Line with all Accessories complete from Substation to Outdoor existing lines including breakdown of existing line to separate feeder lines	Km	2.25			
1.10.9	Switchyard Lighting (including lighting for internal road)	Lot	1			
1.11	**Station Supply**					
1.11.1	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star with Current Limiting Fuse (DO Fuse) connected complete with all accessories as specified	Set	1			

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHINGE 132 kV TRANSMISSION LINE PROJECT

Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.11.2	400V AC distribution board panel	Lot	1			
1.12	**Battery / Battery Charger**					
1.12.1	110 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.2	48 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.3	Battery Charger for 110 V battery complete with all accessories	Set	1			
1.12.4	Battery Charger for 48 V battery complete with all accessories	Set	1			
1.12.5	110 V DC Distribution Board complete with all accessories	Set	1			
1.12.6	48 V DC Distribution Board complete with all accessories	Set	1			
1.13	**Fire Detection & Alarm System**					
1.13.1	50 litre foam type, Portable/Trolley/Wheel mounted fire extinguishers	Nos.	2			
1.13.2	4.5 kg CO2 type, Fire Extinguisher	Nos.	10			
1.13.3	22.5 kg Dry Chemical Power (DCP) type, Trolley/Wheel mounted fire extinguishers	Nos.	3			
1.13.4	Smoke detection system in Control Room Building	set	1			
1.13.5	Fire detection and Alarm System in Control Room Building	set	1			
	Total of Electrical of Motipur S/S					

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
2	**SUBSTATION AUTOMATION/ COMMUNICATION / SCADA (Based on IEC 61850)**					
2.1	**SUBSTATION AUTOMATION**					
a.	Complete Substation automation system including hardware and software for the substation & remote control stations alongwith associated equipments for the followings as per Technical Specification.					
i	132 kV System	Nos.	6			
ii	33kV system	Nos.	4			
iii	11kV HT indoor switchgear	Lot	1			
b.	Integration of all 132/33/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	Lot	1			
2.1.2	**COMMUNICATION / SCADA**					
i	Digital Protection Coupler	Nos.	10			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
ii	Communication Panel including allied equipment such as SDH Equipment (STM - 1 upgradable to STM-4 ADM, upto three directions) , Ethernet tributaries card (min. 4 port), Termination Equipment (Drop/Insert Multiplexer, Subscriber Line Interface Cards, Equipment Cabinets complete in all respects as per technical specifications & Drawings	Lot	1			
iii	Optical Distribution Frame complete in all respects as per technical specifications	Lot	1			
iv	Optical Approach Cable -24 pair Fibre (DWSM - G.652D) along with Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable complete in all respects as per technical specifications	Lot	1			
	Total of Communication of Motipur S/S					
3	**CIVIL AND ARCHITECTURAL WORKS**					
3.1	**Steel structure for post, beam and equipment supporting frame complete with bolts, nuts and all accessories**					
3.1.1	Rail Structure for 132/33 kV Power Transformer including access from Internal Road	Lot	1			
3.1.2	Rail Structure for 33/11 kV Power Transformer including access from Internal Road	Lot	1			
3.1.3	132 kV Take Off Gantry structure as per drawing	Bays	6			
3.1.4	132 kV SF6 Circuit Breaker	Sets	8			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.5	132 kV Disconnecting Switch with Earth Switch	Sets	6			
3.1.6	132 kV Disconnecting Switch without Earth switch	Set	22			
3.1.7	132 kV Capacitive Voltage Transformer	Nos.	18			
3.1.8	132 kV Current Transformer	Nos.	24			
3.1.9	120 kV Lightening Arrestor	Nos.	21			
3.1.10	132 kV Bus Post Insulator/CVT	Nos.	54			
3.1.11	132 kV Support Insulator	Nos.	16			
3.1.12	33 kV Vaccum Circuit Breaker	Sets	6			
3.1.13	33 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.14	33 kV Disconnecting Switch without Earth Switch	Sets	7			
3.1.15	33 kV Current Transformer	Nos.	18			
3.1.16	33 kV Voltage Transformer	Nos.	3			
3.1.17	30 kV Lightening Arrestor	Nos.	18			
3.1.18	33 kV Bus Support Insulator	Lot	1			
3.1.19	33 kV Power Fuse Support Insulator	Lot	1			
3.1.20	Earth mast	Lot	1			
3.1.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.1.22	Switchyard Fence as per Specificaitons (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.1.23	Identification plate, danger notice etc	Lot	1			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
	Total of Steel structure works of Motipur S/S					
3.2	**Concrete Foundation for Equipment and Steel Structures complete with excavation, backfilling, form works, concrete works and reinforcement bars**					
3.2.1	132/33 kV , Three Phase 24/30 MVA, Power Transformer complete as specified	set	1			
3.2.2	33/11 kV, Three phase 16 MVA, Power Transformer complete	set	1			
3.2.3	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star connected complete with all accessories as specified	set	1			
3.2.4	132 kV Take Off Gantry structure as per drawing	Bays	6			
3.2.5	132 kV SF6 Circuit Breaker	Sets	8			
3.2.6	132 kV Disconnecting Switch with Earth Switch	Sets	6			
3.2.7	132 kV Disconnecting Switch without Earth switch	Set	22			
3.2.8	132 kV Capacitive Voltage Transformer	Nos.	18			
3.2.9	132 kV Current Transformer	Nos.	24			
3.2.10	120 kV Lightening Arrestor	Nos.	21			
3.2.11	132 kV Bus Post Insulator/CVT	Nos.	54			
3.2.12	132 kV Support Insulator	Nos.	16			
3.2.13	33 kV Vaccum Circuit Breaker	Sets	6			
3.2.14	33 kV Disconnecting Switch with Earth Switch	Sets	4			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.2.15	33 kV Disconnecting Switch without Earth Switch	Sets	7			
3.2.16	33 kV Current Transformer	Nos.	18			
3.2.17	33 kV Voltage Transformer	Nos.	3			
3.2.18	30 kV Lightening Arrestor	Nos.	18			
3.2.19	33 kV Bus Support Insulator	Lot	1			
3.2.20	33 kV Power Fuse Support Insulator	Lot	1			
3.2.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.2.22	Switchyard Fence as per Specifications (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.2.23	Cable Trench, Duct Bank, Conduit and Handhole and Cable Tray as per spec	Lot	1			
3.2.24	Switchyard Drainage (running at two corners of substation) with RCC slab covering as per specification	Lot	1			
	Total of Civil Works of Motipur Substation					
3.3	**Construction of Buildings**					
3.3.1	Control Building with electrification, air condictioning, sanitary, smoke detector and fire alarm system.	lot	1			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.3.2	Staff Quarter building with electrification, sanitary, septic tank and all necessary works as specified	lot	1			
3.3.3	Store building with electrification, sanitary and all necessary works as specified	lot	1			
3.3.4	Guard house with electrification, sanitary and all necessary works as specified	lot	1			
	Total of Civil Works of Motipur Substation					
3.3	**Miscellaneous**					
3.3.1	Clearing and stripping	lot	1			
3.3.2	Exploration works for soil strength of foundations including laboratory tests	locations	7			
3.3.3	Soil Resistivity test	lot	1			
3.3.4	Site Grading with earth cutting and filling by borrow pit earth, including compaction and leveling etc all complete	cu.m.	5000			
3.3.5	Identification plate, danger notice etc	lot	1			
3.3.6	Crushed Rock Surfacing	sq.m.	7500			
3.3.7	Asphalt road from main road to Substation area as per Specifications and Drawings, detail analysis is attached	sq.m.	800			
3.3.8	Construction of Water tank & Water supply from source to storage tank all complete as specification	lot	1			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.3.9	Supplying and fitting of pipe and accessories for water supply, sanitaryware , sewer pipe and fittings including overhead tank as specified.	lot	1			
	Total of miscellaneous works of Motipur Substation					
	Total of Motipur Substation					
SS	***Sandhikharka Substation***					
1	**ELECTRICAL WORKS**					
1.1	**Power Transformer**					
1.1.1	132/33 kV, Three Phase 24/27/30 MVA, ONAN/ONAF Power Transfromer complete with On load Tap Changer (OLTC) and RTCC facility with Tank Mounted LA at LV side and Bushing CT on both sides, complete with all accessories as specified	Set	1			
1.1.2	33/11 kV, Three phase 16 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, delta/star connected complete with all accessories as specified	Set	1			
1.2	**Circuit breakers/Switchgears**					

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.2.1	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (individual pole operation type), complete with all accessories as per specification for incoming lines	Sets	4			
1.2.2	145 kV, 1250 A, 3 phase, SF6 Circuit Breaker, (three pole operation type), complete with all accessories as per specification for Transformer HT.	Sets	1			
1.2.3	145 kV, 2000 A, 3 phase, SF6 Circuit Breaker, three pole operation type, complete with all accessories as per specification for Bus Coupler	Set	1			
1.2.4	36 kV, 1250 A, 3 phase, Vaccum Circuit Breaker for incomer, three pole operation type, complete with all accessories as per specification	Set	1			
1.2.5	36 kV, 800 A, 3 phase, Vaccum Circuit Breaker for outgoing feeders, three pole operation type, complete with all accessories as per specification	Sets	5			
1.3	**Disconnecting Switches**					
1.3.1	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.2	145 kV, 2000 A, 3 phase, Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	2			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.3.3	145 kV, 1250 A, 3 phase Center Break Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	14			
1.3.4	36 kV, 1250 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	1			
1.3.5	36 kV, 800 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Sets	5			
1.3.6	36 kV, 800 A, 3 phase Disconnecting Switch with Grounding Switch complete with all accessories as per specification	Sets	4			
1.3.7	36 kV, 400 A, 3 phase Disconnecting Switch without Grounding Switch complete with all accessories as per specification	Set	1			
1.4	**Instrument Transformers**					
1.4.1	145 kV, 50 VA, 132/√3 /110/√3 kV, Class 0.5/3P Capacitor Voltage Transformer complete with all accessories as per specification	Nos.	18			
1.4.2	145 kV, 30 VA, 5 core Current Transformer complete with all accessories as per specification	Nos.	15			
1.4.3	145 kV, 30 VA, 4 core Current Transformer complete with all accessories as per specification	Nos.	3			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.4.4	36 kV, 30 VA, 33/√3/110/√3 kV Voltage Transformer complete with all accessories asp per specification	Nos.	3			
1.4.5	36 kV, 30 VA, 2 core Current Transformer complete with all accessories as per specification	Nos.	18			
1.5	**Lightening Arrestor**					
1.5.1	120 kV, 10 kA Lightening Arrestor including Discharge Counter complete with all accessories as per specification	Nos.	15			
1.5.2	30 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	18			
1.5.3	9 kV, 10 kA Lightening Arrestor complete with all accessories as per specification	Nos.	9			
1.6	**Control and relay panel**					
1.6.1	132 kV Transmission Line Control and Relay Panel complete with all accessories as per specification	Sets	4			
1.6.2	132/33 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			
1.6.3	132 kV Bus Coupler Panel with Bus bar Protection Facilities	set	1			
1.6.4	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Set	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.6.5	33 kV Protection Control and Relay Panel complete with all accessories as per specification for Line Bays	Set	4			
1.7	**Grounding**					
1.7.1	Galvanized E.H.S. Steel wires of size 7/3.35 for Lightening Shield Wire in take off and internal structures, with accessories to complete the specified scope of works	lot	1			
1.7.2	Earthing of substation with conductors, electrode grounding materials and accessories to complete the specified scope of works	Lot	1			
1.8	**11 KV VCB Switchgear Panel with all accessories as per specified**					
1.8.1	11 kV Line Transformer incomer module (1250A) (IP-2) with all accessories as per specification	No.	1			
1.8.2	11 kV Line Module/LT Transformer (800A) (IP-1) with all accessories as per specification	Nos.	3			
1.8.3	11 kV PT module (IP-3) with all accessories as per specification	No.	1			
1.9	**Control and Power Cables**					
1.9.1	600 V power and lighting cable for all works to complete the specified scope of work	Lot	1			
1.9.2	600 V control cable to complete the specified scope of works	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.9.3	36 kV, 630 sq. mm 3 x single core XLPE Copper Power Cable including Termination and Accessories complete from LV sides of 132/33 kV Power Transformers to proposed 33 kV Switchyard Bays as per Drawings	m	200			
1.9.4	12 kV, 400 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	m	150			
1.9.5	12 kV, 185 sq.mm 3 core XLPE Aluminium Power Cable including Straight Joints with Accessories complete for 3 nos. of Outgoing Distribution Feeders as specified.	m	450			
1.10	**Miscellaneous material**					
1.10.1	145 kV Insulator Strings with necessary hardwares, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Gantry structure, complete as per the specified scope of works	Lot	1			
1.10.2	36 kV Insulator Strings with necessary hardware, Clamps for Substation Works and connection between Line Tower, Take Off Gantry and Internal Strucutre, complete as per the specified scope of works	Lot	1			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.10.3	ACSR "BEAR" Conductors and Accessories to complete the specified scope of works including for Line Tower to Take Off and Internal Structure (including stringing of conductor between tower to gantry for 132kV & 33 kV .)	Lot	1			
1.10.4	132 kV Tubular Bus (Outer Dia 100 mm and thickness 10 mm) and Bus Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.5	145 kV Support Insulators including all other Accessories required to complete the specified scope of work	Lot	1			
1.10.6	33 kV Tubular Bus (Dia 75 mm, thickness 8 mm) and Bus Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.7	33 kV Power Fuse with Support Insulator including all other accessories required to complete the specified scope of work	Lot	1			
1.10.8	11 kV Overhead Distribution Line with all Accessories complete from Substation to Outdoor existing lines including breakdown of existing line to separate feeder lines	Km	2.25			
1.10.9	Switchyard Lighting (including lighting for internal road)	Lot	1			
1.11	**Station Supply**					

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.11.1	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star with Current Limiting Fuse (DO Fuse) connected complete with all accessories as specified	Set	1			
1.11.2	400V AC distribution board panel	Lot	1			
1.12	**Battery / Battery Charger**					
1.12.1	110 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.2	48 V Maintenance Free Lead Acid Battery complete with all accessories	Set	1			
1.12.3	Battery Charger for 110 V battery complete with all accessories	Set	1			
1.12.4	Battery Charger for 48 V battery complete with all accessories	Set	1			
1.12.5	110 V DC Distribution Board complete with all accessories	Set	1			
1.12.6	48 V DC Distribution Board complete with all accessories	Set	1			
1.13	**Fire Detection & Alarm System**					
1.13.1	50 litre foam type, Portable/Trolley/Wheel mounted fire extinguishers	Nos.	2			
1.13.2	4.5 kg CO2 type, Fire Extinguisher	Nos.	10			
1.13.3	22.5 kg Dry Chemical Power (DCP) type, Trolley/Wheel mounted fire extinguishers	Nos.	3			

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHINGE 132 kV TRANSMISSION LINE PROJECT

Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
1.13.4	Smoke detection system in Control Room Building	set	1			
1.13.5	Fire detection and Alarm System in Control Room Building	set	1			
	Total of Electrical of Sandhikharka S/S					
2	**SUBSTATION AUTOMATION/ COMMUNICATION / SCADA (Based on IEC 61850)**					
2.1	**SUBSTATION AUTOMATION**					
a.	Complete Substation automation system including hardware and software for the substation & remote control stations alongwith associated equipments for the followings as per Technical Specification.					
i	132 kV System	Nos.	4			
ii	33kV system	Nos.	4			
iii	11kV HT indoor switchgear	Lot	1			
b.	Integration of all 132/33/11kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	Lot	1			
2.1.2	**COMMUNICATION / SCADA**					
i	Digital Protection Coupler	Nos.	4			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
ii	Communication Panel including allied equipment such as SDH Equipment (STM - 1 upgradable to STM-4 ADM, upto three directions) , Ethernet tributaries card (min. 4 port), Termination Equipment (Drop/Insert Multiplexer, Subscriber Line Interface Cards, Equipment Cabinets complete in all respects as per technical specifications	Lot	1			
iii	Optical Distribution Frame complete in all respects as per technical specifications	Lot	1			
iv	Optical Approach Cable -24 pair Fibre (DWSM - G.652D) along with Installation hardware set for above 24 Fibre, Fibre Optic Approach Cable complete in all respects as per technical specifications	Lot	1			
	Total of Communication of Sandhikharka S/S					
3	**CIVIL AND ARCHITECTURAL WORKS**					
3.1	**Steel structure for post, beam and equipment supporting frame complete with bolts, nuts and all accessories**					
3.1.1	Rail Structure for 132/33 kV Power Transformer including access from Internal Road	Lot	1			
3.1.2	Rail Structure for 33/11 kV Power Transformer including access from Internal Road	Lot	1			
3.1.3	132 kV Take Off Gantry structure as per drawing	Bays	4			
3.1.4	132 kV SF6 Circuit Breaker	Sets	6			

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Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.1.5	132 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.6	132 kV Disconnecting Switch without Earth switch	Set	16			
3.1.7	132 kV Capacitive Voltage Transformer	Nos.	12			
3.1.8	132 kV Current Transformer	Nos.	18			
3.1.9	120 kV Lightening Arrestor	Nos.	15			
3.1.10	132 kV Bus Post Insulator/CVT	Nos.	42			
3.1.11	132 kV Support Insulator	Nos.	12			
3.1.12	33 kV Vaccum Circuit Breaker	Sets	6			
3.1.13	33 kV Disconnecting Switch with Earth Switch	Sets	4			
3.1.14	33 kV Disconnecting Switch without Earth Switch	Sets	7			
3.1.15	33 kV Current Transformer	Nos.	18			
3.1.16	33 kV Voltage Transformer	Nos.	3			
3.1.17	30 kV Lightening Arrestor	Nos.	18			
3.1.18	33 kV Bus Support Insulator	Lot	1			
3.1.19	33 kV Power Fuse Support Insulator	Lot	1			
3.1.20	Earth mast	Lot	1			
3.1.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.1.22	Switchyard Fence as per Specificaitons (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.1.23	Identification plate, danger notice etc	Lot	1			
	Total of Steel structure works of Sandhikharka S/S					

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.2	**Concrete Foundation for Equipment and Steel Structures complete with excavation, backfilling, form works, concrete works and reinforcement bars**					
3.2.1	132/33 kV , Three Phase 24/30 MVA, Power Transformer complete as specified	set	1			
3.2.2	33/11 kV, Three phase 16 MVA, Power Transformer complete	set	1			
3.2.3	33/0.4 kV, Three phase 200 kVA, ONAN Disribution Transformer with Off load Tap Changer delta/star connected complete with all accessories as specified	set	1			
3.2.4	132 kV Take Off Gantry structure as per drawing	Bays	4			
3.2.5	132 kV SF6 Circuit Breaker	Sets	6			
3.2.6	132 kV Disconnecting Switch with Earth Switch	Sets	4			
3.2.7	132 kV Disconnecting Switch without Earth switch	Set	16			
3.2.8	132 kV Capacitive Voltage Transformer	Nos.	12			
3.2.9	132 kV Current Transformer	Nos.	18			
3.2.10	120 kV Lightening Arrestor	Nos.	15			
3.2.11	132 kV Bus Post Insulator/CVT	Nos.	42			
3.2.12	132 kV Support Insulator	Nos.	12			
3.2.13	33 kV Vaccum Circuit Breaker	Sets	6			
3.2.14	33 kV Disconnecting Switch with Earth Switch	Sets	4			
3.2.15	33 kV Disconnecting Switch without Earth Switch	Sets	7			

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Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
3.2.16	33 kV Current Transformer	Nos.	18			
3.2.17	33 kV Voltage Transformer	Nos.	3			
3.2.18	30 kV Lightening Arrestor	Nos.	18			
3.2.19	33 kV Bus Support Insulator	Lot	1			
3.2.20	33 kV Power Fuse Support Insulator	Lot	1			
3.2.21	Switchyard Fence as per Specifications (including Fence with Gate for 132 kV switchyard)	Rm	300			
3.2.22	Switchyard Fence as per Specifications (including Fence with Gate for 33 kV switchyard)	Rm	200			
3.2.23	Cable Trench, Duct Bank, Conduit and Handhole and Cable Tray as per spec	Lot	1			
3.2.24	Switchyard Drainage (running at two corners of substation) with RCC slab covering as per specification	Lot	1			
	Total of Civil Works of Sandhikharka Substation					
3.3	**Construction of Buildings**					
3.3.1	Control Building with electrification, air condictioning, sanitary, smoke detector and fire alarm system.	lot	1			
3.3.2	Staff Quarter building with electrification, sanitary and all necessary works as specified	lot	1			
3.3.3	Store building with electrification, sanitary and all necessary works as specified	lot	1			
3.3.4	Guard house with electrification, sanitary and all necessary works as specified	lot	1			

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHINGE 132 kV TRANSMISSION LINE PROJECT

Price Schedule 4. Installation Services, Charges and Civil Works

Project :	BPTSG TRANSMISSION LINE PROJECT	Estimated		L/C (NRs.)		Remarks
Item No.	Description	Unit	Quantity	Unit Rate	Amount	
1	2	3	4	5	6=4*5	
	Total of Civil Works of Sandhikharka Substation					
3.3	**Miscellaneous**					
3.3.1	Clearing and stripping	lot	1			
3.3.2	Exploration works for soil strength of foundations including laboratory tests	locations	7			
3.3.3	Soil Resistivity test	lot	1			
3.3.4	Site Grading with earth cutting and filling by borrow pit earth, including compaction and leveling etc all complete	cu.m.	5000			
3.3.5	Identification plate, danger notice etc	lot	1			
3.3.6	Crushed Rock Surfacing	sq.m.	7500			
3.3.7	Asphalt road from main road to Substation area as per Specifications and Drawings, detail analysis is attached	sq.m.	800			
3.3.8	Construction of Water tank & Water supply from source to storage tank all complete as specification	lot	1			
3.3.9	Supplying and fitting of pipe and accessories for water supply, sanitaryware , sewer pipe and fittings including overhead tank as specified.	lot	1			
	Total of miscellaneous works of Sandhikharka Substation					
	Total of Sandhikharka Substation					
Total of Motipur & Sandhikharka Substation						

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BURTIBANG PAUDI-AMARAI TAMGHAS SANDHIKHARKA GORUSHING 132 kV TRANSMISSION LINE PROJECT

MOTIPUR & SANDHIKHARKA 132/33/11 kV SUBSTATION

Grand Summary

S. No.	DESCRIPTION	Foreign Currency (excluding Tax & VAT)	Local Currency (excluding Tax & VAT)	Remarks
1	**Total Schedule No. 1: Plant and Equipments (Including mandatory Spare parts) Supplied from Abroad**			
2	**Total Schedule No. 2: Plant and Equipments (Including mandatory Spare parts) Supplied from within the Employer's country**			
3	**Total Schedule No. 3: Insurance, Clearing, Forwarding and Transport up to Site (including port clearance etc.)**			
4	**Total Schedule No. 4: Installation Services, Charges and Civil Works**			
	Grand Total (Excluding Custom Duties & VAT)			