NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Kathmandu Valley Substation Automation Project

PTDEEP: Power Transmission and Distribution Efficiency Enhancement Project

PMD/PTDEEP/KVSAP-075/76/01:Design, Supply, Installation, Integration, Testing and Commissioning of Substation Automation System (SAS) for Existing Grid Substations in Kathmandu Valley

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
				FC			FC
		Unit	Quantity	Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
PART 1	132/66/11kV Siuchatar Substation						
	PART - A: OWNER ASSESSED QUANTITIES						
A	145kV EQUIPMENT						
1.0	145kV Isolator (3-phase)						
a	1250A, 31.5 KA, Isolator with Earth Switch	Nos	2				
b	1250A, 31.5 KA, Isolator without Earth Switch	Nos	8				
B	66 kV EQUIPMENT						
1.0	72.5 kV Isolator (3-phase)						
a	1250A, 31.5 KA, Isolator with Earth Switch	Nos	2				
b	1250A, 31.5 KA, Isolator without Earth Switch	Nos	28				
C	CONTROL & RELAY PANELS (WITH AUTOMATION)						
1	132 kV						
1.1	132 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification	Nos.	1				
1.2	132 kV Transformer Line Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos.	2				
2	66 kV						
2.1	66 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification	Nos.	5				
2.2	66 kV Transformer Line Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos.	2				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
3	**Other/Common equipments Pertaining to C & R System**						
3.1	Time Synchronisation Equipment	No.	1				
D	**SUBSTATION AUTOMATION**						
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.1	132 kV Bays	Nos.	9				
1.2	66 kV Bays	Nos.	14				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
1.4	11 kV Indoor Switchgear Panels	Nos.	18				
E	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories	Nos.	10				
	SUB TOTAL PART-A						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	Visual Monitoring System for watch & ward as per technical specification	LS	1				
C	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)	LS	1				
2.0	Earth Rod (copper clad steel)	LS	1				
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
	PART-C: MANDATORY SPARES						
	Total For PART 1 Siuchatar Substation [(Part-A+ Part-B+ Part C)						
PART 2	**132/66/11 kV Balaju S/S**						
	PART -A: OWNER ASSESSED QUANTITIES						
A	**CONTROL & RELAY PANELS (WITH AUTOMATION)**						
1	**132 kV**						
1.1	132 kV Line Simplex type Relay Panel with Numerical Distance relay complete with all accessories as per Technical Specification	Nos.	1				
1.2	132 kV Transformer Circuit Simplex type Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos.					
2	**66 kV**						
2.1	66 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification	Nos.	5				
2.2	66 kV Transformer Line Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)	Nos.	2				
2.3	66 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification	set	1				
3	**Other/Common equipments Pertaining to C & R System**						
3.1	Time Synchronisation Equipment	No.	1				
B	**SUBSTATION AUTOMATION**						
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.1	132 kV Bays	Nos.	5				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1.2	66 kV Bays	Nos.	11				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
1.4	11 kV Indoor Switchgear Panels	Nos.	22				
C	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories	Nos.	15				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	**Visual Monitoring System for watch & ward as per technical specification**	LS	1				
C	**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)	LS	1				
2.0	Earth Rod (copper clad steel)	LS	1				
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total for PART 2 132/66/11 kV Balaju Substation (III) (Part-A+ Part-B+ Part C)						
PART 3	**132/33/11 kV Matatrirtha Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	**Integration of all 132/33/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.**	LS	1				
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
B	Visual Monitoring System for watch & ward as per technical specification	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total For PART 3 Matatirtha Substation [(Part-A+ Part-B+ Part C)						
PART 4	**132/66/11 kV Chapali Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**RELAY PANELS (WITH AUTOMATION)**						
1	**Common equipments Pertaining to Contorl & Relay System**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1.1	Time Synchronisation Equipment	No.	1				
B	**SUBSTATION AUTOMATION**						
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.1	132 kV Bays	Nos.	8				
1.2	66 kV Bays	Nos.	4				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
1.4	11 kV Indoor Switchgear Panels	Nos.	10				
C	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room	Nos.	5				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	**Visual Monitoring System for watch & ward as per technical specification**	LS	1				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
C	**Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total For PART 4 Chapali Substation [(Part-A+ Part-B+ Part C)						
PART 5	**132/66/11 kV Bhaktapur Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**145kV EQUIPMENT**						
1.0	**145kV Isolator (3-phase)**						
a	1250A, 31.5 KA, Isolator with Earth Switch	Nos	3				
b	1250A, 31.5 KA, Isolator without Earth Switch	Nos	6				
B	**66 kV EQUIPMENT**						
1.0	**72.5 kV Isolator (3-phase)**						
a	1250A, 31.5 KA, Isolator without Earth Switch	Nos	5				
C	**CONTROL & RELAY PANELS (WITH AUTOMATION)**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1	**Common equipments Pertaining to C & R System**						
1.1	Time Synchronisation Equipment	No.	1				
D	**SUBSTATION AUTOMATION**						
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.1	132 kV Bays	Nos.	13				
1.2	66 kV Bays	Nos.	2				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
1.4	11 kV HT Indoor Switchgear Panels	Nos.	25				
E	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories	Nos.	8				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	Visual Monitoring System for watch & ward as per technical specification	LS	1				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
C	**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)	LS	1				
2.0	Earth Rod (copper clad steel)	LS	1				
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total For PART 5 Bhaktapur Substation [(Part-A+ Part-B+ Part C)						
PART 6	**132/33 kV Lamosangu Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**145kV EQUIPMENT**						
1.0	**145kV Isolator (3-phase)**						
a	1250A, 31.5 KA, Isolator without Earth Switch	Nos	12				
B	**36 kV EQUIPMENT**						
1.0	**36 kV Isolator (3-phase)**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
a	1250A, 31.5 KA, Isolator without Earth Switch	Nos	1				
C	**RELAY PANELS (WITH AUTOMATION)**						
3	**Common equipments Pertaining to C & R System**						
3.1	Time Synchronisation Equipment	No.	1				
D	**SUBSTATION AUTOMATION**						
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.1	132 kV Bays	Nos.	12				
1.2	33 kV Bays	Nos.	7				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
E	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories	Nos.	5				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
B	Visual Monitoring System for watch & ward as per technical specification	LS	1				
C	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)	LS	1				
2.0	Earth Rod (copper clad steel)	LS	1				
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 132/66/33/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total For PART 6 Lamosangu Substation [(Part-A+ Part-B+ Part C)						
PART 7	**66/11 kV New Chabel Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**66 kV EQUIPMENT**						
1.0	**72.5 kV Isolator (3-phase)**						
a	1250A, 31.5 KA, Isolator without Earth Switch	Nos	4				
B	**CONTROL & RELAY PANELS (WITH AUTOMATION)**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
3	**Other/Common equipments Pertaining to C & R System**						
3.1	Time Synchronisation Equipment	No.	1				
C	**SUBSTATION AUTOMATION**						
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.2	66 kV Bays	Nos.	6				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
1.4	11 kV HT Indoor Switchgear Panels	Nos.	14				
D	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room	Nos.	6				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	Visual Monitoring System for watch & ward as per technical specification	LS	1				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
C	**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)	LS	1				
2.0	Earth Rod (copper clad steel)	LS	1				
F	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total For PART 7 New Chabel Substation [(Part-A+ Part-B+ Part C)						
PART 8	**66/11 kV Lainchaur Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**RELAY PANELS (WITH AUTOMATION)**						
1	**66 kV**						
1.1	66/11 kV Transformer Circuit Simplex type Relay Panel (For both HV & MV side) complete with all accessories	Nos.	2				
2	Other/Common equipments Pertaining to C & R System						
2.1	Time Synchronisation Equipment	No.	1				
B	**SUBSTATION AUTOMATION**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.2	66 kV Bays	Nos.	3				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
1.4	11 kV Indoor Switchgear Panels	Nos.	15				
C	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room	Nos.	6				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	**Visual Monitoring System for watch & ward as per technical specification**	LS	1				
C	**Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)**						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	SUB-TOTAL-C						
	Total For PART 8 Lainchaur Substation [(Part-A+ Part-B+ Part C)						
PART 9	**66/11 kV K-3 Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**RELAY PANELS (WITH AUTOMATION)**						
1	**Other/Common equipments Pertaining to C & R System**						
1.1	Time Synchronisation Equipment	No.	1				
B	**SUBSTATION AUTOMATION**						
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.2	66 kV Bays	Nos.	4				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1.4	11 kV HT Indoor Switchgear Panels	Nos.	14				
C	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories	Nos.	6				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total For PART 9 K3 Substation [(Part-A+ Part-B+ Part C)						
PART 10	**66/11 kV Patan Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**66 kV EQUIPMENT**						
1.0	72.5 kV Isolator (3-phase)						
a	1250A, 31.5 KA, Isolator without Earth Switch	Nos	6				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
C	**CONTROL & RELAY PANELS (WITH AUTOMATION)**						
1	**66 kV**						
1.1	66 kV Control & Relay Panel complete with all accessories as perTechnical Specification	Nos	3				
1.2	66/11 kV Transformer Control & Relay Panel complete with all accessories as perTechnical Specification	Nos	2				
2	Other/Common equipments Pertaining to C & R System						
2.1	Time Synchronisation Equipment	No.	1				
D	**SUBSTATION AUTOMATION**						
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.2	66 kV Bays	Nos.	6				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
1.4	11 kV Indoor Switchgear Panels	Nos.	28				
E	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories	Nos.	10				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	Visual Monitoring System for watch & ward as per technical specification	LS	1				
C	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)	LS	1				
2.0	Earth Rod (copper clad steel)	LS	1				
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total For PART 10 Patan Substation [(Part-A+ Part-B+ Part C)						
PART 11	**66/11 kV Banepa Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**66 kV EQUIPMENT**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1.0	72.5 kV Isolator (3-phase)						
c	1250A, 31.5 KA, Isolator without Earth Switch	Nos	6				
B	**RELAY PANELS (WITH AUTOMATION)**						
3	**Other/Common equipments Pertaining to C & R System**						
3.1	Time Synchronisation Equipment	No.	1				
C	**SUBSTATION AUTOMATION**						
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.2	66 kV Bays	Nos.	4				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
1.4	11 kV HT Indoor Switchgear Panels	Nos.	14				
D	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories	Nos.	6				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	**Visual Monitoring System for watch & ward as per technical specification**	LS	1				
C	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)	LS	1				
2.0	Earth Rod (copper clad steel)	LS	1				
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total For PART 11 Banepa Substation [(Part-A+ Part-B+ Part C)						
PART 12	**66/11 kV Panchkhal Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**66 kV EQUIPMENT**						
1.0	**72.5 kV Isolator (3-phase)-HDB**						
c	1250A, 31.5 KA, Tandem Isolator without Earth Switch	Nos	8				
B	**SUBSTATION AUTOMATION**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
1	**Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification**						
1.2	66 kV Bays	Nos.	4				
1.3	BCU and other necessary facilitities for auxilary system (such as station Supply, AC/DC supply, Battery Charger etc.)	set	1				
1.4	11 kV Indoor Switchgear Panels	Nos.	5				
C	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room	Nos.	6				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
5	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	Visual Monitoring System for watch & ward as per technical specification	LS	1				
C	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)	LS	1				
2.0	Earth Rod (copper clad steel)	LS	1				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**						
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
2	Integration of all 66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary comunication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.	LS	1				
	SUB TOTAL PART-B						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).						
	Total For PART 12 Panchkhal Substation [(Part-A+ Part-B+ Part C)						
PART 13	**66/11 kV Baneshwor Substation**						
	PART - A: OWNER ASSESSED QUANTITIES						
A	**Master Control Center (MCC) at Baneshwor Substation**						
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 Kathmandu Grid Division, NEA	set	1				
2	Virtual Projection systme for MCC	set	1				
B	**66 kV EQUIPMENT**						
1.0	72.5 kV Isolator (3-phase)						
a	1250A, 31.5 KA, Isolator without Earth Switch	Nos	4				
C	**SUBSTATION AUTOMATION**						

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
D	**Air conditioning**						
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room	Nos.	10				
E	Furnitures and Other Civil Structures for Control room of Master Control Center including all accessories as per Technical Specification	LS	1				
	SUB TOTAL PART-A						
	PART-B: VENDOR ASSESSED QUANTITIES						
A	**POWER & CONTROL CABLES**						
1	**1.1 kV LV Cables**						
1.1	Power Cables(PVC)- (1.1kV grade)	LS	1				
1.2	Control Cable (PVC)- (1.1kV grade)	LS	1				
1.3	Cable glands, lugs & straight through joints for Power & Control cables	LS	1				
B	Visual Monitoring System for watch & ward as per technical specification	LS	1				
C	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)	LS	1				
2.0	Earth Rod (copper clad steel)	LS	1				
23.0	**PRE ENGINEERED BUILDINGS - MCC HALL**						
i)	**Pre-engineered Buliding with structure**						
(a)	MCC Hall and server Room	Sq. M.	120				
D	**SUBSTATION AUTOMATION**						
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
2	Integration of all 132/66/11 kV Bays of all 12 Substations under present scope with the Master Control Station in Baneshwor Substation, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.	LS	1				
	SUB TOTAL 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.	2				
ii)	Copper contact fingers for male & female contacts	Set	6				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	Set	6				
iv)	Limit Switch	Set	6				
v)	Terminal Pads & Connectors	Nos.	9				
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.	2				
ii)	Copper contact fingers for male & female contacts	Set	4				
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	Set	4				
iv)	Limit Switch	Set	4				
v)	Terminal Pads & Connectors	Nos.	9				
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.	1				
ii)	Copper contact fingers for male & female contacts	Set	2				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
iii)	Open/Close contactor assembly, timers, key interlock push button switch & auxilliary switches	Set	1				
iv)	Limit Switch	Set	2				
v)	Terminal Pads & Connectors	Nos.	3				
4	**Relay & Protection**						
a.	**132 kV Panels**						
3.1	Line Protection Panel						
3.1.1	Numerical distance or line differential relay (1 no. of each type)	Set	2				
3.2	Transformer Protection Panel						
3.2.1	Transformer differential protection	No.	2				
3.2.2	Restricted earth fault protection relay with non-linear resistor	No.	2				
3.2.3	Directional over current & E/F Protection Relay	no	2				
3.3	COMMON SPARES						
3.3.1	Power supply module for Bus Bar protection.	No.					
3.3.2	Bay unit module	Set	2				
3.4	Breaker protection Relay						
3.4.1	Breaker failure relay	No.	2				
3.4.2	Trip circuit supervision relay	Nos.	2				
3.4.3	Self reset trip relay (relay of each type)	Set	2				
3.4.4	Hand reset trip relay(relay of each type)	Set	2				
3.4.5	Timer relay(relay of each type)	Set	2				
3.4.6	DC supervision relay(relay of each type)	Set	2				
3.4.7	Flag relays (relay of each type)	Set	2				
3.4.8	Auxiliary relays (relay of each type)	Set	2				
b.	**66 kV Panels**						
3.1	Line Protection Panel						
3.1.1	Numerical distance or line differential relay (1 no. of each type)	Set	2				
3.2	Transformer Protection Panel						
3.2.1	Transformer differential protection	No.	2				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
3.2.2	Restricted earth fault protection relay with non-linear resistor	No.	2				
3.2.3	Directional over current & E/F Protection Relay	no	2				
3.3	COMMON SPARES						
3.3.1	Power supply module for Bus Bar protection.	No.					
3.3.2	Bay unit module	Set	2				
3.4	Breaker protection Relay						
3.4.1	Breaker failure relay	No.	2				
3.4.2	Trip circuit supervision relay	Nos.	2				
3.4.3	Self reset trip relay (relay of each type)	Set	2				
3.4.4	Hand reset trip relay(relay of each type)	Set	2				
3.4.5	Timer relay(relay of each type)	Set	2				
3.4.6	DC supervision relay(relay of each type)	Set	2				
3.4.7	Flag relays (relay of each type)	Set	2				
3.4.8	Auxiliary relays (relay of each type)	Set	2				
4	**Sub-Station Automation System**						
4.1	Bay control unit (IED) of each type	Set	3				
4.2	Ethernet switch of each type	Set	3				
6	**Control and Relay Panels**						
3	Other/Common equipments Pertaining to C & R System						
3.1	Time Synchronisation Equipment	No.	2				

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

Item No.	Item description	Estimated		CIP Project Site including insurance, clearing, forwarding and transportation to site (Excluding Taxes and Duties applicable in Nepal)			Total Amount (Excluding Taxes and Duties)
		Unit	Quantity	FC			FC
				Currency#	Unit Rate	Amount	
1	2	4	5	6	7	8 = (7) x (5)	9=8
	SUB-TOTAL-C						
	Total For PART 12 Baneshwor Substation [(Part-A+ Part-B+ Part C)						
	Total for Schedule 1 (Total of column 9 to be carried forward to Schdule 5: Grand Summary)						

Note : 1) Bidder is required to quote prices in this Schedule for all the individual items/sub-items.
2.) The Prices of equipments are inclusive of type test charges
3.) BOQ given above is indicative only based on the scope of work as given in Employer's Requirements. The quantities mentioned above may undergo change during detailed engineering to Specify currency in accordance with BDS ITB Clause 32.1, Part-I of the Bidding Documents.

* Strike-out whichever is not applicable.

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

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Kathmandu Valley Substation Automation Project

PTDEEP: Power Transmission and Distribution Efficiency Enhancement Project

PMD/PTDEEP/KVSAP-075/76/01:Design, Supply, Installation, Integration, Testing and Commissioning of Substation Automation System (SAS) for Existing Grid Substations in Kathmandu Valley

Schedule A-3: Design Services

Item No.	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
Kathmandu Valley Substation Automation Project

PTDEEP: Power Transmission and Distribution Efficiency Enhancement Project
PMD/PTDEEP/KVSAP-075/76/01:Design, Supply, Installation, Integration, Testing and Commissioning of Substation Automation System (SAS) for Existing Grid Substations in Kathmandu Valley
Schedule No. 4(a): Installation and Construction Charges

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
PART 1	**132/66/11kV Siuchatar Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**145kV EQUIPMENT**										
1.0	145kV Isolator (3-phase)										
a	1250A, 31.5 KA, Isolator with Earth Switch			Nos	2						
c	1250A, 31.5 KA, Isolator without Earth Switch			Nos	8						
B	**66 kV EQUIPMENT**										
1.0	72.5 kV Isolator (3-phase)										
a	1250A, 31.5 KA, Isolator with Earth Switch			Nos	2						
c	1250A, 31.5 KA, Isolator without Earth Switch			Nos	28						
C	**CONTROL & RELAY PANELS (WITH AUTOMATION)**										
1	**132 kV**										
1.1	132 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification				1						
1.2	132 kV Transformer Line Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)				2						
2	**66 kV**										
2.1	66 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification				5						
2.2	66 kV Transformer Line Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)				2						
3	**Other/Common equipments Pertaining to C & R System**										
3.1	Time Synchronisation Equipment			No.	1						
D	**SUBSTATION AUTOMATION**										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.1	132 kV System			Nos.	9						
1.2	66 kV System			Nos.	14						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	18						
E	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories			Nos.	10						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
C	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)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										
A	Modification/Reinforcement of Steel Supporting Structures for 132 kV and 66 kV Isolators as per Techinical Specification			LS	1						
	SUB-TOTAL-C										
	Total For PART 1 Siuchatar Substation [(Part-A+ Part-B+ Part C)										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
PART 2	**132/66/11 kV Balaju S/S**										
	PART -A: OWNER ASSESSED QUANTITIES										
A	**CONTROL & RELAY PANELS (WITH AUTOMATION)**										
1	**132 kV**										
1.1	132 kV Line Simplex type Relay Panel with Numerical Distance relay complete with all accessories as per Technical Specification			Nos.	1						
2	**66 kV**										
2.1	66 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification			Nos.	5						
2.2	66 kV Transformer Line Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)			Nos.	2						
2.3	66 kV Bus Coupler Control and Relay Panel including Busbar Protection with all accessories as per Technical Specification			Nos.	1						
3	Other/Common equipments Pertaining to C & R System										
3.1	Time Synchronisation Equipment			No.	1						
B	**SUBSTATION AUTOMATION**										
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.1	132 kV System			Nos.	5						
1.2	66 kV System			Nos.	11						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	22						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
						Portion in Foreign Currency			Portion in Nepalese		LC
		Country of Origin	Type & Designation	Unit	Quantity	Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
C	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories			Nos.	15						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
C	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)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										
	SUB-TOTAL-C										
	Total for PART 2 132/66/11 kV Balaju Substation (III) (Part-A+ Part-B+ Part C)										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
						Portion in Foreign Currency			Portion in Nepalese		LC
		Country of Origin	Type & Designation	Unit	Quantity	Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
PART 3	**132/66/33/11 kV Matatrirtha Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.										
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
	SUB TOTAL PART-B										
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).										
	SUB-TOTAL-C										
	Total For PART 3 Matatirtha Substation [(Part-A+ Part-B+ Part C)										
PART 4	**132/66/11 kV Chapali Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**CONTROL & RELAY PANELS (WITH AUTOMATION)**										
3	Common equipments Pertaining to Contorl & Relay System										
3.1	Time Synchronisation Equipment			No.	1						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
						Portion in Foreign Currency			Portion in Nepalese		LC
		Country of Origin	Type & Designation	Unit	Quantity	Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
B	**SUBSTATION AUTOMATION**										
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.1	132 kV System			Nos.	8						
1.2	66 kV System			Nos.	4						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	10						
C	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room			Nos.	5						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
C	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)			LS	1						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
						Portion in Foreign Currency			Portion in Nepalese		LC
		Country of Origin	Type & Designation	Unit	Quantity	Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										
	SUB-TOTAL-C										
	Total For PART 4 Chapali Substation [(Part-A+ Part-B+ Part C)										
PART 5	**132/66/11 kV Bhaktapur Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**145kV EQUIPMENT**										
1.0	145kV Isolator (3-phase)										
a	1250A, 31.5 KA, Isolator with Earth Switch			Nos	3						
b	1250A, 31.5 KA, Isolator without Earth Switch			Nos	6						
B	**66 kV EQUIPMENT**										
1.0	72.5 kV Isolator (3-phase)										
a	1250A, 31.5 KA, Isolator without Earth Switch			Nos	5						
C	**RELAY PANELS (WITH AUTOMATION)**										
3	Common equipments Pertaining to C & R System										
3.1	Time Synchronisation Equipment			No.	1						
D	**SUBSTATION AUTOMATION**										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.1	132 kV System			Nos.	13						
1.2	66 kV System			Nos.	2						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	25						
C	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories			Nos.	8						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
B	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
C	Visual Monitoring System for watch & ward as per technical specification			LS	1						
E	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)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	POWER & CONTROL CABLES										
1.0	1.1 kV LV Cables										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
C	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)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										
A	Modification/Reinforcement of Steel Supporting Structures for 132 kV and 66 kV Isolators as per Techinical Specification			LS	1						
	SUB TOTAL PART-C										
	Total For PART 4 Bhaktapur Substation [(Part-A+ Part-B+ Part C)										
PART 6	**132/33 kV Lamosangu Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**145kV EQUIPMENT**										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1.0	145kV Isolator (3-phase)										
a	1250A, 31.5 KA, Isolator with Earth Switch			Nos	1						
a	1250A, 31.5 KA, Isolator without Earth Switch			Nos	12						
B	**36 kV EQUIPMENT**										
1.0	36 kV Isolator (3-phase)										
a	1250A, 31.5 KA, Isolator without Earth Switch			Nos	1						
C	**RELAY PANELS (WITH AUTOMATION)**										
3	Common equipments Pertaining to C & R System										
3.1	Time Synchronisation Equipment			No.	1						
D	**SUBSTATION AUTOMATION**										
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.1	132 kV System			Nos.	12						
1.2	33 kV System			Nos.	7						
1.3	BCU for auxilary system			set	1						
E	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories			Nos.	5						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
C	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)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										
A	Modification/Reinforcement of Steel Supporting Structures for 132 kV and 66 kV Isolators as per Techinical Specification			LS	1						
	SUB-TOTAL-C										
	Total For PART 5 Lamosangu Substation [(Part-A+ Part-B+ Part C)										
PART7	**66/11 kV New Chabel Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**66 kV EQUIPMENT**										
1.0	72.5 kV Isolator (3-phase)										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
a	1250A, 31.5 KA, Isolator without Earth Switch			Nos	4						
B	**RELAY PANELS (WITH AUTOMATION)**										
3	Other/Common equipments Pertaining to C & R System										
3.1	Time Synchronisation Equipment			No.	1						
C	**SUBSTATION AUTOMATION**										
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.2	66 kV System			Nos.	6						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	14						
D	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room			Nos.	6						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
E	Earthing and lightning protection including necesaary connectors/connections, risers etc. complete in all respect(but excluding LM structures for Lightning protection)										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1.0	Earth Conductor (copper)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						
C	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										
A	Modification/Reinforcement of Steel Supporting Structures for 66 kV Isolators as per Techinical Specification			LS	1						
	SUB-TOTAL-C										
	Total For PART 6 New Chabel Substation [(Part-A+ Part-B+ Part C)										
PART 8	**66/11 kV Lainchaur Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**RELAY PANELS (WITH AUTOMATION)**										
1	**66 kV**										
1.1	66/11 kV Transformer Circuit Simplex type Relay Panes			Nos.	2						
3	Other/Common equipments Pertaining to C & R System										
3.1	Time Synchronisation Equipment			Nos.	1						
B	**SUBSTATION AUTOMATION**										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.2	66 kV System			Nos.	3						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	15						
C	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room			Nos.	6						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
B	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
C	Visual Monitoring System for watch & ward as per technical specification			LS	1						
E	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)			LS	1						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
						Portion in Foreign Currency			Portion in Nepalese		LC
		Country of Origin	Type & Designation	Unit	Quantity	Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).										
	SUB-TOTAL-C										
	Total For PART 7 Lainchaur Substation [(Part-A+ Part-B+ Part C)										
PART 9	**66/11 kV K3 Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**CONTROL & RELAY PANELS (WITH AUTOMATION)**										
1	Other/Common equipments Pertaining to C & R System										
1.1	Time Synchronisation Equipment			No.	1						
B	**SUBSTATION AUTOMATION**										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.2	66 kV System			Nos.	4						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	14						
H	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories			Nos.	10						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
B	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
C	Visual Monitoring System for watch & ward as per technical specification			LS	1						
C	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room			Nos.	6						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
						Portion in Foreign Currency			Portion in Nepalese		LC
		Country of Origin	Type & Designation	Unit	Quantity	Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 132/66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: MANDATORY SPARES (Break up of Lumpsum quantity shall be as per Annexure-I, Section Project of Technical Specification).										
	SUB-TOTAL-C										
	Total For PART 8 K3 Substation [(Part-A+ Part-B+ Part C)										
PART 10	**66/11 kV Patan Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**66 kV EQUIPMENT**										
1.0	72.5 kV Isolator (3-phase)										
a	1250A, 31.5 KA, Isolator without Earth Switch			Nos	6						
B	**CONTROL & RELAY PANELS (WITH AUTOMATION)**										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
1	**66 kV**										
1.1	66 kV Line Control & Relay Panel along with Line Differential Relay or Numerical Distance relay complete with all accessories as per Technical Specification			Nos.	3						
1.2	66 kV Transformer Line Control & Relay Panel complete with all accessories as per Technical Specification (For both HV & MV side)			Nos.	2						
2	Other/Common equipments Pertaining to C & R System										
2.1	Time Synchronisation Equipment			No.	1						
D	**SUBSTATION AUTOMATION**										
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.2	66 kV System			Nos.	6						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	28						
E	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories			Nos.	10						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
						Portion in Foreign Currency			Portion in Nepalese		LC
		Country of Origin	Type & Designation	Unit	Quantity	Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
C	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)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										
A	**Modification/Reinforcement of Steel Supporting Structures for 66 kV Isolators as per Techinical Specification**			**LS**	**1**						
	SUB-TOTAL-C										
	Total For PART 9 Patan Substation [(Part-A+ Part-B+ Part C)										
PART 11	**66/11 kV Banepa Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**66 kV EQUIPMENT**										
1.0	72.5 kV Isolator (3-phase)-HDB										
a	1250A, 31.5 KA, Tandem Isolator without Earth Switch			Nos	6						
B	**CONTROL & RELAY PANELS (WITH AUTOMATION)**										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
3	Other/Common equipments Pertaining to C & R System										
3.1	Time Synchronisation Equipment			No.	1						
C	**SUBSTATION AUTOMATION**										
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.2	66 kV System			Nos.	4						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	14						
D	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room with all wirings and accessories			Nos.	6						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
C	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)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
						Portion in Foreign Currency			Portion in Nepalese		LC
		Country of Origin	Type & Designation	Unit	Quantity	Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										
A	Modification/Reinforcement of Steel Supporting Structures for 66 kV Isolators as per Techinical Specification			**LS**	**1**						
	SUB-TOTAL-C										
	Total For PART 10 Banepa Substation [(Part-A+ Part-B+ Part C)										
PART 12	**66/11 kV Panchkhal Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**66 kV EQUIPMENT**										
1.0	72.5 kV Isolator (3-phase)										
a	1250A, 31.5 KA, Isolator without Earth Switch			Nos	8						
B	**SUBSTATION AUTOMATION**										
1	Complete Substation Automation System (SAS) for substation including hardware and software, (including protection relays for main and backup protecion as and when required) and other accessories and metering and indication facilities for the substation & remote control stations alongwith associated equipments for the following bays as per Technical Specification										
1.2	66 kV System			Nos.	4						
1.3	BCU for auxilary system			set	1						
1.4	11 kV HT Indoor Switchgear			Nos.	5						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
						Portion in Foreign Currency			Portion in Nepalese		LC
		Country of Origin	Type & Designation	Unit	Quantity	Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
C	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room			Nos.	6						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
5	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
C	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)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
2	Integration of all 132/66/11 kV Bays under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per technical specifications.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
A	Modification/Reinforcement of Steel Supporting Structures for 66 kV Isolators as per Techinical Specification			LS	1						
	SUB-TOTAL-C										
	Total For PART 11 Panchkhal Substation [(Part-A+ Part-B+ Part C)										
PART 13	**66/11 kV Baneshwor Substation**										
	PART - A: OWNER ASSESSED QUANTITIES										
A	**Master Control Center (MCC) at Baneshwor Substation**										
1	Complete Hardware and Software for Master Control Center (MCC) as per technical specification for Control and Monitoring of all Grid Substations under Kathmandu Grid Division, NEA			set	1						
2	Virtual Projection systme for MCC			set	1						
B	**66 kV EQUIPMENT**										
1.0	72.5 kV Isolator (3-phase)										
a	1250A, 31.5 KA, Isolator without Earth Switch			Nos	4						
C	**SUBSTATION AUTOMATION**										
D	**Air conditioning**										
1	High wall type split AC unit of 2 TR capacities for control room, relay room and battery room			Nos.	10						
	SUB TOTAL PART-A										
	PART-B: VENDOR ASSESSED QUANTITIES										
A	**POWER & CONTROL CABLES**										
1	**1.1 kV LV Cables**										
1.1	Power Cables(PVC)- (1.1kV grade)			LS	1						
1.2	Control Cable (PVC)- (1.1kV grade)			LS	1						
1.3	Cable glands, lugs & straight through joints for Power & Control cables			LS	1						

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
B	Visual Monitoring System for watch & ward as per technical specification			LS	1						
C	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)			LS	1						
2.0	Earth Rod (copper clad steel)			LS	1						
D	**SUBSTATION AUTOMATION /COMMUNICATION EQUIPMENT**										
1	Integration of all 66/11 kV Bays under present scope with the SCADA of SIEMENS (SINAUT Spectrum) at Load Dispatch Centre, Kathmandu including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
2	Integration of all 132/66/11 kV Bays of all 12 Substations under present scope with the Master Control Station in Baneshwor Substation, Kathmandu with all necessary communication equipment including supply of Hardware, Software, accessories etc. as per TS Section Project.			LS	1						
	SUB TOTAL PART-B										
	PART-C: CIVIL WORKS (As per Technical Specification)										
	SECTION: A : NEA ASSESSED QUANTITIES										
1.0	Excavation in all types of soil and rock including backfilling disposal etc. for all leads and lifts			Cu.Mtr.	100						
2.0	Providing and laying of Plain Cement Concrete (PCC) (1:4:8)			Cu.Mtr.	50						
3.0	Providing and laying of Plain Cement Concrete (PCC) (1:2:4)			Cu.Mtr.	50						
4.0	Providing and laying of Reinforced Cement Concrete Design Mix (M25) including pre cast, shuttering, Grouting of pockets & underpinning but excluding steel reinforcement.			Cu.Mtr.	200						
5.0	Providing and laying Plain Cement Concrete 1:5:10 (1 cement : 5 sand : 10 Stone aggregate)			Cu.Mtr.	50						
6.0	Steel Reinforcement (Fe 500)			MT	20						
23.0	**PRE ENGINEERED BUILDINGS - MCC HALL**										

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

Item No.	Item description			Estimated		Installation and Construction Charges					Total Amount (Excluding Taxes and Duties)
		Country of Origin	Type & Designation	Unit	Quantity	Portion in Foreign Currency			Portion in Nepalese		LC
						Currency#	Unit Rate	Total Charges	Unit Rate	Total Charges	
1	2	(3)	(4)	5	6	7	8	9=8x6	10	11=10x6	12
i)	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.										
(a)	MCC Hall and server Room			Sq. M.	120						
A	Modification/Reinforcement of Steel Supporting Structures for 66 kV Isolators as per Techinical Specification			LS	1						
B	Desks, Chairs and furniture for MCC Hall and server Room			LS	1						
	SUB-TOTAL-C										
	Total For PART 12 Baneshwor Substation [(Part-A+ Part-B+ Part C)										
	Total for Schedule 1 (Total of column 9 to be carried forward to Schdule 5: Grand Summary)										

Note :
1) Bidder is required to quote prices in this Schedule for all the individual items/sub-items.
2.) The Prices of equipments are inclusive of type test charges
3.) BOQ given above is indicative only based on the scope of work as given in Employer's Requirements. The quantities mentioned above may undergo change during detailed engineering
Specify currency in accordance with BDS ITB Clause 32.1, Part-I of the Bidding Documents.
* Strike-out whichever is not applicable.

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

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Kathmandu Valley Substation Automation Project

PTDEEP: Power Transmission and Distribution Efficiency Enhancement Project

PMD/PTDEEP/KVSAP-075/76/01:Design, Supply, Installation, Integration, Testing and Commissioning of Substation Automation System (SAS) for Existing Grid Substations in Kathmandu Valley

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

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

Sl. No.	Description	Item for which training is to be imparted.	Country where training is to be imparted	Nos. of Trainee	Training duration in days	Total Training Charges	
						Currency (USD)	Total Training Charges(USD)
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		5	7		
	Total for Training Charges						
	Total for Schedule 4 (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 @ USD200 per day per trainee for the duration of training abroad towards accommodation, meals and other incidental expenses and 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: **Date:**

Signature of Bidder:

(Printed Name)

(Designation)

(Common Seal)

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Kathmandu Valley Substation Automation Project

PTDEEP: Power Transmission and Distribution Efficiency Enhancement Project

PMD/PTDEEP/KVSAP-075/76/01:Design, Supply, Installation, Integration, Testing and Commissioning of Substation Automation System (SAS) for Existing Grid Substations in Kathmandu Valley

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	Currency	Training Charges for Contractors Trainers	
					Unit rate	Total Training Charges
1	2	3	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	5			
		ii) Substation Automation System including integration aspect of existing SCADA (of Siemens suppliedSINAUT Spectrum Software) at Load Dispatch Center	5			
	Total for Training Charges					
	Total for Schedule 4 (Total of column 7 to be carried forward to Schedule 5: Grand					

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: **Date:**

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

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Kathmandu Valley Substation Automation Project

PTDEEP: Power Transmission and Distribution Efficiency Enhancement Project

PMD/PTDEEP/KVSAP-075/76/01:Design, Supply, Installation, Integration, Testing and Commissioning of Substation Automation System (SAS) for Existing Grid Substations in Kathmandu Valley

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

(d): Maintenance Charges

Sl No	Description	Unit	Qty.	Total Maintenance Charges	
				Currency	Total Maintenance Charges
	1	2	3	4	5
1	Annual Operation and Maintenance services of the facilities after operational acceptance	Year	3		
	Total Maintenance Charges for Equipment Package (Total Schedule 4c)				
	Total for Schedule 4 (Total of column 5 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

Kathmandu Valley Substation Automation Project

PTDEEP: Power Transmission and Distribution Efficiency Enhancement Project

PMD/PTDEEP/KVSAP-075/76/01:Design, Supply, Installation, Integration, Testing and Commissioning of Substation Automation System (SAS) for Existing Grid Substations in Kathmandu Valley

Schedule 5: Summary

Sl. No.	Description	Total Price Foreign (US$)	Total Price Local (NRs.)
		1	2
1	TOTAL SCHEDULE NO. 1		
	Plant and Equipment including Mandatory Spares to be supplied from abroad.		
	Part 1: Siuchatar Substation		
	Part 2: Balaju Substation		
	Part 3: Matatirtha Substation		
	Part 4: Chapali Substation		
	Part 5: Bhaktapur Substation		
	Part 6: Lamosangu Substation		
	Part 7: New Chabel Substation		
	Part 8: Lainchaur Substation		
	Part 9: K-3 Substation		
	Part 10: Patan Substation		
	Part 11: Banepa Substation		
	Part 12: Panchkhal Substation		
	Part 13: Baneshwor Substation		
	SUB-TOTAL OF SCHEDULE-1		
2	Plant and Equipment Supplied from within Nepal		
3	Design Services (Not Applicable)		
4	Construction & Installation Services		
	TOTAL SCHEDULE NO. 4		
(a)	Installation and construction charges		
	Part 1: Siuchatar Substation		
	Part 2: Balaju Substation		
	Part 3: Matatirtha Substation		
	Part 4: Chapali Substation		
	Part 5: Bhaktapur Substation		
	Part 6: Lamosangu Substation		
	Part 7: New Chabel Substation		
	Part 8: Lainchaur Substation		
	Part 9: K-3 Substation		
	Part 10: Patan Substation		
	Part 11: Banepa Substation		
	Part 12: Panchkhal Substation		
	Part 13: Baneshwor Substation		
	SUB-TOTAL OF SCHEDULE- 4(a)		
(b)	Training charges for training to be imparted abroad		
(c)	Training charges for training to be imparted in Nepal		
(d)	Maintenance charges		
Total excluding Custom duty and VAT			

NEPAL ELECTRICITY AUTHORITY

PROJECT MANAGEMENT DIRECTORATE

Kathmandu Valley Substation Automation Project

PTDEEP: Power Transmission and Distribution Efficiency Enhancement Project

PMD/PTDEEP/KVSAP-075/76/01:Design, Supply, Installation, Integration, Testing and Commissioning of Substation Automation System (SAS) for Existing Grid Substations in Kathmandu Valley

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

Item No.	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

Date:

Signature: _____

Printed Name: _____

Designation: _____

Common Seal: _____