

## SCHEDULE OF RATES AND PRICES

### LOT 5 SAMBURU

SCHEDULE NO. 1 - PLANT AND MANDATORY SPARE PARTS SUPPLIED FROM ABROAD							
Item	Description	Quantity and capacity of single unit <sup>2</sup>	Code <sup>3</sup>	Unit <sup>4</sup>	Qty	CIP Unit Price <sup>1</sup>	CIP Total Price <sup>1</sup>
					(1)	(2)	(1) x (2)
<b>LATAKWENY 75kWp (75 kW AC) SOLAR PV MINI GRID</b>							
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>						
<b>A1</b>	<b>SPV Modules &amp; Inverters</b>						
1	75 kWp (DC) Standard monocrystalline silicon SPV modules			Lot	1		
2	Fixed-tilt racking structure(s) for above SPV modules including all necessary nuts and bolts as well as necessary clamps, foundation bolts etc.			Lot	1		
3	75 kW (AC) Solar PV Inverter			Lot	1		
4	50 kW Battery Inverter			Lot	1		
<b>A2</b>	<b>Battery Energy Storage System</b>						
5	188 kWh Usable Battery Energy Storage System (BESS)			Lot	1		
6	Battery Management System			Lot	1		
7	Supply of SCADA along with associated equipment, data acquisition, data logger and display units and Industrial type PC with remote monitoring.			Lot	1		
<b>A3</b>	<b>Diesel Generator</b>						
8	50 kVA Prime Rated Diesel Generator(s) (DG) 415 V, 3-phase installed with a common genset controller capable of parallel operation with shunt-trip breakers for auto-start capability			Lot	1		
9	2000Litres Fuel Storage Tank			Lot	1		
<b>A4</b>	<b>Other SPGP Items</b>						
10	Security equipment including CCTV cameras, IR sensors with video display at control room.			Lot	1		
11	Metering system consisting of check and main meters for Import / export of energy from solar plant as per grid code			No.	1		
12	Auxiliary power supply as per specifications			Lot	1		
13	Air conditioners for the control room as per specifications.			Lot	1		

14	All balance of system components for interconnecting the battery and solar array with their inverters and the wider 415V three-phase 50 Hz AC distribution system, including but not limited to: AC & DC wiring, breakers, fuses, combiner boxes, recombiner boxes, panelboards, conduits, cables and cable trays, relays, transformers, enclosures, foundations, trenches, poles, support structures, cabinets, grounding electrodes, grounding conductors, lighting arrestors, lightning rods, insulators, surge protection, meters, sensors, and any other fixtures required for safety, reliability, and compliance with all relevant local and international codes and standards at the time of installation.			Lot	1		
<b>LATAKWENY SUBTOTAL A</b>							
<b>B</b>	<b>Power Distribution Network (PDN)</b>						
<b>B1</b>	<b>3-phase and single-phase LV Distribution Line</b>						
15	10M LV Concrete Pole (TSP/03/005-1)			No	258		
16	LV Concrete Pole fittings- (Multipurpose/universal clamps, bolts,nuts,stays, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	258		
17	50sqmm AA bare conductor for length of LV (2-wire) line (TSP/06/020-2)			Km	15.59		
18	Complete Earthing- Protective Multiple Earthing (PME) (TSP/06/031-1)			No	135		
19	LV Concrete stays- (Stay wire, stay block, stay rod)			No	116		
20	LV Concrete strut pole- (Concrete strut pole, heavy duty clamps)			No	17		
<b>B2</b>	<b>Other PDN Items</b>						
21	Service Cable (25mm <sup>2</sup> PVC Insulated three phase, 4 core Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	60		
22	Service Cable (16mm <sup>2</sup> PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable)(TSP/05/004)			M	5040		
23	10mm dropper cable Red and Black; 1m each for single phase meters <sup>2</sup> (TSP/05/016)			M	204		
24	Service cable concrete fittings (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/03/003), (TSP/06/035)			No.	170		
25	Service Cable fittings for wall mounting including Angle Iron (TSP/02/003-3), (TSP/04/011), (TSP/03/003), (TSP/02/003-1)			No.	170		
26	Ready Boards complete with mounting accessories (TSP/14/051)			No.	170		
27	1ftX1ftX3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter &			No	170		

	MCB mounting, Service cable entry and Earthing .						
28	Other Items not Mentioned above but required for installation and commissioning of the single and three phase Distribution line for Mini Grid and end user installation such as insulators, binding wires, fittings including nuts, bolts, Danger Plates, Name Plates, anti-climbing Barbed wire and accessories etc. on turn-key basis			Lot	1		
<b>B3</b>	<b>11KV MV Distribution line</b>						
29	12M MV Concrete Pole (TSP/03/005-1)			No	0		
30	14M MV Concrete Pole (TSP/03/005-1)			No	0		
31	MV Concrete Pole fittings- (Cross arms, Tie straps, insulator composites, Universal clamps, bolts, nuts, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	0		
32	75sqmm Aluminium Conductor Steel Reinforced (ACSR) conductor for length of three phase (3 - wire) line (TSP/06/020-2)			Km	0		
33	MV Concrete Pole stays - (Stay wire, stay rod, stay block, shackle insulator)			No	0		
34	MV Concrete Pole flying stays - (Concrete pole, Stay wire, stay rod, stay block, shackle insulator)			No	0		
35	MV Concrete Pole strut pole – (Concrete strut pole, heavy duty clamps)			No	0		
<b>B4</b>	<b>11KV Distribution Transformer</b>						
36	11KV 50KVA transformer			No	0		
37	11KV 50 - 200KVA transformer substation structure and fittings (Earthing & lightning Protection and associated material requirement, Expulsion Fuses, Surge diverters, Overhead fuse carriers, 10M Concrete poles, 11KV Steel channel and clamps etc. Danger plates, phase plates, circuit plates, number plates, anti-climbing devices and other safety requirements)			Set	0		
<b>LATAKWENY SUBTOTAL B</b>							
<b>C</b>	<b>Mandatory spares</b>						
38	Mandatory spares including at least 1 spare inverter, 5% of total solar PV panel capacity, fuses, cabling and hardware for 7 years including all consumable parts.			Lot	1		
<b>LATAKWENY SUBTOTAL C</b>							

Item	Description	Quantity and capacity of single unit <sup>2</sup>	Code <sup>3</sup>	Unit <sup>4</sup>	Qty	CIP Unit Price <sup>1</sup>	CIP Total Price <sup>1</sup>
					(1)	(2)	(1) x (2)
<b>BARSALOI 120 kWp (120 kW AC) SOLAR PV MINI GRID</b>							
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>						
<b>A1</b>	<b>SPV Modules &amp; Inverters</b>						
1	120 kWp (DC) Standard monocrystalline silicon SPV modules			Lot	1		
2	Fixed-tilt racking structure(s) for above SPV modules including all necessary nuts and bolts as well as necessary clamps, foundation bolts etc.			Lot	1		
3	120 kW (AC) Solar PV Inverters			Lot	1		
4	82 kW Battery Inverter			Lot	1		
<b>A2</b>	<b>Battery Energy Storage System</b>						
5	300 kWh Usable Battery Energy Storage System (BESS)			Lot	1		
6	Battery Management System			Lot	1		
7	Supply of SCADA along with associated equipment, data acquisition, data logger and display units and Industrial type PC with remote monitoring.			Lot	1		
<b>A3</b>	<b>Diesel Generator</b>						
8	82 kVA Prime Rated Diesel Generator(s) (DG) 415 V, 3-phase installed with a common genset controller capable of parallel operation with shunt-trip breakers for auto-start capability			Lot	1		
9	2000Litres Fuel Storage Tank			Lot	1		
<b>A4</b>	<b>Other SPGP Items</b>						
10	Metering system consisting of check and main meters for Import / export of energy from solar plant as per grid code			No.	1		
11	Auxiliary power supply as per specifications			Lot	1		
12	Air conditioners for the control room as per specifications.			Lot	1		
13	All balance of system components for interconnecting the battery and solar array with their inverters and the wider 415V three-phase 50 Hz AC distribution system, including but not limited to: AC & DC wiring, breakers, fuses, combiner boxes, recombiner boxes, panelboards, conduits, cables and cable trays, relays, transformers, enclosures, foundations, trenches, poles, support structures, cabinets, grounding electrodes, grounding conductors, lighting arrestors, lightning rods, insulators, surge protection, meters, sensors, and any other fixtures required for safety, reliability, and compliance with all relevant local and international codes and standards at the time of installation.			Lot	1		
					<b>BARSALOI SUBTOTAL A</b>		
<b>B</b>	<b>Power Distribution Network (PDN)</b>						

<b>B1</b>	<b>3-phase and single-phase LV Distribution Line</b>						
14	10M LV Concrete Pole (TSP/03/005-1)			No	333		
15	LV Concrete Pole fittings- (Multipurpose/universal clamps, bolts, nuts, stays, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	333		
16	50sqmm AA bare conductor for length of LV (2-wire) line (TSP/06/020-2)			Km	16.09		
17	Complete Earthing- Protective Multiple Earthing (PME) (TSP/06/031-1)			No	243		
18	LV Concrete stays- (Stay wire, stay block, stay rod)			No	235		
19	LV Concrete strut pole- (Concrete strut pole, heavy duty clamps)			No	37		
<b>B2</b>	<b>Other PDN Items</b>						
20	Service Cable (25mm <sup>2</sup> PVC Insulated three phase, 4 core Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	90		
21	Service Cable (16mm <sup>2</sup> PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	8100		
22	10mm dropper cable Red and Black; 1m each for single phase meters? (TSP/05/016)			M	327.6		
23	Service cable concrete fittings (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/03/003), (TSP/06/035)			No.	273		
24	Service Cable fittings for wall mounting including Angle Iron (TSP/02/003-3), (TSP/04/011), (TSP/03/003), (TSP/02/003-1)			No.	273		
25	Ready Boards complete with mounting accessories (TSP/14/051)			No.	273		
26	1ftX1ftX3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing .			No	273		
27	Other Items not Mentioned above but required for installation and commissioning of the single and three phase Distribution line for Mini Grid and end user installation such as insulators, binding wires, fittings including nuts, bolts, Danger Plates, Name Plates, anti-climbing Barbed wire and accessories etc. on turn-key basis			Lot	1		
<b>B3</b>	<b>11KV MV Distribution line</b>						
28	12M MV Concrete Pole (TSP/03/005-1)			No	0		
29	14M MV Concrete Pole (TSP/03/005-1)			No	0		

30	MV Concrete Pole fittings- (Cross arms, Tie straps, insulator composites, Universal clamps, bolts, nuts, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	0		
31	75sqmm Aluminium Conductor Steel Reinforced (ACSR) conductor for length of three phase (3 - wire) line (TSP/06/020-2)			Km	0		
32	MV Concrete Pole stays - (Stay wire, stay rod, stay block, shackle insulator)			No	0		
33	MV Concrete Pole flying stays - (Concrete pole, Stay wire, stay rod, stay block, shackle insulator)			No	0		
34	MV Concrete Pole strut pole – (Concrete strut pole, heavy duty clamps)			No	0		
<b>B4</b>	<b>11KV Distribution Transformer</b>				0		
35	11KV 50KVA transformer			No			
36	11KV 50 - 200KVA transformer substation structure and fittings (Earthing & lightning Protection and associated material requirement, Expulsion Fuses, Surge diverters, Overhead fuse carriers, 10M Concrete poles, 11KV Steel channel and clamps etc. Danger plates, phase plates, circuit plates, number plates, anti-climbing devices and other safety requirements)			Set	0		
		<b>BARSALOI SUBTOTAL B</b>					
<b>C</b>	<b>Mandatory spares</b>						
37	Mandatory spares including at least 1 spare inverter, 5% of total solar PV panel capacity, fuses, cabling and hardware for 7 years including all consumable parts.			Lot	1		
		<b>BARSALOI SUBTOTAL C</b>					

Item	Description	Quantity and capacity of single unit <sup>2</sup>	Code <sup>3</sup>	Unit <sup>4</sup>	Qty	CIP Unit Price <sup>1</sup>	CIP Total Price <sup>1</sup>
					(1)	(2)	(1) x (2)
<b>TUUM 135 kWp (135 kW AC) SOLAR PV MINI GRID</b>							
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>						
<b>A1</b>	<b>SPV Modules &amp; Inverters</b>						
1	135 kWp (DC) Standard monocrystalline silicon SPV modules			Lot	1		
2	Fixed-tilt racking structure(s) for above SPV modules including all necessary nuts and bolts as well as necessary clamps, foundation bolts etc.			Lot	1		
3	135 kW (AC) Solar PV Inverters			Lot	1		
4	100 kW Battery Inverter			Lot	1		
<b>A2</b>	<b>Battery Energy Storage System</b>						
5	338 kWh Usable Battery Energy Storage System (BESS)			Lot	1		
6	Battery Management System			Lot	1		
7	Supply of SCADA along with associated equipment, data acquisition, data logger and display units and Industrial type PC with remote monitoring.			Lot	1		
<b>A3</b>	<b>Diesel Generator</b>						
8	100 kVA Prime Rated Diesel Generator(s) (DG) 415 V, 3-phase installed with a common genset controller capable of parallel operation with shunt-trip breakers for auto-start capability			Lot	1		
9	2000Litres Fuel Storage Tank			Lot	1		
<b>A4</b>	<b>Other SPGP Items</b>						
10	Metering system consisting of check and main meters for Import / export of energy from solar plant as per grid code			No.	1		
11	Auxiliary power supply as per specifications			Lot	1		
12	Air conditioners for the control room as per specifications.			Lot	1		
13	All balance of system components for interconnecting the battery and solar array with their inverters and the wider 415V three-phase 50 Hz AC distribution system, including but not limited to: AC & DC wiring, breakers, fuses, combiner boxes, recombiner boxes, panelboards, conduits, cables and cable trays, relays, transformers, enclosures, foundations, trenches, poles, support structures, cabinets, grounding electrodes, grounding conductors, lighting arrestors, lightning rods, insulators, surge protection, meters, sensors, and any other fixtures required for safety, reliability, and compliance with all relevant local and international codes and standards at the time of installation.			Lot	1		
					<b>TUUM SUBTOTAL A</b>		
<b>B</b>	<b>Power Distribution Network (PDN)</b>						
<b>B1</b>	<b>3-phase and single-phase LV Distribution Line</b>						
14	10M LV Concrete Pole (TSP/03/005-1)			No	420		

15	LV Concrete Pole fittings- (Multipurpose/universal clamps, bolts,nuts,stays, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	420		
16	50sqmm AA bare conductor for length of LV (2-wire) line (TSP/06/020-2)			Km	24.05		
17	Complete Earthing- Protective Multiple Earthing (PME) (TSP/06/031-1)			No	313		
18	LV Concrete stays- (Stay wire, stay block, stay rod)			No	309		
19	LV Concrete strut pole- (Concrete strut pole, heavy duty clamps)			No	35		
<b>B2</b>	<b>Other PDN Items</b>						
20	Service Cable (25mm <sup>2</sup> PVC Insulated three phase, 4 core Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	60		
21	Service Cable (16mm <sup>2</sup> PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	12450		
22	10mm dropper cable Red and Black; 1m each for single phase meters <sup>2</sup> (TSP/05/016)			M	500.4		
23	Service cable concrete fittings (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/03/003), (TSP/06/035)			No.	417		
24	Service Cable fittings for wall mounting including Angle Iron (TSP/02/003-3), (TSP/04/011), (TSP/03/003), (TSP/02/003-1)			No.	417		
25	Ready Boards complete with mounting accessories (TSP/14/051)			No.	417		
26	1ftX1ftX3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing .			No	417		
27	Other Items not Mentioned above but required for installation and commissioning of the single and three phase Distribution line for Mini Grid and end user installation such as insulators, binding wires, fittings including nuts, bolts, Danger Plates, Name Plates, anti-climbing Barbed wire and accessories etc. on turn-key basis			Lot	1		
<b>B3</b>	<b>11KV MV Distribution line</b>						
28	12M MV Concrete Pole (TSP/03/005-1)			No	37		
29	14M MV Concrete Pole (TSP/03/005-1)			No	10		
30	MV Concrete Pole fittings- (Cross arms, Tie straps, insulator composites, Universal clamps, bolts, nuts, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	47		



31	75sqmm Aluminium Conductor Steel Reinforced (ACSR) conductor for length of three phase (3 - wire) line (TSP/06/020-2)			Km	3.39		
32	MV Concrete Pole stays - (Stay wire, stay rod, stay block, shackle insulator)			No	23		
33	MV Concrete Pole flying stays - (Concrete pole, Stay wire, stay rod, stay block, shackle insulator)			No	10		
34	MV Concrete Pole strut pole – (Concrete strut pole, heavy duty clamps)			No	0		
<b>B4</b>	<b>11KV Distribution Transformer</b>						
35	11KV 50KVA transformer			No	2		
36	11KV 50 - 200KVA transformer substation structure and fittings (Earthing & lightning Protection and associated material requirement, Expulsion Fuses, Surge diverters, Overhead fuse carriers, 10M Concrete poles, 11KV Steel channel and clamps etc. Danger plates, phase plates, circuit plates, number plates, anti-climbing devices and other safety requirements)			Set	2		
<b>B5</b>	<b>Step up Transformer</b>						
37	415V/11KV 100KVA transformer			No	1		
38	All system components for interconnecting the inverters and the 11kv distribution transformers, including but not limited to: panelboards, busbars, switchgears, air break switch and structure, 11kv solid links, surge diverters, mounting structures for the surge diverters, underground cabling, conduits, cables and cable trays, grounding electrodes, grounding conductors, lightning arrestors, lightning mast galvanized steel structure and associated earthing, insulators, meters, sensors, concrete plinth, autorecloser, mounting structures for the HT neutral bushing and any other fixtures required for a safety, reliability, and compliance with all relevant local and international codes and standards at the time of installation.			Set	1		
					<b>TUUM SUBTOTAL B</b>		
<b>C</b>	<b>Mandatory spares</b>						
39	Mandatory spares including at least 1 spare inverter, 5% of total solar PV panel capacity, fuses, cabling and hardware for 7 years including all consumable parts.			Lot	1		
					<b>TUUM SUBTOTAL C</b>		

Item	Description	Quantity and capacity of single unit <sup>2</sup>	Code <sup>3</sup>	Unit <sup>4</sup>	Qty	CIP Unit Price <sup>1</sup>	CIP Total Price <sup>1</sup>
					(1)	(2)	(1) x (2)
<b>SEREOLIPi 200 kWp (200 kW AC) SOLAR PV MINI GRID</b>							
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>						
<b>A1</b>	<b>SPV Modules &amp; Inverters</b>						
1	200 kWp (DC) Standard monocrystalline silicon SPV modules			Lot	1		
2	Fixed-tilt racking structure(s) for above SPV modules including all necessary nuts and bolts as well as necessary clamps, foundation bolts etc.			Lot	1		
3	200 kW(AC) Solar PV Inverters			Lot	1		
4	130 kW Battery Inverter			Lot	1		
<b>A2</b>	<b>Battery Energy Storage System</b>						
5	500 kWh Usable Battery Energy Storage System (BESS)			Lot	1		
6	Battery Management System			Lot	1		
7	Supply of SCADA along with associated equipment, data acquisition, data logger and display units and Industrial type PC with remote monitoring.			Lot	1		
<b>A3</b>	<b>Diesel Generator</b>						
8	130 kVA Prime Rated Diesel Generator(s) (DG) 415 V, 3-phase installed with a common genset controller capable of parallel operation with shunt-trip breakers for auto-start capability			Lot	1		
9	2000Litres Fuel Storage Tank			Lot	1		
<b>A4</b>	<b>Other SPGP Items</b>						
10	Metering system consisting of check and main meters for Import / export of energy from solar plant as per grid code			No.	1		
11	Auxiliary power supply as per specifications			Lot	1		
12	Air conditioners for the control room as per specifications.			Lot	1		
13	All balance of system components for interconnecting the battery and solar array with their inverters and the wider 415V three-phase 50 Hz AC distribution system, including but not limited to: AC & DC wiring, breakers, fuses, combiner boxes, recombiner boxes, panelboards, conduits, cables and cable trays, relays, transformers, enclosures, foundations, trenches, poles, support structures, cabinets, grounding electrodes, grounding conductors, lighting arrestors, lightning rods, insulators, surge protection, meters, sensors, and any other fixtures required for safety, reliability, and compliance with all relevant local and international codes and standards at the time of installation.			Lot	1		
	<b>SEREOLIPi SUBTOTAL A</b>						
<b>B</b>	<b>Power Distribution Network (PDN)</b>						
<b>B1</b>	<b>3-phase and single-phase LV Distribution Line</b>						
14	10M LV Concrete Pole (TSP/03/005-1)			No	579		

15	LV Concrete Pole fittings- (Multipurpose/universal clamps, bolts,nuts,stays, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	579		
16	50sqmm AA bare conductor for length of LV (2-wire) line (TSP/06/020-2)			Km	31		
17	Complete Earthing- Protective Multiple Earthing (PME) (TSP/06/031-1)			No	342		
18	LV Concrete stays- (Stay wire, stay block, stay rod)			No	336		
19	LV Concrete strut pole- (Concrete strut pole, heavy duty clamps)			No	22		
<b>B2</b>	<b>Other PDN Items</b>						
20	Service Cable (25mm <sup>2</sup> PVC Insulated three phase, 4 core Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	60		
21	Service Cable (16mm <sup>2</sup> PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	12,480		
22	10mm dropper cable Red and Black; 1m each for single phase meters <sup>2</sup> (TSP/05/016)			M	501.6		
23	Service cable concrete fittings(TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/03/003), (TSP/06/035)			No.	417		
24	Service Cable fittings for wall mounting including Angle Iron (TSP/02/003-3), (TSP/04/011), (TSP/03/003), (TSP/02/003-1)			No.	417		
25	Ready Boards complete with mounting accessories (TSP/14/051)			No.	417		
26	1ftX1ftX3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing .			No	417		
27	Other Items not Mentioned above but required for installation and commissioning of the single and three phase Distribution line for Mini Grid and end user installation such as insulators, binding wires, fittings including nuts, bolts, Danger Plates, Name Plates, anti-climbing Barbed wire and accessories etc. on turn-key basis			Lot	1		
<b>B3</b>	<b>11KV MV Distribution line</b>						
28	12M MV Concrete Pole (TSP/03/005-1)			No	0		
29	14M MV Concrete Pole (TSP/03/005-1)			No	0		
30	MV Concrete Pole fittings-(Cross arms, Tie straps, insulator composites, Universal clamps, bolts, nuts, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	0		



**SCHEDULE NO. 2 - PLANT AND MANDATORY SPARE PARTS FROM WITHIN THE EMPLOYER'S COUNTRY**

Item	Description	Quantity and capacity of single unit <sup>2</sup>	Code <sup>3</sup>	Unit <sup>4</sup>	Qty	EXW Unit Price <sup>1</sup>	EXW Total Price <sup>1</sup>
					(1)	(2)	(1) x (2)
<b>LATAKWENY 75kWp (75 kW AC) SOLAR PV MINI GRID</b>							
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>						
<b>A1</b>	<b>SPV Modules &amp; Inverters</b>						
1	75 kWp (DC) Standard monocrystalline silicon SPV modules			Lot	1		
2	Fixed-tilt racking structure(s) for above SPV modules including all necessary nuts and bolts as well as necessary clamps, foundation bolts etc.			Lot	1		
3	75 kW (AC) Solar PV Inverter			Lot	1		
4	50 kW Battery Inverter			Lot	1		
<b>A2</b>	<b>Battery Energy Storage System</b>						
5	188 kWh Usable Battery Energy Storage System (BESS)			Lot	1		
6	Battery Management System			Lot	1		
7	Supply of SCADA along with associated equipment, data acquisition, data logger and display units and Industrial type PC with remote monitoring.			Lot	1		
<b>A3</b>	<b>Diesel Generator</b>						
8	50 kVA Prime Rated Diesel Generator(s) (DG) 415 V, 3-phase installed with a common genset controller capable of parallel operation with shunt-trip breakers for auto-start capability			Lot	1		
9	2000Litres Fuel Storage Tank			Lot	1		
<b>A4</b>	<b>Other SPGP Items</b>						
10	Security equipment including CCTV cameras, IR sensors with video display at control room.			Lot	1		
11	Metering system consisting of check and main meters for Import / export of energy from solar plant as per grid code			No.	1		
12	Auxiliary power supply as per specifications			Lot	1		
13	Air conditioners for the control room as per specifications.			Lot	1		
14	All balance of system components for interconnecting the battery and solar array with their inverters and the wider 415V three-phase 50 Hz AC distribution system, including but not limited to: AC & DC wiring, breakers, fuses, combiner boxes, recombiner boxes, panelboards, conduits, cables and cable trays, relays, transformers, enclosures, foundations, trenches, poles, support structures, cabinets, grounding electrodes, grounding conductors, lighting arrestors, lightning rods, insulators, surge protection, meters, sensors, and any other fixtures required for safety, reliability, and compliance with all relevant local and			Lot	1		

	international codes and standards at the time of installation.						
<b>LATAKWENY SUBTOTAL A</b>							
<b>B</b>	<b>Power Distribution Network (PDN)</b>						
<b>B1</b>	<b>3-phase and single-phase LV Distribution Line</b>						
15	10M LV Concrete Pole (TSP/03/005-1)			No	258		
16	LV Concrete Pole fittings-clamps, (Multipurpose/universal clamps, bolts,nuts,stays, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	258		
17	50sqmm AA bare conductor for length of LV (2-wire) line (TSP/06/020-2)			Km	15.59		
18	Complete Earthing- Protective Multiple Earthing (PME) (TSP/06/031-1)			No	135		
19	LV Concrete stays- (Stay wire, stay block, stay rod)			No	116		
20	LV Concrete strut pole- (Concrete strut pole, heavy duty clamps)			No	17		
<b>B2</b>	<b>Other PDN Items</b>						
21	Service Cable (25mm <sup>2</sup> PVC Insulated three phase, 4 core Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	60		
22	Service Cable (16mm <sup>2</sup> PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable)(TSP/05/004)			M	5040		
23	10mm dropper cable Red and Black; 1m each for single phase meters <sup>2</sup> (TSP/05/016)			M	204		
24	Service cable concrete fittings (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/03/003), (TSP/06/035)			No.	170		
25	Service Cable fittings for wall mounting including Angle Iron (TSP/02/003-3), (TSP/04/011), (TSP/03/003), (TSP/02/003-1)			No.	170		
26	Ready Boards complete with mounting accessories (TSP/14/051)			No.	170		
27	1ftyX1ftX3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing .			No	170		

28	Other Items not Mentioned above but required for installation and commissioning of the single and three phase Distribution line for Mini Grid and end user installation such as insulators, binding wires, fittings including nuts, bolts, Danger Plates, Name Plates, anti-climbing Barbed wire and accessories etc. on turn-key basis			Lot	1			
<b>B3</b>	<b>11KV MV Distribution line</b>							
29	12M MV Concrete Pole (TSP/03/005-1)			No	0			
30	14M MV Concrete Pole (TSP/03/005-1)			No	0			
31	MV Concrete Pole fittings- (Cross arms, Tie straps, insulator composites, Universal clamps, bolts, nuts, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	0			
32	75sqmm Aluminium Conductor Steel Reinforced (ACSR) conductor for length of three phase (3 - wire) line (TSP/06/020-2)			Km	0			
33	MV Concrete Pole stays - (Stay wire, stay rod, stay block, shackle insulator)			No	0			
34	MV Concrete Pole flying stays - (Concrete pole, Stay wire, stay rod, stay block, shackle insulator)			No	0			
35	MV Concrete Pole strut pole – (Concrete strut pole, heavy duty clamps)			No	0			
<b>B4</b>	<b>11KV Distribution Transformer</b>							
36	11KV 50KVA transformer			No	0			
37	11KV 50 - 200KVA transformer substation structure and fittings (Earthing & lightning Protection and associated material requirement, Expulsion Fuses, Surge diverters, Overhead fuse carriers, 10M Concrete poles, 11KV Steel channel and clamps etc. Danger plates, phase plates, circuit plates, number plates, anti-climbing devices and other safety requirements)			Set	0			
<b>LATAKWENY SUBTOTAL B</b>								
<b>C</b>	<b>Mandatory spares</b>							
38	Mandatory spares including at least 1 spare inverter, 5% of total solar PV panel capacity, fuses, cabling and hardware for 7 years including all consumable parts.			Lot	1			
<b>LATAKWENY SUBTOTAL C</b>								



Item	Description	Quantity and capacity of single unit <sup>2</sup>	Code <sup>3</sup>	Unit <sup>4</sup>	Qty	EXW Unit Price <sup>1</sup>	EXW Total Price <sup>1</sup>
					(1)	(2)	(1) x (2)
<b>BARSALOI 120 kWp (120 kW AC) SOLAR PV MINI GRID</b>							
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>						
<b>A1</b>	<b>SPV Modules &amp; Inverters</b>						
1	120 kWp (DC) Standard monocrystalline silicon SPV modules			Lot	1		
2	Fixed-tilt racking structure(s) for above SPV modules including all necessary nuts and bolts as well as necessary clamps, foundation bolts etc.			Lot	1		
3	120 kW (AC) Solar PV Inverters			Lot	1		
4	82 kW Battery Inverter			Lot	1		
<b>A2</b>	<b>Battery Energy Storage System</b>						
5	300 kWh Usable Battery Energy Storage System (BESS)			Lot	1		
6	Battery Management System			Lot	1		
7	Supply of SCADA along with associated equipment, data acquisition, data logger and display units and Industrial type PC with remote monitoring.			Lot	1		
<b>A3</b>	<b>Diesel Generator</b>						
8	82 kVA Prime Rated Diesel Generator(s) (DG) 415 V, 3-phase installed with a common genset controller capable of parallel operation with shunt-trip breakers for auto-start capability			Lot	1		
9	2000Litres Fuel Storage Tank			Lot	1		
<b>A4</b>	<b>Other SPGP Items</b>						
10	Metering system consisting of check and main meters for Import / export of energy from solar plant as per grid code			No.	1		
11	Auxiliary power supply as per specifications			Lot	1		
12	Air conditioners for the control room as per specifications.			Lot	1		
13	All balance of system components for interconnecting the battery and solar array with their inverters and the wider 415V three-phase 50 Hz AC distribution system, including but not limited to: AC & DC wiring, breakers, fuses, combiner boxes, recombiner boxes, panelboards, conduits, cables and cable trays, relays, transformers, enclosures, foundations, trenches, poles, support structures, cabinets, grounding electrodes, grounding conductors, lighting arrestors, lightning rods, insulators, surge protection, meters, sensors, and any other fixtures required for safety, reliability, and compliance with all relevant local and international codes and standards at the time of installation.			Lot	1		
<b>BARSALOI SUBTOTAL A</b>							
<b>B</b>	<b>Power Distribution Network (PDN)</b>						
<b>B1</b>	<b>3-phase and single-phase LV Distribution Line</b>						
14	10M LV Concrete Pole (TSP/03/005-1)			No	333		



15	LV Concrete Pole fittings- (Multipurpose/universal clamps, bolts, nuts, stays, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	333		
16	50sqmm AA bare conductor for length of LV (2-wire) line (TSP/06/020-2)			Km	16.09		
17	Complete Earthing- Protective Multiple Earthing (PME) (TSP/06/031-1)			No	243		
18	LV Concrete stays- (Stay wire, stay block, stay rod)			No	235		
19	LV Concrete strut pole- (Concrete strut pole, heavy duty clamps)			No	37		
<b>B2</b>	<b>Other PDN Items</b>						
20	Service Cable (25mm <sup>2</sup> PVC Insulated three phase, 4 core Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	90		
21	Service Cable (16mm <sup>2</sup> PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	8100		
22	10mm dropper cable Red and Black; 1m each for single phase meters <sup>2</sup> (TSP/05/016)			M	327.6		
23	Service cable concrete fittings (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/03/003), (TSP/06/035)			No.	273		
24	Service Cable fittings for wall mounting including Angle Iron (TSP/02/003-3), (TSP/04/011), (TSP/03/003), (TSP/02/003-1)			No.	273		
25	Ready Boards complete with mounting accessories (TSP/14/051)			No.	273		
26	1ftx1ftX3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.			No	273		
27	Other Items not Mentioned above but required for installation and commissioning of the single and three phase Distribution line for Mini Grid and end user installation such as insulators, binding wires, fittings including nuts, bolts, Danger Plates, Name Plates, anti-climbing Barbed wire and accessories etc. on turn-key basis			Lot	1		
<b>B3</b>	<b>11KV MV Distribution line</b>						
28	12M MV Concrete Pole (TSP/03/005-1)			No	0		
29	14M MV Concrete Pole (TSP/03/005-1)			No	0		
30	MV Concrete Pole fittings- (Cross arms, Tie straps, insulator composites, Universal clamps, bolts, nuts, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	0		

31	75sqmm Aluminium Conductor Steel Reinforced (ACSR) conductor for length of three phase (3 - wire) line (TSP/06/020-2)			Km	0		
32	MV Concrete Pole stays - (Stay wire, stay rod, stay block, shackle insulator)			No	0		
33	MV Concrete Pole flying stays - (Concrete pole, Stay wire, stay rod, stay block, shackle insulator)			No	0		
34	MV Concrete Pole strut pole – (Concrete strut pole, heavy duty clamps)			No	0		
<b>B4</b>	<b>11KV Distribution Transformer</b>				0		
35	11KV 50KVA transformer			No			
36	11KV 50 - 200KVA transformer substation structure and fittings (Earthing & lightning Protection and associated material requirement, Expulsion Fuses, Surge diverters, Overhead fuse carriers, 10M Concrete poles, 11KV Steel channel and clamps etc. Danger plates, phase plates, circuit plates, number plates, anti-climbing devices and other safety requirements)			Set	0		
					<b>BARSALOI SUBTOTAL B</b>		
<b>C</b>	<b>Mandatory spares</b>						
37	Mandatory spares including at least 1 spare inverter, 5% of total solar PV panel capacity, fuses, cabling and hardware for 7 years including all consumable parts.			Lot	1		
					<b>BARSALOI SUBTOTAL C</b>		

Item	Description	Quantity and capacity of single unit <sup>2</sup>	Code <sup>3</sup>	Unit <sup>4</sup>	Qty	EXW Unit Price <sup>1</sup>	EXW Total Price <sup>1</sup>
					(1)	(2)	(1) x (2)
<b>TUUM 135 kWp (135 kW AC) SOLAR PV MINI GRID</b>							
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>						
<b>A1</b>	<b>SPV Modules &amp; Inverters</b>						
1	135 kWp (DC) Standard monocrystalline silicon SPV modules			Lot	1		
2	Fixed-tilt racking structure(s) for above SPV modules including all necessary nuts and bolts as well as necessary clamps, foundation bolts etc.			Lot	1		
3	135 kW (AC) Solar PV Inverters			Lot	1		
4	100 kW Battery Inverter			Lot	1		
<b>A2</b>	<b>Battery Energy Storage System</b>						
5	338 kWh Usable Battery Energy Storage System (BESS)			Lot	1		
6	Battery Management System			Lot	1		
7	Supply of SCADA along with associated equipment, data acquisition, data logger and display units and Industrial type PC with remote monitoring.			Lot	1		
<b>A3</b>	<b>Diesel Generator</b>						
8	100 kVA Prime Rated Diesel Generator(s) (DG) 415 V, 3-phase installed with a common genset controller capable of parallel operation with shunt-trip breakers for auto-start capability			Lot	1		
9	2000Litres Fuel Storage Tank			Lot	1		
<b>A4</b>	<b>Other SPGP Items</b>						
10	Metering system consisting of check and main meters for Import / export of energy from solar plant as per grid code			No.	1		
11	Auxiliary power supply as per specifications			Lot	1		
12	Air conditioners for the control room as per specifications.			Lot	1		
13	All balance of system components for interconnecting the battery and solar array with their inverters and the wider 415V three-phase 50 Hz AC distribution system, including but not limited to: AC & DC wiring, breakers, fuses, combiner boxes, recombiner boxes, panelboards, conduits, cables and cable trays, relays, transformers, enclosures, foundations, trenches, poles, support structures, cabinets, grounding electrodes, grounding conductors, lighting arrestors, lightning rods, insulators, surge protection, meters, sensors, and any other fixtures required for safety, reliability, and compliance with all relevant local and international codes and standards at the time of installation.			Lot	1		
					<b>TUUM SUBTOTAL A</b>		
<b>B</b>	<b>Power Distribution Network (PDN)</b>						
<b>B1</b>	<b>3-phase and single-phase LV Distribution Line</b>						
14	10M LV Concrete Pole (TSP/03/005-1)			No	420		

15	LV Concrete Pole fittings- (Multipurpose/universal clamps, bolts,nuts,stays, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	420		
16	50sqmm AA bare conductor for length of LV (2-wire) line (TSP/06/020-2)			Km	24.05		
17	Complete Earthing- Protective Multiple Earthing (PME) (TSP/06/031-1)			No	313		
18	LV Concrete stays- (Stay wire, stay block, stay rod)			No	309		
19	LV Concrete strut pole- (Concrete strut pole, heavy duty clamps)			No	35		
<b>B2</b>	<b>Other PDN Items</b>						
20	Service Cable (25mm <sup>2</sup> PVC Insulated three phase, 4 core Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	60		
21	Service Cable (16mm <sup>2</sup> PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	12450		
22	10mm dropper cable Red and Black; 1m each for single phase meters <sup>2</sup> (TSP/05/016)			M	500.4		
23	Service cable concrete fittings (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/03/003), (TSP/06/035)			No.	417		
24	Service Cable fittings for wall mounting including Angle Iron (TSP/02/003-3), (TSP/04/011), (TSP/03/003), (TSP/02/003-1)			No.	417		
25	Ready Boards complete with mounting accessories (TSP/14/051)			No.	417		
26	1ftX1ftX3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.			No	417		
27	Other Items not Mentioned above but required for installation and commissioning of the single and three phase Distribution line for Mini Grid and end user installation such as insulators, binding wires, fittings including nuts, bolts, Danger Plates, Name Plates, anti-climbing Barbed wire and accessories etc. on turn-key basis			Lot	1		
<b>B3</b>	<b>11KV MV Distribution line</b>						
28	12M MV Concrete Pole (TSP/03/005-1)			No	37		
29	14M MV Concrete Pole (TSP/03/005-1)			No	10		
30	MV Concrete Pole fittings- (Cross arms, Tie straps, insulator composites, Universal clamps, bolts, nuts, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	47		

31	75sqmm Aluminium Conductor Steel Reinforced (ACSR) conductor for length of three phase (3 - wire) line (TSP/06/020-2)			Km	3.39		
32	MV Concrete Pole stays - (Stay wire, stay rod, stay block, shackle insulator)			No	23		
33	MV Concrete Pole flying stays - (Concrete pole, Stay wire, stay rod, stay block, shackle insulator)			No	10		
34	MV Concrete Pole strut pole – (Concrete strut pole, heavy duty clamps)			No	0		
<b>B4</b>	<b>11KV Distribution Transformer</b>						
35	11KV 50KVA transformer			No	2		
36	11KV 50 - 200KVA transformer substation structure and fittings (Earthing & lightning Protection and associated material requirement, Expulsion Fuses, Surge diverters, Overhead fuse carriers, 10M Concrete poles, 11KV Steel channel and clamps etc. Danger plates, phase plates, circuit plates, number plates, anti-climbing devices and other safety requirements)			Set	2		
<b>B5</b>	<b>Step up Transformer</b>						
37	415V/11KV 100KVA transformer			No	1		
38	All system components for interconnecting the inverters and the 11kv distribution transformers, including but not limited to: panelboards, busbars, switchgears, air break switch and structure, 11kv solid links, surge diverters, mounting structures for the surge diverters, underground cabling, conduits, cables and cable trays, grounding electrodes, grounding conductors, lightning arrestors, lightning mast galvanized steel structure and associated earthing, insulators, meters, sensors, concrete plinth, autorecloser, mounting structures for the HT neutral bushing and any other fixtures required for a safety, reliability, and compliance with all relevant local and international codes and standards at the time of installation.			Set	1		
					<b>TUUM SUBTOTAL B</b>		
<b>C</b>	<b>Mandatory spares</b>						
39	Mandatory spares including at least 1 spare inverter, 5% of total solar PV panel capacity, fuses, cabling and hardware for 7 years including all consumable parts.			Lot	1		
					<b>TUUM SUBTOTAL C</b>		

Item	Description	Quantity and capacity of single unit <sup>2</sup>	Code <sup>3</sup>	Unit <sup>4</sup>	Qty	EXW Unit Price <sup>1</sup>	EXW Total Price <sup>1</sup>
					(1)	(2)	(1) x (2)
<b>SEREOLUPI 200 kWp (200 kW AC) SOLAR PV MINI GRID</b>							
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>						
<b>A1</b>	<b>SPV Modules &amp; Inverters</b>						
1	200 kWp (DC) Standard monocrystalline silicon SPV modules			Lot	1		
2	Fixed-tilt racking structure(s) for above SPV modules including all necessary nuts and bolts as well as necessary clamps, foundation bolts etc.			Lot	1		
3	200 kW(AC) Solar PV Inverters			Lot	1		
4	130 kW Battery Inverter			Lot	1		
<b>A2</b>	<b>Battery Energy Storage System</b>						
5	500 kWh Usable Battery Energy Storage System (BESS)			Lot	1		
6	Battery Management System			Lot	1		
7	Supply of SCADA along with associated equipment, data acquisition, data logger and display units and Industrial type PC with remote monitoring.			Lot	1		
<b>A3</b>	<b>Diesel Generator</b>						
8	130 kVA Prime Rated Diesel Generator(s) (DG) 415 V, 3-phase installed with a common genset controller capable of parallel operation with shunt-trip breakers for auto-start capability			Lot	1		
9	2000Litres Fuel Storage Tank			Lot	1		
<b>A4</b>	<b>Other SPGP Items</b>						
10	Metering system consisting of check and main meters for Import / export of energy from solar plant as per grid code			No.	1		
11	Auxiliary power supply as per specifications			Lot	1		
12	Air conditioners for the control room as per specifications.			Lot	1		
13	All balance of system components for interconnecting the battery and solar array with their inverters and the wider 415V three-phase 50 Hz AC distribution system, including but not limited to: AC & DC wiring, breakers, fuses, combiner boxes, recombiner boxes, panelboards, conduits, cables and cable trays, relays, transformers, enclosures, foundations, trenches, poles, support structures, cabinets, grounding electrodes, grounding conductors, lighting arrestors, lightning rods, insulators, surge protection, meters, sensors, and any other fixtures required for safety, reliability, and compliance with all relevant local and international codes and standards at the time of installation.			Lot	1		
	<b>SEREOLUPI SUBTOTAL A</b>						
<b>B</b>	<b>Power Distribution Network (PDN)</b>						
<b>B1</b>	<b>3-phase and single-phase LV Distribution Line</b>						
14	10M LV Concrete Pole ( <a href="#">TSP/03/005-1</a> )			No	579		

15	LV Concrete Pole fittings- (Multipurpose/universal clamps, bolts,nuts,stays, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	579		
16	50sqmm AA bare conductor for length of LV (2-wire) line (TSP/06/020-2)			Km	31		
17	Complete Earthing- Protective Multiple Earthing (PME) (TSP/06/031-1)			No	342		
18	LV Concrete stays- (Stay wire, stay block, stay rod)			No	336		
19	LV Concrete strut pole- (Concrete strut pole, heavy duty clamps)			No	22		
<b>B2</b>	<b>Other PDN Items</b>						
20	Service Cable (25mm <sup>2</sup> PVC Insulated three phase, 4 core Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	60		
21	Service Cable (16mm <sup>2</sup> PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) (TSP/05/004)			M	12,480		
22	10mm dropper cable Red and Black; 1m each for single phase meters <sup>2</sup> (TSP/05/016)			M	501.6		
23	Service cable concrete fittings (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/03/003), (TSP/06/035)			No.	417		
24	Service Cable fittings for wall mounting including Angle Iron (TSP/02/003-3), (TSP/04/011), (TSP/03/003), (TSP/02/003-1)			No.	417		
25	Ready Boards complete with mounting accessories (TSP/14/051)			No.	417		
26	1ftX1ftX3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing .			No	417		
27	Other Items not Mentioned above but required for installation and commissioning of the single and three phase Distribution line for Mini Grid and end user installation such as insulators, binding wires, fittings including nuts, bolts, Danger Plates, Name Plates, anti-climbing Barbed wire and accessories etc. on turn-key basis			Lot	1		
<b>B3</b>	<b>11KV MV Distribution line</b>						
28	12M MV Concrete Pole (TSP/03/005-1)			No	0		
29	14M MV Concrete Pole (TSP/03/005-1)			No	0		
30	MV Concrete Pole fittings-(Cross arms, Tie straps, insulator composites, Universal clamps, bolts, nuts, preformed guy-grips, D-irons, insulators, etc) (TSP/06/035), (TSP/03/021), (TSP/03/003), (TSP/02/004), (TSP/02/003-1), (TSP/04/011), (TSP/02/003-2), (TSP/02/002), (TSP/06/036-1), (TSP/07/001), (TSP/03/022)			Set	0		



31	75sqmm Aluminium Conductor Steel Reinforced (ACSR) conductor for length of three phase (3 - wire) line (TSP/06/020-2)			Km	0			
32	MV Concrete Pole stays - (Stay wire, stay rod, stay block, shackle insulator)			No	0			
33	MV Concrete Pole flying stays - (Concrete pole, Stay wire, stay rod, stay block, shackle insulator)			No	0			
34	MV Concrete Pole strut pole – (Concrete strut pole, heavy duty clamps)			No	0			
<b>B4</b>	<b>11KV Distribution Transformer</b>							
35	11KV 50KVA transformer			No	0			
36	11KV 50 - 200KVA transformer substation structure and fittings (Earthing & lightning Protection and associated material requirement, Expulsion Fuses, Surge diverters, Overhead fuse carriers, 10M Concrete poles, 11KV Steel channel and clamps etc. Danger plates, phase plates, circuit plates, number plates, anti-climbing devices and other safety requirements)			Set	0			
	<b>SEREOLUPI SUBTOTAL B</b>							
<b>C</b>	<b>Mandatory spares</b>							
37	Mandatory spares including at least 1 spare inverter, 5% of total solar PV panel capacity, fuses, cabling and hardware for 7 years including all consumable parts.			Lot	1			
	<b>SEREOLUPI SUBTOTAL C</b>							
<b>TOTAL (to Schedule No. 7. Grand Summary)</b>								
				<b>Name of Bidder</b>		_____		
				<b>Signature of Bidder</b>		_____		
	<sup>1</sup> Specify currency. Create and use as many columns for Unit Price and Total Price as there are currencies.							
	<sup>2</sup> Bidder to provide further breakdown of items quoted for i.e. the exact number of single units that make up the item as well as the size/capacity of a single unit.							
	<sup>3</sup> Lot per km - Bidders are advised to assume a span length of 100m for Medium Voltage network (11kV) and 50m for Low Voltage network.							
	<b>NB – Refer to Employer’s Requirements &amp; Technical Specifications for details of each item (Bidding Documents Volumes II and IV)</b>							



**SCHEDULE NO. 3 - SURVEY & DESIGN SERVICES**

LOT 5 SOLAR PV MINIGRIDS					
Item	Description	Unit	Qty	Unit Price <sup>1</sup>	Total Price <sup>1</sup>
			(1)	(2)	(1) x (2)
1	Survey and Design of SPV Modules & Inverters including structures	Lot	4		
2	Design of Battery Energy Storage System, including Inverter/Charger	Lot	4		
3	SCADA system design	Lot	4		
4	Diesel Generator Design	Lot	4		
5	Design of other SPGP items	Lot	4		
6	Survey and Design of Power Distribution Network	Lot	4		
7	Design of other PDN items	Lot	4		
8	Design of Civil/Structural works and associated works	Lot	4		
	<b>Lot 5 SUBTOTAL</b>				
<b>TOTAL (to Schedule No. 7. Grand Summary)</b>					
				<b>Name of Bidder</b>	_____
				<b>Signature of Bidder</b>	_____

<sup>1</sup> Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1

**NB – Refer to Employer’s Requirements & Technical Specifications for details of each item (Bidding Documents Volumes II and IV)**

The design costs should include Survey (including picking distance of the solar plant from the existing KPLC grid), premises picking, customer sensitization, customer data collection, transformer positioning/picking, LV line wayleaves consent acquisition, and detailed design including design proposals/information updating on the KPLC Facility Data Base (FDB), preparation and submission of drawings. The civil and structural works design shall include Geotechnical Survey, Topographical Survey, hydrogeological survey and all Designs and drawings submission and all statutory approvals.

**SCHEDULE NO. 4 - INSTALLATION, TESTING, COMMISSIONING AND OTHER SERVICES**

Item	Description	Unit <sup>2</sup>	Qty	Unit Price <sup>1</sup>	Total Price <sup>1</sup>
			(1)	(2)	(1) x (2)
<b>LATAKWENY 75 kWp (75kW AC) SOLAR PV MINI-GRID</b>					
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>				
1	Installation, Erection, Testing and Commissioning of SPV Modules & Inverters including Mounting structures	Lot	1		
2	Installation, Erection, Testing and Commissioning of Battery Energy Storage System, including Inverter/Charger	Lot	1		
3	Installation, Erection, Testing and Commissioning of SCADA system	Lot	1		
4	Installation, Erection, Testing and Commissioning of Diesel Generator	Lot	1		
5	Installation of all balance of system components to complete erection of the SPGP	Lot	1		
6	Testing & commissioning of all supplied equipment including DG. Test running of Solar Power Plant as well as load trials at site, prior to handover and implementation of maintenance contract	Lot	1		
<b>LATAKWENY SUBTOTAL A</b>					
<b>B</b>	<b>Power Distribution Network</b>				
<b>B-1</b>	<b>Pegging, Erection, dressing and stringing of LV lines- 3 phase lines and Single phase lines</b>				
7	Pole Erection and dressing- Concrete	No	258		
8	Conductor Stringing including trace clearance as per KPLC standard	Km	15.59		
9	PME installation	No	135		
10	LV Stay hole digging, making & Erection	No	116		
11	LV Strut hole digging, making & Erection	No	17		
<b>B-2</b>	<b>Service cable</b>				
12	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	170		
13	Installation of Ready Boards, Earthing and Testing	No.	170		
14	Installation of wall mounted metallic customer meter boards complete with MCB and service cable termination	No.	170		
15	Class C-2 ERC Wiring Certificates	No	170		
<b>B-3</b>	<b>Pegging, Erection, dressing and stringing of 11KV MV Distribution line</b>				
16	Pole Erection and dressing- Concrete	No	0		
17	Conductor Stringing including trace clearance as per KPLC standard	Km	0		
18	MV Stay hole digging, making & Erection	No	0		
19	MV Flying Stay hole digging, making & Erection	No	0		
20	MV Strut hole digging, making & Erection	No	0		
<b>B-4</b>	<b>Mounting, Dressing, Welding and Earthing 11KV Distribution Transformer</b>				
21	Transformer Mounting, Dressing, Welding and Earthing	No	0		

<b>LATAKWENY SUBTOTAL B</b>					
<b>C</b>	<b>Civil works</b>				
22	Platform Works-Earthworks and slope protection, site clearing and disposal, Galvanised Boundary chain link fence with steel posts for the entire Mini grid developed area, Gates, SPGP area barricade fence. Solar panels reinforced concrete foundations/helical anchor foundations, Generator Equipment Plinth, 2000L underground fuel storage tank, Access Road, SPGP Internal road, Storm water drainage.	Lot	1		
23	Cable network and conduits	Lot	1		
24	Containerized technology solution for Office Building and Control Room, Air conditioners.	Lot	1		
25	Galvanized Steel Structures- solar panels steel support structurers.	Lot	1		
26	Masonry guard house	Lot	1		
27	Masonry twin VIP Pit Latrine	Lot	1		
28	Security Systems, SPGP Outdoor Lighting and Perimeter Lighting, Control room and office building security lighting, Guard House Alarm System and danger and warning plate.	Lot	1		
29	Rainwater harvesting and Storage	Lot	1		
30	Fire Prevention System-Fire Extinguishers, and Fire Suppression System at the BESS Section.	Lot	1		
<b>LATAKWENY SUBTOTAL C</b>					

Item	Description	Unit <sup>2</sup>	Qty	Unit Price <sup>1</sup>	Total Price <sup>1</sup>
<b>BARSALOI 120 kWp (120kW AC) Solar Mini Grid</b>					
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>				
1	Installation, Erection, Testing and Commissioning of SPV Modules & Inverters including Mounting structures	Lot	1		
2	Installation, Erection, Testing and Commissioning of Battery Energy Storage System, including Inverter/Charger	Lot	1		
3	Installation, Erection, Testing and Commissioning of SCADA system	Lot	1		
4	Installation, Erection, Testing and Commissioning of Diesel Generator	Lot	1		
5	Installation of all balance of system components to complete erection of the SPGP	Lot	1		
6	Testing & commissioning of all supplied equipment including DG. Test running of Solar Power Plant as well as load trials at site, prior to handover and implementation of maintenance contract	Lot	1		
<b>BARSALOI SUBTOTAL A</b>					
<b>B</b>	<b>Power Distribution Network</b>				
<b>B-1</b>	<b>Pegging, Erection, dressing and stringing of LV lines- 3 phase lines and Single phase lines</b>				
7	Pole Erection and dressing- Concrete	No	33		
8	Conductor Stringing including trace clearance as per KPLC standard	Km	16.09		
9	PME installation	No	243		
10	LV Stay hole digging, making & Erection	No	235		
11	LV Strut hole digging, making & Erection	No	37		
<b>B-2</b>	<b>Service cable</b>				
12	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	273		
13	Installation of Ready Boards, Earthing and Testing	No.	273		
14	Installation of wall mounted metallic customer meter boards complete with MCB and service cable termination	No.	273		
15	Class C-2 ERC Wiring Certificates	No	273		
<b>B-3</b>	<b>Pegging, Erection, dressing and stringing of 11KV MV Distribution line</b>				
16	Pole Erection and dressing- Concrete	No	0		
17	Conductor Stringing including trace clearance as per KPLC standard	Km	0		
18	MV Stay hole digging, making & Erection	No	0		
19	MV Flying Stay hole digging, making & Erection	No	0		
20	MV Strut hole digging, making & Erection	No	0		
<b>B-4</b>	<b>Mounting, Dressing, Welding and Earthing 11KV Distribution Transformer</b>				
21	Transformer Mounting, Dressing, Welding and Earthing	No	0		
<b>BARSALOI SUBTOTAL B</b>					

<b>C</b>	<b>Civil works</b>				
22	Platform Works-Earthworks and slope protection, site clearing and disposal, Galvanised Boundary chain link fence with steel posts for the entire Mini grid developed area, Gates, SPGP area barricade fence. Solar panels reinforced concrete foundations/helical anchor foundations, Generator Equipment Plinth, 2000L underground fuel storage tank, Access Road, SPGP Internal road, Storm water drainage.	Lot	1		
23	Cable network and conduits	Lot	1		
24	Containerized technology solution for Office Building and Control Room, Air conditioners.	Lot	1		
25	Galvanized Steel Structures- solar panels steel support structurers.	Lot	1		
26	Masonry guard house	Lot	1		
27	Masonry twin VIP Pit Latrine	Lot	1		
28	Security Systems, SPGP Outdoor Lighting and Perimeter Lighting, Control room and office building security lighting, Guard House Alarm System and danger and warning plate.	Lot	1		
29	Rain water harvesting and Storage	Lot	1		
30	Fire Prevention System-Fire Extinguishers, and Fire Suppression System at the BESS Section.	Lot	1		
<b>BARSALOI SUBTOTAL C</b>					

Item	Description	Unit <sup>2</sup>	Qty	Unit Price <sup>1</sup>	Total Price <sup>1</sup>
<b>TUUM 135 kWp (135kW AC) SOLAR PV MINI GRID</b>					
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>				
1	Installation, Erection, Testing and Commissioning of SPV Modules & Inverters including Mounting structures	Lot	1		
2	Installation, Erection, Testing and Commissioning of Battery Energy Storage System, including Inverter/Charger	Lot	1		
3	Installation, Erection, Testing and Commissioning of SCADA system	Lot	1		
4	Installation, Erection, Testing and Commissioning of Diesel Generator	Lot	1		
5	Installation of all balance of system components to complete erection of the SPGP	Lot	1		
6	Testing & commissioning of all supplied equipment including DG. Test running of Solar Power Plant as well as load trials at site, prior to handover and implementation of maintenance contract	Lot	1		
<b>TUUM SUBTOTAL A</b>					
<b>B</b>	<b>Power Distribution Network</b>				
<b>B-1</b>	<b>Pegging, Erection, dressing and stringing of LV lines- 3 phase lines and Single phase lines</b>				
7	Pole Erection and dressing- Concrete	No	420		
8	Conductor Stringing including trace clearance as per KPLC standard	Km	24.05		
9	PME installation	No	313		
10	LV Stay hole digging, making & Erection	No	309		
11	LV Strut hole digging, making & Erection	No	35		
<b>B-2</b>	<b>Service cable</b>				
12	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	417		
13	Installation of Ready Boards, Earthing and Testing	No.	417		
14	Installation of wall mounted metallic customer meter boards complete with MCB and service cable termination	No.	417		
15	Class C-2 ERC Wiring Certificates	No	417		
<b>B-3</b>	<b>Pegging, Erection, dressing and stringing of 11KV MV Distribution line</b>				
16	Pole Erection and dressing- Concrete	No	47		
17	Conductor Stringing including trace clearance as per KPLC standard	Km	3.39		
18	MV Stay hole digging, making & Erection	No	23		
19	MV Flying Stay hole digging, making & Erection	No	10		
20	MV Strut hole digging, making & Erection	No	0		
<b>B-4</b>	<b>Mounting, Dressing, Welding and Earthing 11KV Distribution Transformer</b>				
21	Transformer Mounting, Dressing, Welding and Earthing	No	2		

<b>B-5</b>	<b>Mounting, Dressing, Welding and Earthing Step up Transformer</b>				
22	Transformer Mounting, Dressing, Welding and Earthing	No	1		
<b>TUUM SUBTOTAL B</b>					
<b>C</b>	<b>Civil works</b>				
23	Platform Works-Earthworks and slope protection, site clearing and disposal, Galvanised Boundary chain link fence with steel posts for the entire minigrid developed area, Gates, SPGP area barricade fence. Solar panels reinforced concrete foundations/helical anchor foundations, Generator Equipment Plinth, 2000L underground fuel storage tank, Access Road, SPGP Internal road, Storm water drainage.	Lot	1		
24	Cable network and conduits	Lot	1		
25	Containerized technology solution for Office Building and Control Room, Air conditioners.	Lot	1		
26	Galvanized Steel Structures- solar panels steel support structurers.	Lot	1		
27	Masonry guard house	Lot	1		
28	Masonry twin VIP Pit Latrine	Lot	1		
29	Security Systems, SPGP Outdoor Lighting and Perimeter Lighting, Control room and office building security lighting, Guard House Alarm System and danger and warning plate.	Lot	1		
30	Rainwater harvesting and Storage	Lot	1		
31	Fire Prevention System-Fire Extinguishers, and Fire Suppression System at the BESS Section.	Lot	1		
<b>TUUM SUBTOTAL C</b>					

Item	Description	Unit <sup>2</sup>	Qty	Unit Price <sup>1</sup>	Total Price <sup>1</sup>
<b>SEREOLUPI 200 kWp (200kW AC) SOLAR PV MINI GRID</b>					
<b>A</b>	<b>Solar Power Generation Plant (SPGP)</b>				
1	Installation, Erection, Testing and Commissioning of SPV Modules & Inverters including Mounting structures	Lot	1		
2	Installation, Erection, Testing and Commissioning of Battery Energy Storage System, including Inverter/Charger	Lot	1		
3	Installation, Erection, Testing and Commissioning of SCADA system	Lot	1		
4	Installation, Erection, Testing and Commissioning of Diesel Generator	Lot	1		
5	Installation of all balance of system components to complete erection of the SPGP	Lot	1		
6	Testing & commissioning of all supplied equipment including DG. Test running of Solar Power Plant as well as load trials at site, prior to handover and implementation of maintenance contract	Lot	1		
			<b>SEREOLUPI SUBTOTAL A</b>		
<b>B</b>	<b>Power Distribution Network</b>				
<b>B-1</b>	<b>Pegging, Erection, dressing and stringing of LV lines- 3 phase lines and Single phase lines</b>				
7	Pole Erection and dressing- Concrete	No	579		
8	Conductor Stringing including trace clearance as per KPLC standard	Km	31		
9	PME installation	No	342		
10	LV Stay hole digging, making & Erection	No	336		
11	LV Strut hole digging, making & Erection	No	22		
<b>B-2</b>	<b>Service cable</b>				
12	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	418		
13	Installation of Ready Boards, Earthing and Testing	No.	418		
14	Installation of wall mounted metallic customer meter boards complete with MCB and service cable termination	No.	418		
15	Class C-2 ERC Wiring Certificates	No	418		
<b>B-3</b>	<b>Pegging, Erection, dressing and stringing of 11KV MV Distribution line</b>				
16	Pole Erection and dressing- Concrete	No	0		
17	Conductor Stringing including trace clearance as per KPLC standard	Km	0		
18	MV Stay hole digging, making & Erection	No	0		
19	MV Flying Stay hole digging, making & Erection	No	0		
20	MV Strut hole digging, making & Erection	No	0		
<b>B-4</b>	<b>Mounting, Dressing, Welding and Earthing 11KV Distribution Transformer</b>				
21	Transformer Mounting, Dressing, Welding and Earthing	No	0		
			<b>SEREOLUPI SUBTOTAL B</b>		



C	Civil works				
22	Platform Works-Earthworks and slope protection, site clearing and disposal, Galvanised Boundary chain link fence with steel posts for the entire Mini grid developed area, Gates, SPGP area barricade fence. Solar panels reinforced concrete foundations/helical anchor foundations, Generator Equipment Plinth, 2000L underground fuel storage tank, Access Road, SPGP Internal Road, Storm water drainage.	Lot	1		
23	Cable network and conduits	Lot	1		
24	Containerized technology solution for Office Building and Control Room, Air conditioners.	Lot	1		
25	Galvanized Steel Structures- solar panels steel support structures.	Lot	1		
26	Masonry guard house	Lot	1		
27	Masonry twin VIP Pit Latrine	Lot	1		
28	Security Systems, SPGP Outdoor Lighting and Perimeter Lighting, Control room and office building security lighting, Guard House Alarm System and danger and warning plate.	Lot	1		
29	Rainwater harvesting and Storage	Lot	1		
30	Fire Prevention System-Fire Extinguishers, and Fire Suppression System at the BESS Section.	Lot	1		
<b>SEREOLIPI SUBTOTAL C</b>					
D	Others				
31	Cost allocation for end-of-life (EOL) plan for all batteries and other potentially hazardous e-waste at the end of its useful life	Lot	1		
32	Offices facilities : Provide a furnished site office complete with communication facilities( Laptop, internet, printer and stationery)	Site	4		
33	Provision of communication facilities for the employer	Lot	1		
34	Provision of Transport: Provide fuel and maintain with driver transport for exclusive use of the REREC project engineer for project supervision and coordination services ( 1 No. 4X4)	Vehicle/Months	12		
35	Factory Acceptance Tests for Major Items	Lumpsum	1		
36	Provisional sum for Community Project for compensation in kind for land acquisition (The project to be decided after land value is determined)	Fixed amount	4	KSh. 1,000,000	KSh. 4,000,000
<b>SUBTOTAL D</b>					
<b>TOTAL (To Schedule No. 7. Grand Summary)</b>					
		Name of Bidder			
		Signature of Bidder			
<sup>1</sup> Specify currency in accordance with ITB 18. Create and use as many columns for Unit Price and Total Price as there are currencies.					
<sup>2</sup> Lot per km - Bidders are advised to assume a span length of 100m for Medium Voltage network (11kV) and 50m for Low Voltage network.					

**SCHEDULE NO. 5 - ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY (ESHS) SERVICES**

Item	Description	Unit	Qty	Unit Price <sup>1</sup>		Total Price <sup>1</sup>	
			(Sites)	Foreign Currency Portion	Local Currency Portion	Foreign	Local
			(1)	(2)	(3)	(1) X (2)	(1) X (3)
<b>Air Quality: Dust and exhaust emissions</b>							
1	Sprinkle water to minimize dust generation	Lot	4				
2	Enclose/ cover/ water stockpiles of excavated soil during dry or windy conditions	Lot	4				
3	Conduct air quality measurements on a monthly basis	Lot	4				
<b>Solid Waste generation</b>							
4	Provide proper facilities for holding, separating and storing waste to reduce exposure and damage by elements of weather	Lot	4				
5	Contract NEMA registered waste handlers to dispose, hazardous, obsolete and E-waste and contaminated soil	Lot	4				
6	Store hazardous products and wastes separately in well labelled containers	Lot	4				
<b>Noise and Vibration</b>							
7	Conduct noise measurements on a monthly basis	Lot	4				
<b>Vegetation disturbance</b>							
8	Plant and nurture (200) indigenous trees in selected areas in public/community institutions	Lot	4				
<b>Fire hazards</b>							
9	Designate smoking zone, fire assembly point and provide appropriate firefighting equipment	Lot	4				
10	Provide trained fire marshals	Lot	4				
<b>Traffic congestion &amp; damage to roads and other existing infrastructure</b>							
11	Provide traffic marshals and signages	Lot	4				
<b>Occupational safety and Health risks</b>							
12	Awareness creation and training of staff on occupation health and safety issues	Lot	4				
13	Provide appropriate PPEs including Helmets, Safety Boots, Overalls, Dust Coats, Ear Muffs, Safety Harness, Gloves, Safety Glasses, etc	Lot	4				
14	Provide fully stocked first aid kit	Lot	4				
15	Provide insurance to the workers as per Work Injury and Benefits Act (WIBA) requirements	Lot	4				
16	Proper barricading and hazard communication and signage	Lot	4				
<b>Training and Sensitization on Labour influx related impacts (Gender based violence)-Sexual abuse and exploitation and sexual harassment, HIV/AIDs, Alcohol and drugs abuse and crime</b>							

17	Awareness creation to the workers and members of public on Abstinence, Being Faithful and Use of Condoms to prevent HIV/AIDs spread.	Lot	4				
18	Install information on the site billboard - 'Beware of HIV/AIDs, it's real, it kills' and other posters around site	Lot	4				
19	Provide adequate condoms at convenient locations	Lot	4				
<b>Risks related to spread of COVID-19 to workers and locals</b>							
20	Install hand washing facilities with adequate running water and soap	Lot	4				
21	Use thermal guns for everyone entering the site for monitoring temperatures levels	Lot	4				
<b>Stakeholder Engagement</b>							
22	Conduct stakeholder engagement forums in a culturally appropriate manner	Lot	4				
23	Conduct separate adequate public consultation for the VMGs where applicable	Lot	4				
<b>TOTAL (To Schedule No. 7. Grand Summary)</b>							
				Name of Bidder _____			
				Signature of Bidder _____			
<sup>1</sup> Specify currency in accordance with ITB 18. Create and use as many columns for Unit Price and Total Price as there are currencies.							
<b>NB – For details of each item, refer to the Environmental, Social, Health and Safety Management Plan for proposed solar mini-grid for community facilities, enterprises, and households - Component 1 of the Kenya Off-grid Solar Access Project (Bidding Document Volume I)</b>							

**SCHEDULE NO. 6 - OPERATION & MAINTENANCE**

Item	Description	Unit	Qty	% of O&M Contract Price	Unit Price <sup>1</sup>		Total Price <sup>1</sup>
					Local Currency Portion	Foreign Currency Portion	
						<i>(optional)</i>	
<b>LATAKWENY 75kWp (75 kW AC) SOLAR PV MINI GRID</b>							
1	Operation and Maintenance of the Distribution Network and Plant Facility for FIRST YEAR	Year	1	11.5			
2	Operation and Maintenance of the Distribution Network and Plant Facility for SECOND YEAR	Year	1	11.5			
3	Operation and Maintenance of the Distribution Network and Plant Facility for THIRD YEAR	Year	1	11.5			
4	Operation and Maintenance of the Distribution Network and Plant Facility for FOURTH YEAR	Year	1	11.5			
5	Operation and Maintenance of the Distribution Network and Plant Facility for FIFTH YEAR	Year	1	18			
6	Operation and Maintenance of the Distribution Network and Plant Facility for SIXTH YEAR	Year	1	18			
7	Operation and Maintenance of the Distribution Network and Plant Facility for SEVENTH YEAR	Year	1	18			
	SUBTOTAL A						
<b>BARSALOI 120kWp (120 kW AC) SOLAR PV MINI GRID</b>							
1	Operation and Maintenance of the Distribution Network and Plant Facility for FIRST YEAR	Year	1	11.5			
2	Operation and Maintenance of the Distribution Network and Plant Facility for SECOND YEAR	Year	1	11.5			
3	Operation and Maintenance of the Distribution Network and Plant Facility for THIRD YEAR	Year	1	11.5			
4	Operation and Maintenance of the Distribution Network and Plant Facility for FOURTH YEAR	Year	1	11.5			
5	Operation and Maintenance of the Distribution Network and Plant Facility for FIFTH YEAR	Year	1	18			
6	Operation and Maintenance of the Distribution Network and Plant Facility for SIXTH YEAR	Year	1	18			
7	Operation and Maintenance of the Distribution Network and Plant Facility for SEVENTH YEAR	Year	1	18			
	SUBTOTAL B						

<b>TUUM 135 kWp (135 kW AC) SOLAR PV MINI GRID</b>							
1	Operation and Maintenance of the Distribution Network and Plant Facility for FIRST YEAR	Year	1	11.5			
2	Operation and Maintenance of the Distribution Network and Plant Facility for SECOND YEAR	Year	1	11.5			
3	Operation and Maintenance of the Distribution Network and Plant Facility for THIRD YEAR	Year	1	11.5			
4	Operation and Maintenance of the Distribution Network and Plant Facility for FOURTH YEAR	Year	1	11.5			
5	Operation and Maintenance of the Distribution Network and Plant Facility for FIFTH YEAR	Year	1	18			
6	Operation and Maintenance of the Distribution Network and Plant Facility for SIXTH YEAR	Year	1	18			
7	Operation and Maintenance of the Distribution Network and Plant Facility for SEVENTH YEAR	Year	1	18			
					SUBTOTAL C		
<b>SEREOLUPI 200 kWp (200kW AC) SOLAR PV MINI GRID</b>							
1	Operation and Maintenance of the Distribution Network and Plant Facility for FIRST YEAR	Year	1	11.5			
2	Operation and Maintenance of the Distribution Network and Plant Facility for SECOND YEAR	Year	1	11.5			
3	Operation and Maintenance of the Distribution Network and Plant Facility for THIRD YEAR	Year	1	11.5			
4	Operation and Maintenance of the Distribution Network and Plant Facility for FOURTH YEAR	Year	1	11.5			
5	Operation and Maintenance of the Distribution Network and Plant Facility for FIFTH YEAR	Year	1	18			
6	Operation and Maintenance of the Distribution Network and Plant Facility for SIXTH YEAR	Year	1	18			
7	Operation and Maintenance of the Distribution Network and Plant Facility for SEVENTH YEAR	Year	1	18			
					SUBTOTAL D		
<b>TOTAL (to Schedule No. 7. Grand Summary)</b>							
		Name of Bidder _____					
		Signature of Bidder _____					
' Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1							

**SCHEDULE NO. 7 - GRAND SUMMARY**

Item	Description	Total Price <sup>1</sup>	
		<i>Foreign</i>	<i>Local</i>
	<b>Phase 1 - Supply and Installation</b>		
1	Total Price of Schedule No 1 : Plant and Mandatory Spare Parts Supplied from Abroad		
2	Total Price of Schedule No 2 : Plant and Mandatory Spare Parts Supplied from Within the Employer's Country		
3	Total Price of Schedule No 3 : Survey & Design Services		
4	Total Price of Schedule No 4 : Installation, Testing, Commissioning, and Other Services		
5	Total Price of Schedule No 5 : Environmental, Social, Health And Safety (ESHS) Services		
	<b>Phase 2 - Operations and Maintenance</b>		
6	Total Price of Schedule No 6 : Operation & Maintenance		
	<b>TOTAL (to Letter of Bid)</b>		
		<i>Name of Bidder</i> _____	
		<i>Signature of Bidder</i> _____	
		_____	

**SCHEDULE NO. 8 - RECOMMENDED SPARE PARTS (NOT BE CONSIDERED FOR EVALUATION, BUT ONLY FOR INFORMATION)**

Item	Description	Unit	Qty	Unit Price <sup>1</sup>		Total Price <sup>1</sup>
				<i>CIF or CIP</i>	<i>EXW</i>	(1) x (2) or (3)
				<i>(foreign parts)</i>	<i>(local parts)</i>	
				(1)	(2)	(3)

*Name of Bidder* \_\_\_\_\_

*Signature of Bidder* \_\_\_\_\_

<sup>1</sup>Specify currency. Create and use as many columns for Unit Price and Total Price as there are currencies.