NEPAL ELECTRICITY AUTHORITY

(An Undertaking of Government of Nepal)
Project Management Directorate

GRID SUBSTATION AUTOMATION PROJECT, PHASE II

(A Component of Electricity Grid Modernization Project)

BIDDING DOCUMENT
FOR

Procurement of Plant for
Design, Supply, Installation, Integration, Testing and Commissioning of Substation Automation System (SAS) for Existing Grid Substations of six-grid division office across Nepal.

Single-Stage, Two-Envelope
Bidding Procedure

Issued on:	**31 March 2022**
Invitation for Bids No.:	**PMD/EGMP/GSAPP2–078/79 – 01**
OCB No.:	**PMD/EGMP/GSAPP2–078/79 – 01**
Employer:	**Nepal Electricity Authority**
Country:	**Nepal**

VOLUME –III OF III
March 2022

Grid Substation Automation Project – Phase II
Project Management Directorate
NEA Project Management Directorate
Matatirtha, Kathmandu, Nepal

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Preface

This Bidding Document for Procurement of Plant – Design, Supply, and Installation has been prepared by Nepal Electricity Authority and is based on the Standard Bidding Document for Procurement of Plant – Design, Supply, and Installation (SBD Plant) issued by the Asian Development Bank dated June 2018.

ADB's SBD Plant has the structure and the provisions of the Master Procurement Document entitled "Procurement of Plant – Design, Supply, and Installation", prepared by multilateral development banks and other public international financial institutions except where ADB-specific considerations have required a change.

BID

PRICE SCHEDULE

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
1	2	3	4	5	6	7=(4*6)	8
I-A	DUHABI GRID						
	PART A : OWNER ACCESSED QUANTITIES						
1	**ISOLATORS**						
A	**132 kV isolator**						
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	6				
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	15				
C	**33 kV Isolator**						
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	30				
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	46				
2	**Control and Relay Panels (With Automation)**						
a	132 kV Line Control & Relay Panel along with Line Differential Relay & Numerical Distance relay(both in a single unit) complete with all accessories as per Technical Specification	Nos	3				
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	3				
c	132 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification	Nos	1				
d	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Nos	1				
e	33 kV Line Control and Relay Panel complete with all accessories as per specification for Line Bays	Nos	1				
f	Line Fault Locator complete with all accessories as per specification.	Sets	1				
3	**Time Synchronisation Equipment**	Nos	7				
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**						
a.	132 kV Bays	Nos	35				

Name and Address of Bidder:

Signature and Seal

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
b	33 kV Bays	Nos	40				
c	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	7				
d	11 kV Bays	Nos	40				
5	**Air conditioning and DG Set**						
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	30				
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1				
	SUB TOTAL OF PART A						
	PART B : VENDOR ACCESSED QUANTITIES						
6	**POWER & CONTROL CABLES**						
a.	**1.1 kV LV Cables**						
b.	Power Cables(PVC)- (1.1kV grade)	package	3				
c.	Control Cable (PVC)- (1.1kV grade)	package	3				
d.	Cable glands, lugs & straight through joints for Power & Control cables	package	3				
7	**Visual Monitoring System for Switchyard and Control Room Equipments as per technical specification**	package	8				
8	**Earthing and lightning protection including necessary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**						
1.0	Earth Conductor (copper)	package	3				
2.0	Earth Rod (copper clad steel)	package	3				
9	**SUBSTATION AUTOMATION /COMMUNICATION**						
10	**MASTER CONTROL CENTRE**						
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of six Grid Substations under NEA	package	1				
2	SCADA and Control Operations' Virtual Projection system for MCC	Sets	1				
3.0	**Pre-engineered Buliding with structure**						
3.1	MCC Hall and server Room	Sq.m	200				
3.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	package	1				

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
3.3	VOIP telephone instrument with one common POE+ switch (number of ports as per requirement)	Sets	1				
	SUB TOTAL OF PART B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
1	**145KV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	3				
ii)	Copper contact fingers for male & female contacts	Set	2				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	2				
iv)	Limit Switch	set	2				
v)	Terminal Pads & Connectors	No.	4				
2	**36 kV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	3				
ii)	Copper contact fingers for male & female contacts	Set	3				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	3				
iv)	Limit Switch	set	3				
v)	Terminal Pads & Connectors	No.	3				
4	**Relay & Protection[SAS Compatible]**						
A	**132 kV/66 kV Panels**						
A.1	Line Protection Panel						
A.1.1	Numerical distance & line differential relay (selectable mode in same product)	Set	1				
A.2	Transformer Protection Panel						
A.2.1	Transformer differential protection	No.	1				
A.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
A.2.3	Directional over current & E/F Protection Relay	no	1				
A.3	COMMON SPARES						
A.3.1	Power supply module for Bus Bar protection.	No.	1				
A.4	Breaker protection Relays [All electrically reset type]						
A.4.1	Breaker failure relay	Nos.	1				

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
A.4.2	Trip circuit supervision relay	Nos.	1				
A.4.3	Self reset trip relay (relay of each type)	Set	1				
A.4.4	Hand reset trip relay(relay of each type)	Set	1				
A.4.5	Timer relay(relay of each type)	Set	1				
A.4.6	DC supervision relay(relay of each type)	Set	1				
A.4.7	Flag relays (relay of each type)	Set	1				
A.4.8	Auxiliary relays (relay of each type)	Set	1				
C	**33 kV/11kV Panels**						
C.1	Line Protection Panel						
C.2	Transformer Protection Panel						
C.2.1	Transformer differential protection	No.	1				
C.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
C.2.3	Directional over current & E/F Protection Relay	Nos.	1				
C.3	COMMON SPARES						
C.4	Breaker protection Relay[All electrically reset type]						
C.4.1	Breaker failure relay	Nos.	1				
C.4.2	Trip circuit supervision relay	Nos.	1				
C.4.3	Self reset trip relay (relay of each type)	Set	1				
C.4.4	Hand reset trip relay(relay of each type)	Set	1				
C.4.5	Timer relay(relay of each type)	Set	1				
C.4.6	DC supervision relay(relay of each type)	Set	1				
C.4.7	Flag relays (relay of each type)	Set	1				
C.4.8	Auxiliary relays (relay of each type)	Set	1				
5	**Sub-Station Automation System**						
4.1	Bay control unit (IED) of each type	Set	4				
4.2	Ethernet switch of each type	Set	3				
4.3	Time Synchronisation Equipment	Nos	1				
4.4	Gateways	Nos	1				
	SUB TOTAL OF PART C						
	GRAND TOTAL OF DUHABI GRID DIVISION OFFICE (PART A+PART B+PART C)						

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
I-B	DHALKEBAR GRID						
	PART A : OWNER ACCESSED QUANTITIES						
1	**ISOLATORS**						
A	**132 kV isolator**						
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	4				
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	6				
C	**33 kV Isolator**						
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	23				
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	45				
2	**Control and Relay Panels (With Automation)**						
a	132 kV Line Control & Relay Panel along with Line Differential Relay & Numerical Distance relay(both in a single unit) complete with all accessories as per Technical Specification	Nos	8				
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	2				
3	**Time Synchronisation Equipment**	Nos	6				
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**						
a.	132 kV Bays	Nos	41				
b	33 kV Bays	Nos	32				
c	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	6				
d	11 kV Bays	Nos	38				
5	**Air conditioning and DG Set**						
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	32				
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1				
	SUB TOTAL OF PART A						

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
	PART B : VENDOR ACCESSED QUANTITIES						
6	**POWER & CONTROL CABLES**						
a.	**1.1 kV LV Cables**						
b.	Power Cables(PVC)- (1.1kV grade)	package	2				
c.	Control Cable (PVC)- (1.1kV grade)	package	2				
d.	Cable glands, lugs & straight through joints for Power & Control cables	package	2				
7	**Visual Monitoring System for Switchyard and Control Room Equipments as per technical specification**	package	7				
8	**Earthing and lightning protection including necessary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**						
1.0	Earth Conductor (copper)	package	1				
2.0	Earth Rod (copper clad steel)	package	1				
9	**SUBSTATION AUTOMATION /COMMUNICATION**						
10	**MASTER CONTROL CENTRE**						
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of six Grid Substations under NEA	package	1				
2	SCADA and Control OperationsVirtual Projection system for MCC	Sets	1				
3.0	**Pre-engineered Buliding with structure**						
3.1	MCC Hall and server Room	Sq.m	200				
3.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	package	1				
3.3	VOIP telephone instrument with one common POE+ switch (number of ports as per requirement)	Sets	1				
	SUB TOTAL OF PART B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
1	**145KV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.					
ii)	Copper contact fingers for male & female contacts	Set	2				

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iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	2				
iv)	Limit Switch	set	2				
v)	Terminal Pads & Connectors	No.	4				
3	**36 kV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	3				
ii)	Copper contact fingers for male & female contacts	Set	3				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	3				
iv)	Limit Switch	set	3				
v)	Terminal Pads & Connectors	No.	3				
4	**Relay & Protection[SAS Compatible]**						
A	**132 kV/66 kV Panels**						
A.1	Line Protection Panel						
A.1.1	Numerical distance & line differential relay (selectable mode in same product)	Set	1				
A.2	Transformer Protection Panel						
A.2.1	Transformer differential protection	No.	1				
A.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
A.2.3	Directional over current & E/F Protection Relay	no	1				
A.3	COMMON SPARES						
A.3.1	Power supply module for Bus Bar protection.	No.	1				
A.4	Breaker protection Relay [All electrically reset type]						
A.4.1	Breaker failure relay	Nos.	1				
A.4.2	Trip circuit supervision relay	Nos.	1				
A.4.3	Self reset trip relay (relay of each type)	Set	1				
A.4.4	Hand reset trip relay(relay of each type)	Set	1				
A.4.5	Timer relay(relay of each type)	Set	1				
A.4.6	DC supervision relay(relay of each type)	Set	1				
A.4.7	Flag relays (relay of each type)	Set	1				
A.4.8	Auxiliary relays (relay of each type)	Set	1				

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
C	**33 kV/11kV Panels**						
C.1	Line Protection Panel						
C.2	Transformer Protection Panel						
C.2.1	Transformer differential protection	No.	1				
C.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
C.2.3	Directional over current & E/F Protection Relay	Nos.	1				
C.3	COMMON SPARES						
C.4	Breaker protection Relay [All electrically reset type]						
C.4.1	Breaker failure relay	Nos.	1				
C.4.2	Trip circuit supervision relay	Nos.	1				
C.4.3	Self reset trip relay (relay of each type)	Set	1				
C.4.4	Hand reset trip relay(relay of each type)	Set	1				
C.4.5	Timer relay(relay of each type)	Set	1				
C.4.6	DC supervision relay(relay of each type)	Set	1				
C.4.7	Flag relays (relay of each type)	Set	1				
C.4.8	Auxiliary relays (relay of each type)	Set	1				
5	**Sub-Station Automation System**						
4.1	Bay control unit (IED) of each type	Set	4				
4.2	Ethernet switch of each type	Set	3				
4.3	Time Synchronisation Equipment	Nos	1				
4.4	Gateways	Nos	1				
	SUB TOTAL OF PART C						
	GRAND TOTAL OF DHALKEBAR GRID DIVISION OFFICE (PART A+PART B+PART C)						
I-C	HETAUDA GRID						
	PART A : OWNER ACCESSED QUANTITIES						
1	**ISOLATORS**						
A	**132 kV isolator**						
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	9				
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	24				

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
B	**66 kV isolator**						
a	66 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	12				
b	66 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	27				
C	**33 kV Isolator**						
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	4				
2	**Control and Relay Panels (With Automation)**						
a	132 kV Line Control & Relay Panel along with Line Differential Relay & Numerical Distance relay(both in a single unit) complete with all accessories as per Technical Specification	Nos	7				
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	8				
c	132 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification	Nos	2				
d	66 kV Line Control & Relay Panel along with Directional over current and Earth Fault relay complete with all accessories as per Technical Specification	Nos	10				
e	66 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	6				
f	66 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification	Nos	2				
g	66/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Nos	0				
h	33 kV Line Control and Relay Panel complete with all accessories as per specification for Line Bays	Nos	2				
3	**Time Synchronisation Equipment**	Nos	7				
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**						
a.	132 kV Bays	Nos	36				
b.	66 kV Bays	Nos	24				
c.	33 kV Bays	Nos	18				

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d.	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	7				
e.	11 kV Bays	Nos	73				
5	**Air conditioning and DG Set**						
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	40				
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1				
	SUB TOTAL OF PART A						
	PART B : VENDOR ACCESSED QUANTITIES						
6	**POWER & CONTROL CABLES**						
a.	**1.1 kV LV Cables**						
b.	Power Cables(PVC)- (1.1kV grade)	package	5				
c.	Control Cable (PVC)- (1.1kV grade)	package	5				
d.	Cable glands, lugs & straight through joints for Power & Control cables	package	5				
7	**Visual Monitoring System for Switchyard and Control Room Equipments as per technical specification**	package	8				
8	**Earthing and lightning protection including necessary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**						
1.0	Earth Conductor (copper)	package	5				
2.0	Earth Rod (copper clad steel)	package	5				
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
10	**MASTER CONTROL CENTRE**						
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of six Grid Substations under NEA	package	1				
2	SCADA and Control OperationsVirtual Projection system for MCC	Sets	1				
3.0	**Pre-engineered Buliding with structure**						
3.1	MCC Hall and server Room	Sq.m	200				
3.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	package	1				
3.3	VOIP telephone instrument with one common POE+ switch (number of ports as per requirement)	Sets	1				
	SUB TOTAL OF PART B						

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
1	**145KV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	0				
ii)	Copper contact fingers for male & female contacts	Set	2				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	2				
iv)	Limit Switch	set	2				
v)	Terminal Pads & Connectors	No.	4				
2	**72.5 KV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	3				
ii)	Copper contact fingers for male & female contacts	Set	9				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	9				
iv)	Limit Switch	set	9				
v)	Terminal Pads & Connectors	No.	24				
3	**36 kV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	3				
ii)	Copper contact fingers for male & female contacts	Set	3				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	3				
iv)	Limit Switch	set	3				
v)	Terminal Pads & Connectors	No.	3				
4	**Relay & Protection[SAS Compatible]**						
A	**132 kV/66 kV Panels**						
A.1	Line Protection Panel						
A.1.1	Numerical distance & line differential relay (selectable mode in same product)	Set	1				
A.2	Transformer Protection Panel						
A.2.1	Transformer differential protection	No.	1				
A.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
A.2.3	Directional over current & E/F Protection Relay	no	1				

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

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PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
A.3	COMMON SPARES						
A.3.1	Power supply module for Bus Bar protection.	No.	1				
A.4	Breaker protection Relay(Electrically Operated and Communicable)						
A.4.1	Breaker failure relay [All electrically reset type]	Nos.	1				
A.4.2	Trip circuit supervision relay	Nos.	1				
A.4.3	Self reset trip relay (relay of each type)	Set	1				
A.4.4	Hand reset trip relay(relay of each type)	Set	1				
A.4.5	Timer relay(relay of each type)	Set	1				
A.4.6	DC supervision relay(relay of each type)	Set	1				
A.4.7	Flag relays (relay of each type)	Set	1				
A.4.8	Auxiliary relays (relay of each type)	Set	1				
C	**33 kV/11kV Panels**						
C.1	Line Protection Panel						
C.2	Transformer Protection Panel						
C.2.1	Transformer differential protection	No.	1				
C.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
C.2.3	Directional over current & E/F Protection Relay	Nos.	1				
C.3	COMMON SPARES						
C.4	Breaker protection Relay						
C.4.1	Breaker failure relay	Nos.	1				
C.4.2	Trip circuit supervision relay	Nos.	1				
C.4.3	Self reset trip relay (relay of each type)	Set	1				
C.4.4	Hand reset trip relay(relay of each type)	Set	1				
C.4.5	Timer relay(relay of each type)	Set	1				
C.4.6	DC supervision relay(relay of each type)	Set	1				
C.4.7	Flag relays (relay of each type)	Set	1				
C.4.8	Auxiliary relays (relay of each type)	Set	1				
5	**Sub-Station Automation System**						
4.1	Bay control unit (IED) of each type	Set	4				
4.2	Ethernet switch of each type	Set	3				
4.3	Time Synchronisation Equipment	Nos	1				
4.4	Gateways	Nos	1				

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

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Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
	SUB TOTAL OF PART C						
	GRAND TOTAL OF HETAUDA GRID DIVISION OFFICE (PART A+PART B+PART C)						
I-D	POKHARA GRID						
	PART A : OWNER ACCESSED QUANTITIES						
1	**ISOLATORS**						
A	**132 kV isolator**						
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	12				
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	24				
C	**33 kV Isolator**						
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	7				
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	13				
2	**Control and Relay Panels (With Automation)**						
a	132 kV Line Control & Relay Panel along with Line Differential Relay & Numerical Distance relay(both in a single unit) complete with all accessories as per Technical Specification	Nos	4				
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	3				
c	132 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification	Nos	1				
3	**Time Synchronisation Equipment**	Nos	4				
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**						
a.	132 kV Bays	Nos	20				
b	33 kV Bays	Nos	10				
c	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	4				
d	11 kV Bays	Nos	31				

Name and Address of Bidder:

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NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

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PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
5	**Air conditioning and DG Set**						
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	24				
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1				
	SUB TOTAL OF PART A					-	
	PART B : VENDOR ACCESSED QUANTITIES						
6	**POWER & CONTROL CABLES**						
a.	**1.1 kV LV Cables**						
b.	Power Cables(PVC)- (1.1kV grade)	package	4				
c.	Control Cable (PVC)- (1.1kV grade)	package	4				
d.	Cable glands, lugs & straight through joints for Power & Control cables	package	4				
7	**Visual Monitoring System for Switchyard and Control Room Equipments as per technical specification**	package	4				
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
10	**MASTER CONTROL CENTRE**						
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of six Grid Substations under NEA	package	1				
2	SCADA and Control OperationsVirtual Projection system for MCC	Sets	1				
3.0	**Pre-engineered Buliding with structure**						
3.1	MCC Hall and server Room	Sq.m	200				
3.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	package	1				
3.3	VOIP telephone instrument with one common POE+ switch (number of ports as per requirement)	Sets	1				
	SUB TOTAL OF PART B						

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
1	**145KV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	0				
ii)	Copper contact fingers for male & female contacts	Set	2				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	2				
iv)	Limit Switch	set	2				
v)	Terminal Pads & Connectors	No.	4				
3	**36 kV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	3				
ii)	Copper contact fingers for male & female contacts	Set	3				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	3				
iv)	Limit Switch	set	3				
v)	Terminal Pads & Connectors	No.	3				
4	**Relay & Protection[SAS Compatible]**						
A	**132 kV/66 kV Panels**						
A.1	Line Protection Panel						
A.1.1	Numerical distance & line differential relay (selectable mode in same product)	Set	1				
A.2	Transformer Protection Panel						
A.2.1	Transformer differential protection	No.	1				
A.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
A.2.3	Directional over current & E/F Protection Relay	no	1				
A.3	COMMON SPARES						
A.3.1	Power supply module for Bus Bar protection.	No.	1				
A.4	Breaker protection Relay [All electrically reset type]						
A.4.1	Breaker failure relay	Nos.	1				
A.4.2	Trip circuit supervision relay	Nos.	1				
A.4.3	Self reset trip relay (relay of each type)	Set	1				

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

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PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
A.4.4	Hand reset trip relay(relay of each type)	Set	1				
A.4.5	Timer relay(relay of each type)	Set	1				
A.4.6	DC supervision relay(relay of each type)	Set	1				
A.4.7	Flag relays (relay of each type)	Set	1				
A.4.8	Auxiliary relays (relay of each type)	Set	1				
C	**33 kV/11kV Panels**						
C.1	Line Protection Panel						
C.2	Transformer Protection Panel						
C.2.1	Transformer differential protection	No.	1				
C.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
C.2.3	Directional over current & E/F Protection Relay	Nos.	1				
C.3	COMMON SPARES						
C.4	Breaker protection Relay						
C.4.1	Breaker failure relay	Nos.	1				
C.4.2	Trip circuit supervision relay	Nos.	1				
C.4.3	Self reset trip relay (relay of each type)	Set	1				
C.4.4	Hand reset trip relay(relay of each type)	Set	1				
C.4.5	Timer relay(relay of each type)	Set	1				
C.4.6	DC supervision relay(relay of each type)	Set	1				
C.4.7	Flag relays (relay of each type)	Set	1				
C.4.8	Auxiliary relays (relay of each type)	Set	1				
5	**Sub-Station Automation System**						
4.1	Bay control unit (IED) of each type	Set	4				
4.2	Ethernet switch of each type	Set	3				
4.3	Time Synchronisation Equipment	Nos	1				
4.4	Gateways	Nos	1				
	SUB TOTAL OF PART C						
	GRAND TOTAL OF POKHARA GRID DIVISION OFFICE (PART A+PART B+PART C)						
I-E	BUTWAL GRID						
	PART A : OWNER ACCESSED QUANTITIES						

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

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Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
1	**ISOLATORS**						
A	**132 kV isolator**						
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	17				
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	52				
C	**33 kV Isolator**						
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	10				
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	24				
2	**Control and Relay Panels (With Automation)**						
a	132 kV Line Control & Relay Panel along with Line Differential Relay & Numerical Distance relay(both in a single unit) complete with all accessories as per Technical Specification	Nos	10				
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	6				
c	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Nos	3				
d	33 kV Line Control and Relay Panel complete with all accessories as per specification for Line Bays	Nos	1				
e	Digital protection Coupler including all accessories, cabinet as per Technical specification	Nos	2				
3	**Time Synchronisation Equipment**	Nos	6				
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**						
a.	132 kV Bays	Nos	40				
b	33 kV Bays	Nos	30				
c	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	6				
d	11 kV Bays	Nos	56				
5	**Air conditioning and DG Set**						
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	34				
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1				
	SUB TOTAL OF PART A						

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
	PART B : VENDOR ACCESSED QUANTITIES						
6	**POWER & CONTROL CABLES**						
a.	**1.1 kV LV Cables**						
b.	Power Cables(PVC)- (1.1kV grade)	package	5				
c.	Control Cable (PVC)- (1.1kV grade)	package	5				
d.	Cable glands, lugs & straight through joints for Power & Control cables	package	5				
7	**Visual Monitoring System for Switchyard and Control Room Equipments as per technical specification**	package	7				
8	**Earthing and lightning protection including necessary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**						
1.0	Earth Conductor (copper)	package	2				
2.0	Earth Rod (copper clad steel)	package	2				
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
10	**MASTER CONTROL CENTRE**						
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of six Grid Substations under NEA	package	1				
2	SCADA and Control OperationsVirtual Projection system for MCC	Sets	1				
3.0	**Pre-engineered Buliding with structure**						
3.1	MCC Hall and server Room	Sq.m	200				
3.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	package	1				
3.3	VOIP telephone instrument with one common POE+ switch (number of ports as per requirement)	package	1				
	SUB TOTAL OF PART B					-	
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
1	**145KV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	0				
ii)	Copper contact fingers for male & female contacts	Set	2				

Name and Address of Bidder:

Signature and Seal

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Grid Substation Automation Project- Phase II

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	2				
iv)	Limit Switch	set	2				
v)	Terminal Pads & Connectors	No.	4				
3	**36 kV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	3				
ii)	Copper contact fingers for male & female contacts	Set	3				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	3				
iv)	Limit Switch	set	3				
v)	Terminal Pads & Connectors	No.	3				
4	**Relay & Protection[SAS Compatible]**						
A	**132 kV/66 kV Panels**						
A.1	Line Protection Panel						
A.1.1	Numerical distance & line differential relay (selectable mode in same product)	Set	1				
A.2	Transformer Protection Panel						
A.2.1	Transformer differential protection	No.	1				
A.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
A.2.3	Directional over current & E/F Protection Relay	no	1				
A.3	COMMON SPARES						
A.3.1	Power supply module for Bus Bar protection.	No.	1				
A.4	Breaker protection Relay [All electrically reset type]						
A.4.1	Breaker failure relay	Nos.	1				
A.4.2	Trip circuit supervision relay	Nos.	1				
A.4.3	Self reset trip relay (relay of each type)	Set	1				
A.4.4	Hand reset trip relay(relay of each type)	Set	1				
A.4.5	Timer relay(relay of each type)	Set	1				
A.4.6	DC supervision relay(relay of each type)	Set	1				
A.4.7	Flag relays (relay of each type)	Set	1				
A.4.8	Auxiliary relays (relay of each type)	Set	1				

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

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		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
C	**33 kV/11kV Panels**						
C.1	Line Protection Panel						
C.2	Transformer Protection Panel						
C.2.1	Transformer differential protection	No.	1				
C.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
C.2.3	Directional over current & E/F Protection Relay	Nos.	1				
C.3	COMMON SPARES						
C.4	Breaker protection Relay						
C.4.1	Breaker failure relay	Nos.	1				
C.4.2	Trip circuit supervision relay	Nos.	1				
C.4.3	Self reset trip relay (relay of each type)	Set	1				
C.4.4	Hand reset trip relay(relay of each type)	Set	1				
C.4.5	Timer relay(relay of each type)	Set	1				
C.4.6	DC supervision relay(relay of each type)	Set	1				
C.4.7	Flag relays (relay of each type)	Set	1				
C.4.8	Auxiliary relays (relay of each type)	Set	1				
5	**Sub-Station Automation System**						
4.1	Bay control unit (IED) of each type	Set	4				
4.2	Ethernet switch of each type	Set	3				
4.3	Time Synchronisation Equipment	Nos	1				
4.4	Gateways	Nos	1				
	SUB TOTAL OF PART C						
	GRAND TOTAL OF BUTWAL GRID DIVISION OFFICE (PART A+PART B+PART C)						
I-F	ATTARIYA GRID						
	PART A : OWNER ACCESSED QUANTITIES						
1	**ISOLATORS**						
A	**132 kV isolator**						
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	6				
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	16				
C	**33 kV Isolator**						
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	11				
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	25				

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
2	**Control and Relay Panels (With Automation)**						
a	132 kV Line Control & Relay Panel along with Line Differential Relay & Numerical Distance relay(both in a single unit) complete with all accessories as per Technical Specification	Nos	6				
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	4				
3	**Time Synchronisation Equipment**	Nos	9				
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**						
a.	132 kV Bays	Nos	54				
b	33 kV Bays	Nos	31				
c.	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	9				
d.	11 kV Bays	Nos	51				
5	**Air conditioning and DG Set**						
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	50				
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1				
	SUB TOTAL OF PART A						
	PART B : VENDOR ACCESSED QUANTITIES						
6	**POWER & CONTROL CABLES**						
a.	**1.1 kV LV Cables**						
b.	Power Cables(PVC)- (1.1kV grade)	package	4				
c.	Control Cable (PVC)- (1.1kV grade)	package	4				
d.	Cable glands, lugs & straight through joints for Power & Control cables	package	4				
7	**Visual Monitoring System for Switchyard and Control Room Equipments as per technical specification**	package	9				

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
8	**Earthing and lightning protection including necessary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**						
1.0	Earth Conductor (copper)	package	4				
2.0	Earth Rod (copper clad steel)	package	4				
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
10	**MASTER CONTROL CENTRE**						
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of six Grid Substations under NEA	package	1				
2	SCADA and Control OperationsVirtual Projection system for MCC	Sets	1				
3.0	**Pre-engineered Buliding with structure**						
3.1	MCC Hall and server Room	Sq.m	200				
3.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	package	1				
3.3	VOIP telephone instrument with one common POE+ switch (number of ports as per requirement)	package	1				
	SUB TOTAL OF PART B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
1	**145KV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	0				
ii)	Copper contact fingers for male & female contacts	Set	2				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	2				
iv)	Limit Switch	set	2				
v)	Terminal Pads & Connectors	No.	4				
3	**36 kV ISOLATORS :**						
i)	One complete pole including support Insulator, motor operating mechanism (MOM) with box but excluding structure						
	1250A, 31.5 KA, 1 E/S (no. of pole)	No.	3				
ii)	Copper contact fingers for male & female contacts	Set	3				

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	set	3				
iv)	Limit Switch	set	3				
v)	Terminal Pads & Connectors	No.	3				
4	**Relay & Protection[SAS Compatible]**						
A	**132 kV/66 kV Panels**						
A.1	Line Protection Panel						
A.1.1	Numerical distance & line differential relay (selectable mode in same product)	Set	1				
A.2	Transformer Protection Panel						
A.2.1	Transformer differential protection	No.	1				
A.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
A.2.3	Directional over current & E/F Protection Relay	no	1				
A.3	COMMON SPARES						
A.3.1	Power supply module for Bus Bar protection.	No.	1				
A.4	Breaker protection Relay [All electrically reset type]						
A.4.1	Breaker failure relay	Nos.	1				
A.4.2	Trip circuit supervision relay	Nos.	1				
A.4.3	Self reset trip relay (relay of each type)	Set	1				
A.4.4	Hand reset trip relay(relay of each type)	Set	1				
A.4.5	Timer relay(relay of each type)	Set	1				
A.4.6	DC supervision relay(relay of each type)	Set	1				
A.4.7	Flag relays (relay of each type)	Set	1				
A.4.8	Auxiliary relays (relay of each type)	Set	1				
C	**33 kV/11kV Panels**						
C.1	Line Protection Panel						
C.2	Transformer Protection Panel						
C.2.1	Transformer differential protection	No.	1				
C.2.2	Restricted earth fault protection relay with non-linear resistor	No.	1				
C.2.3	Directional over current & E/F Protection Relay	Nos.	1				
C.3	COMMON SPARES						
C.4	Breaker protection Relay						
C.4.1	Breaker failure relay	Nos.	1				
C.4.2	Trip circuit supervision relay	Nos.	1				

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations under six Grid Division offices across Nepal.

Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad

ITEM	DESCRIPTION	ESTIMATED		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal) FC			REMARKS
		UNIT	QTY	CURRENCY	UNIT RATE	AMOUNT	
C.4.3	Self reset trip relay (relay of each type)	Set	1				
C.4.4	Hand reset trip relay(relay of each type)	Set	1				
C.4.5	Timer relay(relay of each type)	Set	1				
C.4.6	DC supervision relay(relay of each type)	Set	1				
C.4.7	Flag relays (relay of each type)	Set	1				
C.4.8	Auxiliary relays (relay of each type)	Set	1				
5	**Sub-Station Automation System**						
4.1	Bay control unit (IED) of each type	Set	4				
4.2	Ethernet switch of each type	Set	3				
4.3	Time Synchronisation Equipment	Nos	1				
4.4	Gateways	Nos	1				
	SUB TOTAL OF PART C						
	GRAND TOTAL OF ATTARIYA GRID DIVISION OFFICE (PART A+PART B+PART C)						
Total for Schedule 1 (Total of column 7 to be carried forward to Schdule 5: Grand Summary) GRAND TOTAL OF 6 GRID DIVISION OFFICE (I-A+I-B+I-C+I-D+I-E+I-F)						-	

Name and Address of Bidder:

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No.2: Plant and Equipment including Mandatory Spares Parts to be supplied from within Nepal **LC: Local Currency (NRs)**

Item No.	Item description	Unit	Quantity	Ex Faxtory Price (Excluding VAT)		Inland transportation to site in LC		Total Amount (Excluding Taxes)	VAT and other taxes	Remarks
				Unit Rate	Amount	Unit Rate	Amount			
1	2	3	4	5	6 = (4) x (5)	7	8=(4)x(7)	9=6+8	10	
	NOT APPLICABLE									
	Total of Schedule 2									

Note : 1) Bidder is required to quote prices in this Schedule for all the items in Schedule 1 which they wish to supply from within Nepal.

2.) The Prices of equipments are inclusive of type test charges

\# Specify currency in accordance with BDS ITB Clause 32.1, Part-I of the Bidding Documents.

* Strike-out whichever is not applicable.

[a] *Specify currency in accordance with ITB 19.1 of the BDS.*

[b] *Column 5 Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or the customs duties and sales and other taxes already paid on previously imported items.*

Name of Bidder: **Date:**

Signature of Bidder:

(Printed Name)

(Designation)

(Common Seal)

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule A-3: Design Services

S.N	Item Description	Estimated		Unit Prices		Total Prices	
				Local Currency Portion	Foreign Currency Portion		
		Quantity	Unit	NRs	Currency	LC	FC
1	2	3	4	5	6	7=3x5	8=3x6
	NOT APPLICABLE						
	Total for Schedule 3 (Total of column 7 & 8 to be carried forward to Schdule 5: Grand Summary)						

NOTE: The design cost is included in schedule 1.

Name of Bidder: **Date:**
Signature of Bidder:
(Printed Name)
(Designation)
(Common Seal)

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
I-A	DUHABI GRID					
	PART A: OWNER ACCESSED QUANTITIES					
1	**ISOLATORS**					
A	**132 kV isolator**					
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	6			
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	15			
C	**33 kV Isolator**					
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	30			
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	46			
2	**Control and Relay Panels (With Automation)**					
a	132 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification	Nos	3			
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	3			
c	132 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification	Nos	1			
d	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Nos	1			
e	33 kV Line Control and Relay Panel complete with all accessories as per specification for Line Bays	Nos	1			
f	Line Fault Locator complete with all accessories as per specification.	Sets	1			

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
3	**Time Synchronisation Equipment**	Nos	7			
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**					
a.	132 kV Bays	Nos	35			
b.	33 kV Bays	Nos	40			
c.	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	7			
d.	11 kV Bays	Nos	40			
5	**Air conditioning**					
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	30			
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1			
	SUB TOTAL OF PART A					
	PART B : VENDOR ACCESSED QUANTITIES					
6	**POWER & CONTROL CABLES**					
a.	**1.1 kV LV Cables**					
b.	Power Cables(PVC)- (1.1kV grade)	Package	3			
c.	Control Cable (PVC)- (1.1kV grade)	Package	3			
d.	Cable glands, lugs & straight through joints for Power & Control cables	Package	3			
7	**Visual Monitoring System for watch & ward as per technical specification**	Package	8			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
8	**Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**					
1.0	Earth Conductor (copper)	Package	3			
2.0	Earth Rod (copper clad steel)	Package	3			
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**					
a.	Integration of all 132/33/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu and New Hetauda, Makwanpur as backup including supply of Hardware, Software, accessories etc. as per TS Section Project.	Package	14			
b.	Integration of all 132/33/11 kV Bays under present scope with the Master Control Station under Duhabi Grid Office with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	Package	1			
10	**MASTER CONTROL CENTRE**					
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of all Grid Substations under Duhabi Grid Division, NEA	Package	1			
2	Virtual Projection system for MCC	Sets	1			
3	VOIP telephone instrument with one common POE+ switch (min. 8 port)	Package	1			
	SUB TOTAL OF PART B					
	PART-C: CIVIL WORKS (As per Technical Specification)					
1	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts	Cu.Mtr.	20			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
2	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)	Cu.Mtr.	10			
3	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)	Cu.Mtr.	10			
4	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.	Cu.Mtr.	40			
5	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)	Cu.Mtr.	10			
6	Steel Reinforcement (Fe 500)	MT	4			
7	**All civil works related to pre-engineered Buliding to be supplied as per schedule 1 including internal cable trench, finishing(external & Internal, illumination, sewerage) etc. complete as per technical specification and approved drawings, excluding excavation, PCC, RCC and reinforcement steel which shall be measured and paid seperately under respective items of BPS.**					
7.1	MCC Hall and server Room	Sq.m	200			
7.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	Package	1			
	SUB TOTAL OF PART C					
	GRAND TOTAL OF DUHABI GRID DIVISION OFFICE (PART A+PART B+PART C)					
I-B	DHALKEBAR GRID					
	PART A: OWNER ACCESSED QUANTITIES					
1	**ISOLATORS**					

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
A	**132 kV isolator**					
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	4			
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	6			
C	**33 kV Isolator**					
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	23			
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	45			
2	**Control and Relay Panels (With Automation)**					
A	**132kV Level**					
a	132 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification	Nos	8			
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	2			
3	**Time Synchronisation Equipment**	Nos	6			
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**					
a.	132 kV Bays	Nos	41			
b.	33 kV Bays	Nos	32			
c.	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	6			
d.	11 kV Bays	Nos	38			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
5	**Air conditioning**					
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	32			
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1			
	SUB TOTAL OF PART A					
	PART B : VENDOR ACCESSED QUANTITIES					
6	**POWER & CONTROL CABLES**					
a.	**1.1 kV LV Cables**					
b.	Power Cables(PVC)- (1.1kV grade)	Package	2			
c.	Control Cable (PVC)- (1.1kV grade)	Package	2			
d.	Cable glands, lugs & straight through joints for Power & Control cables	Package	2			
7	**Visual Monitoring System for watch & ward as per technical specification**	Package	7			
8	**Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**					
1.0	Earth Conductor (copper)	Package	1			
2.0	Earth Rod (copper clad steel)	Package	1			
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**					
a.	Integration of all 132/33/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu and New Hetauda, Makwanpur as backup including supply of Hardware, Software, accessories etc. as per TS Section Project.	Package	12			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
b.	Integration of all 132/33/11 kV Bays under present scope with the Master Control Station under Dhalkebar Grid Office with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	Package	1			
10	**MASTER CONTROL CENTRE**					
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of all Grid Substations under Dhalkebar Grid Division, NEA	Package	1			
2	Virtual Projection system for MCC	Sets	1			
3	VOIP telephone instrument with one common POE+ switch (min. 8 port)	Package	1			
	SUB TOTAL OF PART B					
	PART-C: CIVIL WORKS (As per Technical Specification)					
1	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts	Cu.Mtr.	20			
2	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)	Cu.Mtr.	10			
3	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)	Cu.Mtr.	10			
4	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.	Cu.Mtr.	40			
5	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)	Cu.Mtr.	10			
6	Steel Reinforcement (Fe 500)	MT	4			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
7	**All civil works related to pre-engineered Buliding to be supplied as per schedule 1 including internal cable trench, finishing(external & Internal, illumination, sewerage) etc. complete as per technical specification and approved drawings, excluding excavation, PCC, RCC and reinforcement steel which shall be measured and paid seperately under respective items of BPS.**					
7.1	MCC Hall and server Room	Sq.m	200			
7.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	Package	1			
	SUB TOTAL OF PART C					
	GRAND TOTAL OF DHALKEBAR GRID DIVISION OFFICE (PART A+PART B+PART C)					
I-C HETAUDA GRID						
	PART A: OWNER ACCESSED QUANTITIES					
1	**ISOLATORS**					
A	**132 kV isolator**					
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	9.00			
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	24.00			
B	**66 kV isolator**					
a	66 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	12.00			
b	66 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	27.00			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
C	**33 kV Isolator**					
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	4.00			
2	**Control and Relay Panels (With Automation)**					
A	**132kV Level**					
a	132 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification	Nos	7.00			
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	8.00			
c	132 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification	Nos	2.00			
d	66 kV Line Control & Relay Panel along with Directional over current/ Earth fault relay complete with all accessories as per Technical Specification	Nos	10.00			
e	66 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	6.00			
f	66 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification	Nos	2.00			
g	33 kV Protection Control and Relay Panel complete with all accessories as per specification for Line Bays	Nos	2.00			
3	**Time Synchronisation Equipment**	Nos	7.00			
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**					

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
a.	132 kV Bays	Nos	36.00			
b.	66 kV Bays	Nos	24.00			
c.	33 kV Bays	Nos	18.00			
d.	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	7.00			
e.	11 kV Bays	Nos	73.00			
5	**Air conditioning**					
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	40.00			
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1.00			
	SUB TOTAL OF PART A					
	PART B : VENDOR ACCESSED QUANTITIES					
6	**POWER & CONTROL CABLES**					
a.	**1.1 kV LV Cables**					
b.	Power Cables(PVC)- (1.1kV grade)	Package	5.00			
c.	Control Cable (PVC)- (1.1kV grade)	Package	5.00			
d.	Cable glands, lugs & straight through joints for Power & Control cables	Package	5.00			
7	**Visual Monitoring System for watch & ward as per technical specification**	Package	8.00			
8	**Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**					
1.0	Earth Conductor (copper)	Package	5.00			
2.0	Earth Rod (copper clad steel)	Package	5.00			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**					
a.	Integration of all 132/66/33/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu and New Hetauda, Makwanpur as backup including supply of Hardware, Software, accessories etc. as per TS Section Project.	Package	14.00			
b.	Integration of all 132/66/33/11 kV Bays under present scope with the Master Control Station under Hetauda Grid Office with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	Package	1.00			
10	**MASTER CONTROL CENTRE**					
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of all Grid Substations under Hetauda Grid Division, NEA	Package	1.00			
2	Virtual Projection system for MCC	Sets	1.00			
3	VOIP telephone instrument with one common POE+ switch (min. 8 port)	Package	1.00			
	SUB TOTAL OF PART B					
	PART-C: CIVIL WORKS (As per Technical Specification)					
1	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts	Cu.Mtr.	20.00			
2	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)	Cu.Mtr.	10.00			
3	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)	Cu.Mtr.	10.00			
4	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.	Cu.Mtr.	40.00			
5	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)	Cu.Mtr.	10.00			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
6	Steel Reinforcement (Fe 500)	MT	4.00			
7	**All civil works related to pre-engineered Buliding to be supplied as per schedule 1 including internal cable trench, finishing(external & Internal, illumination, sewerage) etc. complete as per technical specification and approved drawings, excluding excavation, PCC, RCC and reinforcement steel which shall be measured and paid seperately under respective items of BPS.**					
7.1	MCC Hall and server Room	Sq.m	200.00			
7.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	Package	1.00			
	SUB TOTAL OF PART C					
	GRAND TOTAL OF HETAUDA GRID DIVISION OFFICE (PART A+PART B+PART C)					
I-D	POKHARA GRID					
	PART A: OWNER ACCESSED QUANTITIES					
1	**ISOLATORS**					
A	**132 kV isolator**					
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	12.00			
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	24.00			
C	**33 kV Isolator**					
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	7.00			
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	13.00			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
2	**Control and Relay Panels (With Automation)**					
A	**132kV Level**					
a	132 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification	Nos	4.00			
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	3.00			
c	132 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification	Nos	1.00			
3	**Time Synchronisation Equipment**	Nos	4.00			
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**					
a.	132 kV Bays	Nos	20.00			
b.	33 kV Bays	Nos	10.00			
c.	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	4.00			
d.	11 kV Bays	Nos	31.00			
5	**Air conditioning**					
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	24.00			
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1.00			
	SUB TOTAL OF PART A					

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
	PART B : VENDOR ACCESSED QUANTITIES					
6	**POWER & CONTROL CABLES**					
a.	**1.1 kV LV Cables**					
b.	Power Cables(PVC)- (1.1kV grade)	Package	4.00			
c.	Control Cable (PVC)- (1.1kV grade)	Package	4.00			
d.	Cable glands, lugs & straight through joints for Power & Control cables	Package	4.00			
7	**Visual Monitoring System for watch & ward as per technical specification**	Package	4.00			
8	**Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**					
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**					
a.	Integration of all 132/33/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu and New Hetauda, Makwanpur as backup including supply of Hardware, Software, accessories etc. as per TS Section Project.	Package	8.00			
b.	Integration of all 132/33/11 kV Bays under present scope with the Master Control Station under Pokhara Grid Office with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	Package	1.00			
10	**MASTER CONTROL CENTRE**					
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of all Grid Substations under Pokhara Grid Division, NEA	Package	1.00			
2	Virtual Projection system for MCC	Sets	1.00			
3	VOIP telephone instrument with one common POE+ switch (min. 8 port)	Package	1.00			
	SUB TOTAL OF PART B					

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
	PART-C: CIVIL WORKS (As per Technical Specification)					
1	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts	Cu.Mtr.	20.00			
2	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)	Cu.Mtr.	10.00			
3	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)	Cu.Mtr.	10.00			
4	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.	Cu.Mtr.	40.00			
5	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)	Cu.Mtr.	10.00			
6	Steel Reinforcement (Fe 500)	MT	4.00			
7	**All civil works related to pre-engineered Buliding to be supplied as per schedule 1 including internal cable trench, finishing(external & Internal, illumination, sewerage) etc. complete as per technical specification and approved drawings, excluding excavation, PCC, RCC and reinforcement steel which shall be measured and paid seperately under respective items of BPS.**					
7.1	MCC Hall and server Room	Sq.m	200.00			
7.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	Package	1.00			
	SUB TOTAL OF PART C					
	GRAND TOTAL OF POKHARA GRID DIVISION OFFICE (PART A+PART B+PART C)					

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
I-E	BUTWAL GRID					
	PART A: OWNER ACCESSED QUANTITIES					
1	**ISOLATORS**					
A	**132 kV isolator**					
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	17.00			
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	52.00			
C	**33 kV Isolator**		-			
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	10.00			
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	24.00			
2	**Control and Relay Panels (With Automation)**					
A	**132kV Level**					
a	132 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification	Nos	10.00			
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	6.00			
c	33/11 kV Transformer Control and Relay Panel complete with all accessories as per specification	Nos	3.00			
d	33 kV Line Control and Relay Panel complete with all accessories as per specification for Line Bays	Nos	1.00			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
e	Digital Protection Coupler with sub Rack and all accessories	Nos	2.00			
3	**Time Synchronisation Equipment**	Nos	6.00			
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**					
a.	132 kV Bays	Nos	40.00			
b.	33 kV Bays	Nos	30.00			
c.	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	6.00			
d.	11 kV Bays	Nos	56.00			
5	**Air conditioning**					
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	34.00			
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1.00			
	SUB TOTAL OF PART A					
	PART B : VENDOR ACCESSED QUANTITIES					
6	**POWER & CONTROL CABLES**					
a.	**1.1 kV LV Cables**					
b.	Power Cables(PVC)- (1.1kV grade)	Package	5.00			
c.	Control Cable (PVC)- (1.1kV grade)	Package	5.00			
d.	Cable glands, lugs & straight through joints for Power & Control cables	Package	5.00			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
7	**Visual Monitoring System for watch & ward as per technical specification**	Package	7.00			
8	**Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**					
1.0	Earth Conductor (copper)	Package	2.00			
2.0	Earth Rod (copper clad steel)	Package	2.00			
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**					
a.	Integration of all 132/33/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu and New Hetauda, Makwanpur as backup including supply of Hardware, Software, accessories etc. as per TS Section Project.	Package	12.00			
b.	Integration of all 132/33/11 kV Bays under present scope with the Master Control Station under Butwal Grid Office with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	Package	1.00			
10	**MASTER CONTROL CENTRE**					
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of all Grid Substations under Butwal Grid Division, NEA	Package	1.00			
2	Virtual Projection system for MCC	Sets	1.00			
3	VOIP telephone instrument with one common POE+ switch (min. 8 port)	Package	1.00			
	SUB TOTAL OF PART B					

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
	PART-C: CIVIL WORKS (As per Technical Specification)					
1	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts	Cu.Mtr.	20.00			
2	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)	Cu.Mtr.	10.00			
3	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)	Cu.Mtr.	10.00			
4	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.	Cu.Mtr.	40.00			
5	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)	Cu.Mtr.	10.00			
6	Steel Reinforcement (Fe 500)	MT	4.00			
7	**All civil works related to pre-engineered Buliding to be supplied as per schedule 1 including internal cable trench, finishing(external & Internal, illumination, sewerage) etc. complete as per technical specification and approved drawings, excluding excavation, PCC, RCC and reinforcement steel which shall be measured and paid seperately under respective items of BPS.**					
7.1	MCC Hall and server Room	Sq.m	200.00			
7.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	Package	1.00			
	SUB TOTAL OF PART C					
	GRAND TOTAL OF BUTWALI GRID DIVISION OFFICE (PART A+PART B+PART C)					

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
I-F	ATTARIYA GRID					
	PART A: OWNER ACCESSED QUANTITIES					
1	**ISOLATORS**					
A	**132 kV isolator**					
a	132 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	6.00			
b	132 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	16.00			
C	**33 kV Isolator**					
a	33 kV 1250A, 31.5 KA, Isolator with Earth Switch	Nos	11.00			
b	33 kV 1250A, 31.5 KA, Isolator without Earth Switch	Nos	25.00			
2	**Control and Relay Panels (With Automation)**					
A	**132kV Level**					
a	132 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification	Nos	6.00			
b	132 kV Transformer Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos	4.00			
3	**Time Synchronisation Equipment**	Nos	9.00			
4	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protection, mastertrip relays, hand reset relays, etc as and when required) and other accessories and metering and indication facilities for the substations along with associated equipments for the following number of bays as per Technical Specification**					
a.	132 kV Bays	Nos	54.00			
b.	33 kV Bays	Nos	31.00			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
c.	Auxillary BCUs and other necessary hardware/facilitities for auxillary system (such as station Supply, AVR/RTCC, AC/DC supply, Battery Charger, AC, aux alarms etc.),	Sets	9.00			
d.	11 kV Bays	Nos	51.00			
5	**Air conditioning**					
a.	High wall type inverter split AC unit of 2 TR capacities with dust filter and air purifier for control room, relay room and battery room with all wirings and accessories	Nos	50.00			
b.	50 KVA Diesel Generator Set for Master Control centre with all required accessories as per Specification.	Sets	1.00			
	SUB TOTAL OF PART A					
	PART B : VENDOR ACCESSED QUANTITIES					
6	**POWER & CONTROL CABLES**					
a.	**1.1 kV LV Cables**					
b.	Power Cables(PVC)- (1.1kV grade)	Package	4.00			
c.	Control Cable (PVC)- (1.1kV grade)	Package	4.00			
d.	Cable glands, lugs & straight through joints for Power & Control cables	Package	4.00			
7	**Visual Monitoring System for watch & ward as per technical specification**	Package	9.00			
8	**Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**					
1.0	Earth Conductor (copper)	Package	4.00			
2.0	Earth Rod (copper clad steel)	Package	4.00			

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

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Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
9	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**					
a.	Integration of all 132/33/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu and New Hetauda, Makwanpur as backup including supply of Hardware, Software, accessories etc. as per TS Section Project.	Package	18.00			
b.	Integration of all 132/33/11 kV Bays under present scope with the Master Control Station under Attariya Grid Office with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	Package	1.00			
10	**MASTER CONTROL CENTRE**					
1	Complete Hardware and Software for Master Control Center (MCC) including all necessary communication equipment as per technical specification for Control and Monitoring of all Grid Substations under Attariya Grid Division, NEA	Package	1.00			
2	Virtual Projection system for MCC	Sets	1.00			
3	VOIP telephone instrument with one common POE+ switch (min. 8 port)	Package	1.00			
	SUB TOTAL OF PART B					
	PART-C: CIVIL WORKS (As per Technical Specification)					
1	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts	Cu.Mtr.	20.00			
2	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)	Cu.Mtr.	10.00			
3	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)	Cu.Mtr.	10.00			
4	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.	Cu.Mtr.	40.00			

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Grid Substation Automation Project- Phase II

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Schedule No : .4(a) Installation and Construction Charges

ITEM	DESCRIPTION	ESTIMATE		INSTALLATION AND CONSTRUCTION CHARGES LOCAL CURRENCY (NPR)		REMARKS
		UNIT	QTY	UNIT RATE	AMOUNT	
1	2	3	4	5	6=4*5	7
5	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)	Cu.Mtr.	10.00			
6	Steel Reinforcement (Fe 500)	MT	4.00			
7	**All civil works related to pre-engineered Buliding to be supplied as per schedule 1 including internal cable trench, finishing(external & Internal, illumination, sewerage) etc. complete as per technical specification and approved drawings, excluding excavation, PCC, RCC and reinforcement steel which shall be measured and paid seperately under respective items of BPS.**					
7.1	MCC Hall and server Room	Sq.m	200.00			
7.2	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	Package	1.00			
	SUB TOTAL OF PART C					
	GRAND TOTAL OF ATTARIYA GRID DIVISION OFFICE (PART A+PART B+PART C)					
Total for Schedule 4(Total of column 6 to be carried forward to Schedule 5: Grand Summary) GRAND TOTAL OF 6 GRID DIVISION OFFICE (I-A+I-B+I-C+I-D+I-E+I-F)						

Name of Bidder:
Signature of Bidder:
(Printed Name)
(Designation)
(Common Seal)

Date:

Name and Address of the Bidder

Signature and Seal

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

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Schedule No. 4 : Installation and Other Services ***(Common for all)***

(b):Training Charges for training to be imparted abroad

Sl. No.	Description	Training Topics	Country where training is to be imparted	Nos. of Trainee	Training duration in days	Total Training Charges	
						Currency	Total Training Charges
1	2		3	4	5	6	7 = 4x5 x 6
A	Training to Owners personnel on Design , testing and Maintenance aspect as per Section Project, Technical Specification at manufacturer's works	i) Control & Protection and Substation Automation System		6	7		
		ii) MCC server and Database Management, Integration of Substations		6	15		
	Total for Training Charges						
	Total for Schedule 4 b (Total of column 7 to be carried forward to Schedule 5: Grand Summary)						

REMARKS:

1. Training at Manufacturer's works: The Contractor shall include in the training charges payment of per Diem allowance to NEA trainees @ USD 200 per day per trainee for the duration of training abroad towards accommodation, meals and other incidental expenses and separately to and fro economy class air ticket from Nepal to place of training. The duration of training shall be excluding travelling period.

Name of Bidder:
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(Designation)
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NEPAL ELECTRICITY AUTHORITY

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Grid Substation Automation Project- Phase II

PRICE SCHEDULE

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Schedule No. 4 : Installation and Other Services *(Common for all)*

(c):Training Charges for training to be imparted to Employer's Personnel by Bidder's Instructor in Nepal

Sl. No.	Description of the Test	Item for which training is to be imparted.	Training duration in days	Training Charges for Contractors Trainers		
				Currency	Unit rate	Total Training Charges
	2		4	5	6	7 = 4x 6
a)	On Job training on operation, maintenance and testing & commissioning aspectat at one Location in Nepal as per section Project, Technical Specification	i) Control & Protection	7	NPR		
		ii) Substation Automation System including integration aspect of existing SCADA (of Siemens supplied SINAUT Spectrum Software) at Load Dispatch Center	7	NPR		
	Total for Training Charges					
	Total for Schedule 4 c (Total of column 7 to be carried forward to Schedule 5: Grand Summary)					

REMARKS: On Job Training in Nepal: The traveling and living expenses of Owner's personnel for the training programme conducted in Nepal shall be borne by the Owner.

Name of Bidder:
Signature of Bidder:
(Printed Name)
(Designation)
(Common Seal)

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Grid Substation Automation Project- Phase II

PRICE SCHEDULE

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

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Schedule No. 4 : Installation and Other Services ***(Common for all)***

(d):Other Services

Sl No	Description	Unit	Qty.	Total Maintenance Charges	
				Currency	Total Maintenance Charges
1	2	3	4	5	6
1	Annual Operation and Maintenance services of the facilities after operational acceptance	Year	3	NPR	
2	Integration of Upcoming new substations to MCC within 5 years after comissioning of MCC at respective grid office.	Nos	10	NPR	
	Total Maintenance Charges for Equipment Package (Total Schedule 4c)				
	Total for Schedule 4 d (Total of column 6 to be carried forward to Schedule 5: Grand Summary)				

Name of Bidder: **Date:**

Signature of Bidder:

(Printed Name)

(Designation)

(Common Seal)

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

GRID SUBSTATION AUTOMATION PROJECT - PHASE II

PRICE SCHEDULE SUMMARY

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

PMD/EGMP/GSAPP2-078/79-01: Design, Supply, Installation, Integration, Testing, Commissioning of Substation Automation System(SAS) for existing substations of six Grid Division offices

Sl. No.	Description	Total Price Foreign Currency	Total Price Local Currency (NRs.)
		1	2
1	**TOTAL SCHEDULE NO. 1**		
2	**TOTAL SCHEDULE NO. 2**		
3	**TOTAL SCHEDULE NO. 3**		
4	**TOTAL SCHEDULE NO. 4**		
(a)	Installation and construction charges		
(b)	Training charges for training to be imparted abroad		
(c)	Training charges for training to be imparted in Nepal		
(d)	Annual Maintenance and Integration charges		
Total excluding Custom duty and VAT			

Name of Bidder: Date:

Signature of Bidder:

(Printed Name)

(Designation)

(Common Seal)

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

GRID SUBSTATION AUTOMATION PROJECT - PHASE II

EGMP: ELECTRICITY GRID MODERNIZATION PROJECT

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Schedule No. 6: Recommended Availability/Optional Spares Parts and recommended Test Equipment in line with technical Specifications

	Name & Description of Parts	Name of Original Manufacturer	Part No.	Number of Units in each set	Total No. of Sets to be provided	Unit Price	Total Price	Remarks
	NOT APPLICABLE							

Date:

Signature: _____

Printed Name: _____

_____

Common Seal: _____