

**Price Schedule - Up-gradation of 33/11 kV Substation at DPH I&II**  
**ABSTRACT**

*Figures in Nu*

<b>Sl. No.</b>	<b>Schedule</b>	<b>Particulars</b>	<b>Amount</b>
1.00	Schedule - 1A	For Supply & Delivery of equipment (DPH - I)	
2.00	Schedule - 1B	For Supply & Delivery of equipment (DPH - II)	
3.00	Schedule - 2A	For erection, testing & commissioning of equipment	
4.00	Schedule - 2B		
5.00	Schedule 3	For civil works	
6.00	Schedule 4	For supply of essential spares	
		<b>Total</b>	

**SCHEDULE 1A: SCHEDULE FOR SUPPLY AND DELIVERY OF SUBSTATION EQUIPMENT (DPH-I)**

Sl. No	Description	Unit	Provisional Qty	Unit Price			Total FAS excluding BST/CD	Provision for BST/CD			Total FAS including BST/CD
				Ex-Works	FAS excluding BST/CD	FAS including BST/CD		BST%	CD%	Value(BST+CD)	
			<b>1</b>	<b>2.00</b>	<b>3</b>	<b>4</b>	<b>5=1 x 3</b>	<b>6%</b>	<b>7</b>	<b>8=(6+7)x1 x 2</b>	<b>9=1 x 4</b>
<b>A.</b>	<b>Equipment</b>										
1	0.415/11 kV, 2 MVA Step-up power transformer as per the specification	Nos.	2								
<b>B.</b>	<b>11 kV Switchgears</b>										
a)	11 kV switchgear with numerical relays, CTs, etc.										
b)	630A, VCB ( 4 incomer - 3 nos from 11 kV feeders and 1 nos from DG Set, 3 outgoing & 1 buscoupler)	Nos.	8								
<b>C.</b>	<b>Cables &amp; Accessories</b>										
<b>1</b>	<b>HV Cables - outdoor and indoor termination kits</b>										
a)	11 kV termination Heat Shrinkable	set	9								
<b>3</b>	<b>LV power, control and instrumentation cables wth lugs &amp; glands</b>										
a)	3C x 2.5 sq.mm	M	100.00								
b)	5C x 2.5 sq.mm	M	100.00								
c)	12Cx2.5 Sq.mm	M	200.00								
<b>C.</b>	<b>Cabling system</b>										
a)	Aluminium Cable Trays, 50x50x5(angle), 30x5 mm(flat), 300 mm(width) with support material	M	12								
b)	Conduits, bends, tees, junction boxes, accessories for cabling system.	L.S.	1								
<b>D.</b>	<b>Earthing and lightning protection system</b>										
a)	50 x 6 mm MS flat Grid conductor including nuts & bolts.	M	50								
b)	50 x 6 mm GI flat for riser including nuts & bolts.	M	50								
<b>E.</b>	<b>Miscellaneous Item</b>										
a)	Rubber mats as per specifications	Nos.	8								
	<b>SUB-TOTAL I</b>										

**SCHEDULE 1B: SCHEDULE FOR SUPPLY AND DELIVERY OF SUBSTATION EQUIPMENT AT DPH-II**

Sl. No	Description	Unit	Provisional Qty	Unit Price			Total FAS excluding BST/CD	Provision for BST/CD			Total FAS including BST/CD
				Ex-Works	FAS excluding BST/CD	FAS including BST/CD		BST%	CD%	Value(BST+CD)	
			1	2	3	4	5=1 x 3	6%	7	8=(6+7)x1 x 2	9=1 x 4
<b>A.</b>	<b>Equipment</b>										
1	33 kV indoor GIS switchgear with numerical relays, meters, CTs, line PTs as per specifications.										
a)	12.5 kA, GIS (2 incomer, 2 transformer feeder, 1 buscoupler)	Nos.	5								
	Bus PT panel with under voltage relay (to be mounted on incomer with PT selector Switch) and Line PTs										
<b>B</b>	<b>Cables &amp; Accessories</b>										
2	<b>HV Cables - outdoor and indoor termination kits</b>										
a)	33 kV GIS termination, Heat Shrinkable	set	5								
3	<b>LV power, control and instrumentation cables with lugs &amp; glands</b>										
a)	3C x 2.5 sq.mm	M	100.00								
b)	5C x 2.5 sq.mm	M	100.00								
c)	12Cx2.5 Sq.mm	M	200.00								
<b>C.</b>	<b>Cabling system</b>										
a)	Aluminium Cable Trays, 50x50x5(angle), 30x5 mm(flat), 300 mm(width) with support material	M	12								
b)	Conduits, bends, tees, junction boxes, accessories for cabling system.	L.S.	1								
<b>D.</b>	<b>Earthing and lightning protection system</b>										
a)	50 x 6 mm GI flat for riser including nuts & bolts.	M	20								
<b>E.</b>	<b>Miscellaneous Item</b>										
a)	Rubber mats as per specifications	Nos.	5								
	<b>SUB TOTAL - II</b>										
	<b>GRAND TOTAL FOR EQUIPMENTS</b>										

**SCHEDULE 2A: SCHEDULE FOR ERECTION, TESTING & COMMISSIONING OF SUBSTATION EQUIPMENT**

Sl. No	Description	Unit	Qty	Unit Rate	Total Price
1	2	3	4	5	6=4X5
<b>A.</b>	<b>Equipment</b>				
1	0.415/11 kV, 2 MVA Step-up power transformer as per the specification	Nos	2		
<b>B.</b>	<b>11 kV Switchgears</b>				
a)	11 kV switchgear with numerical relays, CTs, etc.	Nos	8		
b)	630A, VCB ( 4 incomer - 3 nos from 11 kV feeders and 1 nos from DG Set, 3 outgoing & 1 buscoupler)				
c)	Prices should be inclusive of floor leveling/foundation materials required at the site for 11 kV panels				
<b>C.</b>	<b>Cables &amp; Accessories</b>				
<b>1</b>	<b>HV Cables - outdoor and indoor termination kits</b>				
a)	11 kV termination Heat Shrinkable	Nos.	9		
<b>3</b>	<b>LV power, control and instrumentation cables wth lugs &amp; glands</b>	Lot	1		
<b>C.</b>	<b>Cabling system</b>	Lot	1.00		
<b>D.</b>	<b>Earthing and lightning protection system</b>				
a)	50 x 6 mm MS flat Grid conductor including nuts & bolts.	M	50.00		
b)	50 x 6 mm GI flat for riser including nuts & bolts.	M	50.00		
<b>E.</b>	<b>Dismantaling</b>				
1	Dismantaling of 11kV AIS switchgear along with the control cables and other associated panels and transport to ESD Thimphu store	No	7		
2	Dismantaling of 2X1.6 MVA Power Transformer and other associated accessories and transport to ESD Thimphu store	Lot	1		
<b>SUB TOTAL - I</b>					

**SCHEDULE 2A: SCHEDULE FOR ERECTION, TESTING & COMMISSIONING OF SUBSTATION EQUIPMENT**

Sl. No	Description	Unit	Qty	Unit Rate	Total Price
1	2	3	4	5	6=4X5

**SCHEDULE 2B: SCHEDULE FOR ERECTION, TESTING & COMMISSIONING OF SUBSTATION EQUIPMENT**

Sl. No	Description	Unit	Qty	Unit Rate	Total Price
1	2	3	4	5	6=4X5
<b>A.</b>	<b>Equipment</b>				
1	33kV switchgear with numerical relays, meters, CTs, line PTs as per specifications.	Nos.	5.00		
a)	630A, VCB (2 incomer, 2 outgoing, 1 transformer feeder, 1 buscoupler)				
b)	Bus PT panel with under voltage relay (cost to be included in a)				
c)	Prices should be inclusive of floor leveling/foundation materials required at the site for 33 kV GIS panels				
<b>2</b>	<b>HV Cables - outdoor and indoor termination kits</b>				
a)	33 kV GIS termination, Heat Shrinkable	Nos.	4.00		
<b>3</b>	<b>LV power, control and instrumentation cables</b>	Lot	1.00		
<b>C.</b>	<b>Cabling system</b>				
a)	Erection of all accessories with cable trays, conduits, bends, tees, junction boxes, accessories for cabling system.	Lot	1.00		
<b>D.</b>	<b>Earthing and lightning protection system</b>				
a)	50 x 6 mm GI flat for riser including nuts & bolts.	Mtr	20		
<b>E.</b>	<b>Dismantling</b>				
1	Dismantling of 33kV AIS switchgear along with the control relay panel (CRP) and transport to Gadakom ESD store	Lot	1.00		
	<b>SUB TOTAL - II</b>				
	<b>GRAND TOTAL FOR EQUIPMENTS</b>				

**SCHEDULE 3: SCHEDULE FOR CIVIL WORKS**

SI.No	Description	Unit	Quantity	Unit Rate	Amount (Nu)
<b>1.0</b>	<b>Substation Civil works</b>				
<b>A</b>	<b><i>EARTHWORK</i></b>				
2	Excavation in foundation trenches or drains not exceeding 1.5m in width or area 10 sq.m on plan, including dressing & ramming, disposal of surplus soil for all lead and lift -hard soil	CuM	9.00		
3	Filling of trenches, sides of foundations etc. in layers <200mm using selected excavated earth, ramming etc. within lead 50 m & lift 1.5m	CuM	2.00		
<b>B</b>	<b><i>STONE WORK</i></b>				
1	Providing and laying Hand packed stone filling or soling with stones	CuM	8.00		
<b>D</b>	<b><i>CONCRETE/R.C.C WORK</i></b>				
1	Providing and laying in position plain cement concrete 1:3:6, 20mm aggregate excluding the cost of centering and shuttering in floors of ground floor	CuM	0.30		
	Providing and laying in position plain cement concrete 1:2:4 20mm aggregate excluding the cost of centering and shuttering in floors of ground floor	CuM	3.50		
3	Providing & laying R.C.C 1:1.5:3, 20mm agg. excluding the cost of formwork & reinforcement cost in (Footing pad below plinth)-all works upto plinth level	CuM	0.60		
4	Providing & laying R.C.C 1:1.5:3, 20mm agg. excluding the cost of formwork & reinforcement cost for- columns	CuM	0.45		
6	Providing & laying R.C.C 1:1.5:3, 20mm agg. excluding the cost of formwork & reinforcement cost for - (Floor beams and lintels)	CuM	0.70		

<b>E</b>	<b>TMT BARS</b>				
1	Providing & fixing cold twisted deformed bar (Fe500) for R.C.C work incl. cutting, bending, binding & placing in position complete	KG	100.00		
1	Providing and fixing of chequered plate 8mm thick (with provision of hole to lift the cover plate using handle) to cover the Cable Trench	SqM	200.00		
<b>F</b>	<b>FORMWORK</b>				
	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork.	SqM	17.00		
<b>G</b>	<b>BRICK WORK</b>				
1	Providing and laying autoclaved aerated cement blocks masonry (AAC blocks) in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made separately).	CuM	4.00		
<b>K</b>	<b>PLASTERING</b>				
2	Providing & laying 20mm cement plaster - C.M 1:4 (External walls Above plinth)	SqM	33.00		
	<b>Total Amount</b>				

**SCHEDULE 4: SCHEDULE FOR SUPPLY OF ESSENTIAL SPARES.**

Sl. No	Description	Unit	Qty	Unit Price			Total FAS excluding BST/CD	Provision for BST/CD			Total FAS including BST/CD
				Ex-Works	FAS excluding BST/CD	FAS including BST/CD		BST%	CD%	Value(BST+ CD)	
			1	2	3	4	5=1 x 3	6	7	8=(6+7)x1 x 2	9=1 x 4
<b>1.0</b>	<b>SWITCHGEAR</b>										
1.1	<b>33kV (GIS)</b>										
1.1.1	Closing Coil	Nos.	2								
1.1.2	Trip Coil	Nos.	2								
1.1.3	CurrentTransformer (1 set - 3 phases) for outgoing	Set	1								
2.1	<b>11 kV (VCB)</b>										
2.1.1	Closing Coil	Nos.	2								
2.1.2	Trip Coil	Nos.	2								
2.1.3	Current Transformer (1 set - 3 phases)	Set	1								
	<b>TOTAL SPARE ITEMS</b>										