Republic of Uganda

Ministry of Water and Environment

Electricity Access Scale Up Project (EASP)

Project ID: P166685

Supply, Installation and Commissioning of Solar Photovoltaic (PV) Energy Packages for Water Supply Schemes

Lot 2: Supply, Installation and Commissioning of 10 Solar Photovoltaic (PV) Energy Packages for Water Supply Schemes in Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim

Procurement Reference No: MWE/SUPLS/23-24/00007/2

Volume 2 - Price Schedules

Date of Issue: November 2023

Electricity Access Scale Up Project (EASP)- Water Component

Lot 2: Supply, Installation and Commissioning of 10 Solar Photovoltaic (PV) Energy Packages for Water Supply Schemes in Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim

Schedule of Rates and Prices

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item	Description	Code[1]	Qty.	Unit	Unit Price[2]		Total Price[2]
						CIP	
			(1)		(2)	(3)	(1) x (3)
1	**Solar Array mounting frame**						
1.1	Solar Array mounting frame made from rust free/resistant aluminium metal supported by aluminium angle sections onto reinforced concrete base supplied and constructed to specifications. Special bolts and nuts with arren-keys shall be supplied for fastening modules, enhanced for theft-proof or spot welded as required by specifications for Kyamukonda water supply scheme		7	No	US Dollars		0.0
1.2	Solar Array mounting frame with specifications as in 1.1 - Biiso water supply scheme		4	No	US Dollars		0.0
1.3	Solar Array mounting frame with specifications as in 1.1 - Ulepi water supply scheme		4	No	US Dollars		0.0
1.4	Solar Array mounting frame with specifications as in 1.1 - Inde water supply scheme		4	No	US Dollars		0.0
1.5	Solar Array mounting frame with specifications as in 1.1 - Kuru water supply scheme		1	No	US Dollars		0.0
1.6	Solar Array mounting frame with specifications as in 1.1 - Lefori water supply scheme		3	No	US Dollars		0.0
1.7	Solar Array mounting frame with specifications as in 1.1 - Ayiilo water supply scheme		2	No	US Dollars		0.0
1.8	Solar Array mounting frame with specifications as in 1.1 - Adilang water supply scheme		2	No	US Dollars		0.0
1.9	Solar Array mounting frame with specifications as in 1.1 - Pallabek Kal water supply scheme		4	No	US Dollars		0.0
1.10	Solar Array mounting frame with specifications as in 1.1 - Olilim water supply scheme		3	No	US Dollars		0.0
2	**Solar Modules**						
2.1	Solar Modules-(Mono/ Poly-crystalline 295Wp Vmax=31.74V, Imax=9.29A, 25yr warranty >16% cell efficiency) configured using 650 VDC, 25 years warranty, with serial number and MWE-label embedded within encapsulation, with anodized aluminum frame; supplied and installed to specifications for Kyamukonda water scheme		140	No	US Dollars		0.0
2.2	Solar modules with specifcations as in 2.1 - Biiso water supply scheme		80	No	US Dollars		0.0
2.3	Solar modules with specifcations as in 2.1 - Ulepi water supply scheme		80	No	US Dollars		0.0
2.4	Solar modules with specifcations as in 2.1 - Inde water supply scheme		80	No	US Dollars		0.0
2.5	Solar modules with specifcations as in 2.1 - Kuru water supply scheme		20	No	US Dollars		0.0
2.6	Solar modules with specifcations as in 2.1 - Lefori water supply scheme		60	No	US Dollars		0.0
2.7	Solar modules with specifcations as in 2.1 - Ayiilo water supply scheme		40	No	US Dollars		0.0
2.8	Solar modules with specifcations as in 2.1 - Adilang water supply scheme		40	No	US Dollars		0.0
2.9	Solar modules with specifcations as in 2.1 - Pallabek- Kal water supply scheme		80	No	US Dollars		0.0
2.10	Solar modules with specifcations as in 2.1 - Olilim water supply scheme		60	No	US Dollars		0.0
3	**Power Inverter & Pump Controller**						
3.1	30.0kW Power Inverter & Pump controller (Compatible with submersible pumps, surface pumps using induction motors) with pure sinewaye output at 98% efficiency at full-load, 650VDC/ 415VAC-variable speed drive with MPPT technology, 50Hz (Variable speed, +5hz selectable speed increase); Hybrid AC Power with solar priority; Built in remote monitor module; support multi linkage system; IP 65 full protection; Full automatic operation. 8 years storage capacity for operation data; with surge protection, overload, underload, pump dry-run and full-tank shutoff protection; supplied and installed to specifictions for Kyamukonda water scheme		1	No	US Dollars		0.0
3.2	18.0kW Power Inverter & Pump Controller with specifcations as in 3.1 - Biiso water supply scheme		1	No	US Dollars		0.0
3.3	11.0kW Power Inverter & Pump Controller with specifcations as in 3.1 - Ulepi water supply scheme		1	No	US Dollars		0.0
3.4	15.0kW Power Inverter & Pump Controller with specifcations as in 3.1 - Inde water supply scheme		1	No	US Dollars		0.0
3.5	3.7kW Power Inverter & Pump Controller with specifcations as in 3.1 - Kuru water supply scheme		1	No	US Dollars		0.0
3.6	11.0kW Power Inverter & Pump Controller with specifcations as in 3.1 - Lefori water supply scheme		1	No	US Dollars		0.0
3.7	7.5kW Power Inverter & Pump Controller with specifcations as in 3.1 - Ayiilo water supply scheme		1	No	US Dollars		0.0
3.8	7.5kW Power Inverter & Pump Controller with specifcations as in 3.1 - Adilang water supply scheme		1	No	US Dollars		0.0
3.9	15.0kW Power Inverter & Pump Controller with specifcations as in 3.1 - Pallabek- Kal water supply scheme		1	No	US Dollars		0.0
3.10	11.0kW Power Inverter & Pump Controller with specifcations as in 3.1 - Olilim water supply scheme		1	No	US Dollars		0.0
4	**Water Pump**						
4.1	22.0kW water pump (Head=230m, yield=20.0m3/hr), multistage centrifugal submersible, 3-phase Induction motor, 380-400-415V, 50Hz variable speed motor, 0.77pf at rated current, with capacity to deliver as per design (flunge connection type) stainless steel casing, supplied and installed with dry-run protection and all accessories; supplied and installed to specifications for Kyamukonda water scheme		1	No	US Dollars		0.0
4.2	13.0kW water pump (Head=200m, yield=15.0m3/hr) with specifcations as in 4.1 - Biiso water supply scheme		1	No	US Dollars		0.0
4.3	9.2kW water pump (Head=110m, yield=18.0m3/hr) with specifcations as in 4.1 - Ulepi water supply scheme		1	No	US Dollars		0.0
4.4	11.0kW water pump (Head 120m, yield=21.4m3/hr) with specifcations as in 4.1 - Inde water supply scheme		1	No	US Dollars		0.0
4.5	2.2kW water pump (Head=90m, yield=5.0m3/hr) with specifcations as in 4.1 - Kuru water supply scheme		1	No	US Dollars		0.0
4.6	7.5kW water pump (Head=110m,yield=15.0m3/hr) with specifcations as in 4.1 - Lefori water supply scheme		1	No	US Dollars		0.0
4.7	4.0kW water pump (Head=95 m, yield=10.0m3/hr) with specifcations as in 4.1 - Ayiilo water supply scheme		1	No	US Dollars		0.0
4.8	4.0kW water pump (Head=116 m, yield=8.0m3/hr) with specifcations as in 4.1 - Adilang water supply scheme		1	No	US Dollars		0.0
4.9	9.2kW water pump (Head=200m, yield=10.0m3/hr) with specifcations as in 4.1 - Pallabek- Kal water supply scheme		1	No	US Dollars		0.0
4.10	7.5kW water pump (Head=110m, yield=14.0m3/hr) with specifcations as in 4.1 - Olilim water supply scheme		1	No	US Dollars		0.0
5	**Well head assembly** Drop pipes for water pump made from PE/ HDPE in accordance to the pump installation depth; Well head assembly structures; 2 flanged gate valves, Flanged Non-return valve, Flanged Air release valve, inclusive of remote monitoring sensors (Liquid Pressure Sensor, Liquid Level Sensor, flanged bulk digital elctronic Water Meter) for interconnection with exisiting transmission to tank and associated accessories done to specifications and to the satisfaction of the engineer; for all water schemes in Lot		10	No	US Dollars		0.0
6	**Remote Monitoring Unit** Data Monitors for GPRS remote monitoring & Bluetooth near field monitoring; IP 65 Protection grade; Ambient temperature (-25℃~+60℃); Integrated with 2G/4G communication module to implement solar pumping system remote monitoring & control. Supports in data collection of temperature, monitor water pressure, water level and water flow within water meter; for all water schemes in Lot		10	No	US Dollars		0.0
7	**Equipment & Tool set** Equipment & Tool set to be used by Scheme operator (Digital multimeter-rating 1000V, set of screw drivers, pliers, phase tester, Cable cutter, pliers, Hummer, set of Arren-keys, Insulating tape-10pcs, adjustable wrench) for all water schemes in Lot		10	No	US Dollars		0.0
8	**Spare parts for repairs and replacements** Spare parts for repairs and replacements parts. Attach a list of spare parts to be supplied within the contract as required by GCC.7.3 for all sites in Lot						
8.1	Solar Modules-(Mono/ Poly-crystalline 295Wp Vmax=31.74V, Imax=9.29A, 25yr warranty >16% cell efficiency) configured using 650 VDC, 25 years warranty, with serial number and MWE-label embedded within encapsulation, with anodized aluminum frame		40	No	US Dollars		0.0
8.2	PV-Disconnect Switch/ Minature Circuit breaker with total capacity of 10A, 650VDC.		250	No	US Dollars		0.0
8.3	6-11W/240VAC Lights		250	No	US Dollars		0.0
8.4	DC750V Fuses		250	No	US Dollars		0.0
8.5	Blocking diodes		250	No	US Dollars		0.0
	TOTAL (to Schedule No. 5. Grand Summary)						**0.0**

Name of Bidder	
Signature of Bidder	

[1] Bidders shall enter a code representing the country of origin of all imported plant and equipment.

[2] Specify currency. Create and use as many columns for Unit Price and Total Price as there are currencies.

Electricity Access Scale Up Project (EASP)- Water Component

Lot 2: Supply, Installation and Commissioning of 10 Solar Photovoltaic (PV) Energy Packages for Water Supply Schemes in Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim

Schedule of Rates and Prices

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item	Description	Qty (1)	Unit	EXW Unit Price[1] (UGX) (2)	Sales and other taxes payable per line item if Contract is awarded (in accordance with ITB 17.5 (b) (ii) (3)	EXW Total Price[1] (1)x(2)
1	**PV-Disconnect Switch/ Minature Circuit breaker**					
1.1	PV-Disconnect Switch/ Minature Circuit breaker with total capacity of 10A, 650VDC, to be installed at the terminating junction box of each panel, supplied to specifications for Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim water supply scheme	7	No			0.0
1.2	PV-Disconnect Switch with specifications as in 1.1 - Biiso water supply scheme	4	No			0.0
1.3	PV-Disconnect Switch with specifications as in 1.1 - Ulepi water supply scheme	4	No			0.0
1.4	PV-Disconnect Switch with specifications as in 1.1 - Inde water supply scheme	4	No			0.0
1.5	PV-Disconnect Switch with specifications as in 1.1 - Kuru water supply scheme	1	No			0.0
1.6	PV-Disconnect Switch with specifications as in 1.1 - Lefori water supply scheme	3	No			0.0
1.7	PV-Disconnect Switch with specifications as in 1.1 - Ayiilo water supply scheme	2	No			0.0
1.8	PV-Disconnect Switch with specifications as in 1.1 - Adilang water supply scheme	2	No			0.0
1.9	PV-Disconnect Switch with specifications as in 1.1 - Pallabek- Kal water supply scheme	4	No			0.0
1.10	PV-Disconnect Switch with specifications as in 1.1 - Olilim water supply scheme	3	No			0.0
2	**Change-over switch**					
2.1	Change-over switch rated 80A 3-phase (TPN) 415V, manually operated and to be used for hybrid switching operation of Solar-PV system with Diesel generator system supplied to specifications for Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim water supply scheme	1	No			0.0
2.2	60A, 415V Change-over switch rated with specifications as in 2.1 - Biiso water supply scheme	1	No			0.0
2.3	60A, 415V Change-over switch rated with specifications as in 2.1 - Ulepi water supply scheme	1	No			0.0
2.4	60A, 415V Change-over switch rated with specifications as in 2.1 - Inde water supply scheme	1	No			0.0
2.5	60A, 415V Change-over switch rated with specifications as in 2.1 - Kuru water supply scheme	1	No			0.0
2.6	60A, 415V Change-over switch rated with specifications as in 2.1 - Lefori water supply scheme	1	No			0.0
2.7	60A, 415V Change-over switch rated with specifications as in 2.1 - Ayiilo water supply scheme	1	No			0.0
2.8	60A, 415V Change-over switch rated with specifications as in 2.1 - Adilang water supply scheme	1	No			0.0
2.9	60A, 415V Change-over switch rated with specifications as in 2.1 - Pallabek- Kal water supply scheme	1	No			0.0
2.10	60A, 415V Change-over switch rated with specifications as in 2.1 - Olilim water supply scheme	1	No			0.0
3	**Assortment set of electrical cables**					
3.1	Assortment set of electrical cables, interconnects and accessories for complete system wiring, including where necessary, underground cables, wired in full-conduit technique; supplied and installed to specifications Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim water supply scheme	1	No			0.0
3.2	Assortment set of electrical cables with specifications as in 2.1 - Biiso water supply scheme	1	No			0.0
3.3	Assortment set of electrical cables with specifications as in 2.1 - Ulepi water supply scheme	1	No			0.0
3.4	Assortment set of electrical cables with specifications as in 2.1 - Inde water supply scheme	1	No			0.0
3.5	Assortment set of electrical cables with specifications as in 2.1 - Kuru water supply scheme	1	No			0.0
3.6	Assortment set of electrical cables with specifications as in 2.1 - Lefori water supply scheme	1	No			0.0
3.7	Assortment set of electrical cables with specifications as in 2.1 - Ayiilo water supply scheme	1	No			0.0
3.8	Assortment set of electrical cables with specifications as in 2.1 - Adilang water supply scheme	1	No			0.0
3.9	Assortment set of electrical cables with specifications as in 2.1 - Pallabek- Kal water supply scheme	1	No			0.0
3.10	Assortment set of electrical cables with specifications as in 2.1 - Olilim water supply scheme	1	No			0.0
4	**System grounding** System grounding with equi-potential bonding to earth impedence lower than 5ohms; for all conducting parts within the installation including the inverter, array mounting frame, metal cabinets, and metal pipes supplied and installed to specifications for water supply schemes	10	No			0.0
5	**Lightenning Protection system**					
5.1	Lightenning Protection system set with spike, copper tape; including the lightening surge protection switch-gear at the main-junction box of solar array and AC-side of inverter; supplied and installed to specifications for Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim water supply scheme	3	No			0.0
5.2	Lightenning Protection system with specifications as in 2.1 - Biiso water supply scheme	2	No			0.0
5.3	Lightenning Protection system with specifications as in 2.1 - Ulepi water supply scheme	2	No			0.0
5.4	Lightenning Protection system with specifications as in 2.1 - Inde water supply scheme	2	No			0.0
5.5	Lightenning Protection system with specifications as in 2.1 - Kuru water supply scheme	1	No			0.0
5.6	Lightenning Protection system with specifications as in 2.1 - Lefori water supply scheme	2	No			0.0
5.7	Lightenning Protection system with specifications as in 2.1 - Ayiilo water supply scheme	1	No			0.0
5.8	Lightenning Protection system with specifications as in 2.1 - Adilang water supply scheme	1	No			0.0
5.9	Lightenning Protection system with specifications as in 2.1 - Pallabek- Kal water supply scheme	2	No			0.0
5.10	Lightenning Protection system with specifications as in 2.1 - Olilim water supply scheme	2	No			0.0
6	**Auxilliary Solar-PV Lighting system** Auxiliary solar-PV lighting system featuring a 2x240Wp solar modules, 1x750Wp inverter, module mounting, 1x20A Regulator, 2x200Ah Battery, 6-11W/240VAC Lights, with switches, sockets, and lamp holders complete supplied and installed to specifications for all water schemes in Lot	10	No			0.0
7	**Alarm system** Alarm system set with siren for intrusion and safety protection of solar modules, where intrusion detection is based on mechanical vibrations/ tampering of the solar array structure, wired and integrated within the installation; complete with all accessories; for all water schemes in Lot	10	No			0.0
8	**Pre-assembled string combiner box**					
8.1	Pre-assembled string combiner box (SCB) to support 8 strings of solar modules inclusive of associated accessories supplied to specifications for for Kyamukonda water supply scheme	1	No			0.0
	TOTAL (to Schedule No. 5. Grand Summary)					**0.0**

Name of Bidder	
Signature of Bidder	

1 Specify currency in accordance with specifications in Bid Data Sheet under ITB 18.1

Electricity Access Scale Up Project (EASP)- Water Component

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Schedule of Rates and Prices

Schedule No. 3. Design Services

Item	Description	Qty. (1)	Unit	Unit Price[1]		Total Price[1]
				Local Currency Portion (2)	Foreign Currency Portion (optional)	(1)x(2)
1	**Design Services**					
1.1	Design services for Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim water supply scheme	1	lumpsum			0.0
1.2	Design services for Biiso water supply scheme	1	lumpsum			0.0
1.3	DDesign services for Ulepi water supply scheme	1	lumpsum			0.0
1.4	Design services for Inde water supply scheme	1	lumpsum			0.0
1.5	Design services for Kuru water supply scheme	1	lumpsum			0.0
1.6	Design services for Lefori water supply scheme	1	lumpsum			0.0
1.7	Design services for Ayiilo water supply scheme	1	lumpsum			0.0
1.8	Design services for Adilang water supply scheme	1	lumpsum			0.0
1.9	Design services for Pallabek- Kal water supply scheme	1	lumpsum			0.0
1.10	Design services for Olilim water supply scheme	1	lumpsum			0.0
TOTAL (to Schedule No. 5. Grand Summary)						**0.0**
					Name of Bidder	
					Signature of Bidder	

Electricity Access Scale Up Project (EASP)- Water Component

Lot 2: Supply, Installation and Commissioning of 10 Solar Photovoltaic (PV) Energy Packages for Water Supply Schemes in Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim

Schedule of Rates and Prices

Schedule No. 4. Installation and Other Services

Item	Description	Qty. (1)	Unit	Unit Price[1]		Total Price[1]	
				Foreign Currency Portion (2)	Local Currency Portion (3)	Foreign (1)x(2)	Local (1)x(3)
1	**Contractual Requirements**						
1.1	Processing of Perfomance Security	1	lumpsum				0.0
1.2	Processing of Advance Payment Guarantee	1	lumpsum				0.0
1.3	Processing of Contractor's All Risk Insurance with Employer and its associates as co-insured for Lot	1	lumpsum				0.0
	Site Sign Board						
2	Manufacture, transport and erect site sign boards designed as directed by Employer for all sites done to satisifaction of the supervising engineer for all water schemes in Lot	10	No				0.0
	Mobilization, Camp Set-up, Demobilization						
3	Mobilisation, setting up camp, Demobilisation on completion of works and costs associated with entry and exit from all sites in Lot	10	No				0.0
	Onsite Storage						
4	Contractor's onsite storage of consignement and supplies on site, and Security of all energy-package installations for the period up to end of Defect Liability for sites in Lot	10	No				0.0
5	**Employer's Requirements**						
5.1a	Availl under lease One (1) Transport vehicle as specified in Volume 4; Item 5.1, for use by the Employer's Supervision Team over a total period of 39 months; Completion and Operational Acceptance (15 months) and Defects Liability Period (24 months); for an approximate total mileage of 70,000Km.	1	lumpsum				0.0
5.1b	Provide for Operation and Maintence of the Vehicle; Comprehensive Insurance at all times; Routine Servicing, Tyre Replacements and Fuel for an approximate total mileage of 70,000Km.	1	lumpsum				0.0
5.2	Plan, coordinate, facilitate and implement Employer's due-diligence inspection, verification of sources/manufacturers for inverters, pumps, and solar modules plus witnessing functional tests at the factory where these are manufactured as described in GCC Clause 23.8, and further specified in Volume 4; Item 5.2.	1	lumpsum				0.0
5.3	Implementation of the Environment and Social Management Plan; including mitigation of all stated negative impacts; plus the environment, health and safety policy; in accordance with the guidelines of the ESIA and environemntal safeguards of World Bank for all the sites in the Lot as further detailed in Volume 4; Item 5.3.	1	lumpsum				0.0
5.4	Create Site access, land easements and expansion of access roads to all sites in Lot; such that all sites are easily accessible by transport means (on foot, bicycle, motor-cycle and vehicle) for all sites in the Lot as further described in Volume 4: Item 5.4.	1	lumpsum				0.0
5.5	Undertake Community Mobilization, training of operators and water boards in operation and maintenance of facilities for all water schemes in the Lot as described in Volume 4; Item 5.5	1	lumpsum				0.0
5.6	Design and production of IEC Materials and O&M manuals, Record keeping books and Facility Data-plate well laminated-framed and hang on the wall inside the pump house for all the schemes in the Lot as described in Volume 4; Item 5.6.	1	lumpsum				0.0
5.7	Plan, coordinate, facilitate and implement Employers' operational system testing, precommissioning, Operational acceptance monitoring, plus final commissioning and handover of facility for all schemes in Lot as described in Volume 4; Item 5.7	1	lumpsum				0.0
6	**Grabbing of site**						
6.1	Grabbing of site, free of grass, shrubs, levelling and other related earth-moving works, done to the satisifaction of the Engineer for the square metre area where the entire installation will be placed_Kyamukonda Water Supply system	2016.0	m²				0.0
6.2	Grabbing of site for specified square meter done to specifcations refered in 6.1 - Biiso water supply scheme	1008.0	m²				0.0
6.3	Grabbing of site for specified square meter done to specifcations refered in 6.1 - Ulepi water supply scheme	1008.0	m²				0.0
6.4	Grabbing of site for specified square meter done to specifcations refered in 6.1 - Inde water supply scheme	1008.0	m²				0.0
6.5	Grabbing of site for specified square meter done to specifcations refered in 6.1 - Kuru water supply scheme	500.0	m²				0.0
6.6	Grabbing of site for specified square meter done to specifcations refered in 6.1 - Lefori water supply scheme	1008.0	m²				0.0
6.7	Grabbing of site for specified square meter done to specifcations refered in 6.1 - Ayiilo water supply scheme	600.0	m²				0.0
6.8	Grabbing of site for specified square meter done to specifcations refered in 6.1 - Adilang water supply scheme	600.0	m²				0.0
6.9	Grabbing of site for specified square meter done to specifcations refered in 6.1 - Pallabek- Kal water supply scheme	1008.0	m²				0.0
6.10	Grabbing of site for specified square meter done to specifcations refered in 6.1 - Olilim water supply scheme	1008.0	m²				0.0
							0.0
	Guard House						0.0
7	Construct the Guard house with a water borne toilet inclusive of scheme water tank and soak pit as per drawing No.1 and done to specifications and to the satsifaction of the engineer for water scheme	10	No				0.0

	Pump House						
8	Construct the Pump house as per drawing No.1 and done to specifications and to the satsifaction of the engineer for water scheme	10	No				0.0
9	**Fencing and Gate**						
9.1	Construct a fence with reinforced concrete post (100mmx100mm cross section area) with rust-free chain link of wire gauge-12.5 with plastered brick curtain wall and razor wire done to specifications per Linear meter and to the satsifaction of the engineer for Kyamukonda Water Supply system	284	m				0.0
9.2	Construct a fence with reinforced concrete post done to specifications in 9.1 for Biiso Water Supply system	142	m				0.0
9.3	Construct a fence with reinforced concrete post done to specifications in 9.1 for Ulepi Water Supply system	142	m				0.0
9.4	Construct a fence with reinforced concrete post done to specifications in 9.1 for Inde Water Supply system	142	m				0.0
9.5	Construct a fence with reinforced concrete post done to specifications in 9.1 for Kuru water supply scheme	90	m				0.0
9.6	Construct a fence with reinforced concrete post done to specifications in 9.1 for Lefori Water Supply system	142	m				0.0
9.7	Construct a fence with reinforced concrete post done to specifications in 9.1 for Ayiilo water supply scheme	142	m				0.0
9.8	Construct a fence with reinforced concrete post done to specifications in 9.1 for Adilang Water Supply system	142	m				0.0
9.9	Construct a fence with reinforced concrete post done to specifications in 9.1 for Pallabek- Kal water supply scheme	142	m				0.0
9.10	Construct a fence with reinforced concrete post done to specifications in 9.1 for Olilim Water Supply system	142	m				0.0
							0.0
10	**Pre-cast garden kerbs**						0.0
10.1	Construct pre-cast garden kerbs (width 75mm,height 150mm), with base embedded in 150mm widex100mm thick mass concrete around solar array area off-set 1m from foundation studs and works done to specifications per linear metre and to the satsifaction of the engineer for Kyamukonda Water Supply system	248.8	m				0.0
10.2	Construct pre-cast garden kerbs done to specifications in 10.1 for Biiso Water Supply system	124.4	m				0.0
10.3	Construct pre-cast garden kerbs done to specifications in 10.1 for Ulepi Water Supply system	124.4	m				0.0
10.4	Construct pre-cast garden kerbs done to specifications in 10.1 for Inde Water Supply system	124.4	m				0.0
10.5	Construct pre-cast garden kerbs done to specifications in 10.1 for Kuru water supply scheme	63.4	m				0.0
10.6	Construct pre-cast garden kerbs done to specifications in 10.1 for Lefori Water Supply system	124.4	m				0.0
10.7	Construct pre-cast garden kerbs done to specifications in 10.1 for Ayiilo water supply scheme	78.0	m				0.0
10.8	Construct pre-cast garden kerbs done to specifications in 10.1 for Adilang Water Supply system	78.0	m				0.0
10.9	Construct pre-cast garden kerbs done to specifications in 10.1 for Pallabek- Kal water supply scheme	124.4	m				0.0
10.10	Construct pre-cast garden kerbs done to specifications in 10.1 for Olilim Water Supply system	124.4	m				0.0
							0.0
11	**Machine crushed stone aggregate**						0.0
11.1	Provide and place machine crushed stone aggregate of size 25mm, for a layer of thickness 75mm placed within the square metre area covered by solar array, done to specifications and satisifaction of the Engineer for Kyamukonda Water Supply system	719.4	m²				0.0
11.2	Provide and place machine crushed stone aggregate done to specifications in 11.1 for Biiso Water Supply system	124.4	m²				0.0
11.3	Provide and place machine crushed stone aggregate done to specifications in 11.1 for Ulepi Water Supply system	359.7	m²				0.0
11.4	Provide and place machine crushed stone aggregate done to specifications in 11.1 for Inde Water Supply system	359.7	m²				0.0
11.5	Provide and place machine crushed stone aggregate done to specifications in 11.1 for Kuru water supply scheme	105.2	m²				0.0
11.6	Provide and place machine crushed stone aggregate done to specifications in 11.1 for Lefori Water Supply system	359.7	m²				0.0
11.7	Provide and place machine crushed stone aggregate done to specifications in 11.1 for Ayiilo water supply scheme	191.8	m²				0.0
11.8	Provide and place machine crushed stone aggregate done to specifications in 11.1 for Adilang Water Supply system	191.8	m²				0.0
11.9	Provide and place machine crushed stone aggregate done to specifications in 11.1 for Pallabek-Kal water supply scheme	359.7	m²				0.0
11.10	Provide and place machine crushed stone aggregate done to specifications in 11.1 for Olilim Water Supply system	359.7	m²				0.0
							0.0

12	**Site landscaping**						0.0
12.1	Site landscaping including planting of grass, and construction of drainage channels to prevent surface runn-off as well as water logging during rainy seasons; clearing the site off all the debris as required for Kyamukonda Water Supply system (square meter)	1284.6	m²				0.0
12.2	Site landscaping done to specification as refered to 12.1 for Biiso Water Supply system (square meter)	636.3	m²				0.0
12.3	Site landscaping done to specification as refered to 12.1 for Ulepi Water Supply system (square meter)	636.3	m²				0.0
12.4	Site landscaping done to specification as refered to 12.1 for Inde Water Supply system (square meter)	636.3	m²				0.0
12.5	Site landscaping done to specification as refered to 12.1 for Kuru Water Supply system (square meter)	382.8	m²				0.0
12.6	Site landscaping done to specification as refered to 12.1 for Lefori Water Supply system (square meter)	636.3	m²				0.0
12.7	Site landscaping done to specification as refered to 12.1 for Ayiilo Water Supply system (square meter)	382.8	m²				0.0
12.8	Site landscaping done to specification as refered to 12.1 for Adilang Water Supply system (square meter)	396.2	m²				0.0
12.9	Site landscaping done to specification as refered to 12.1 for Pallabek- Kal Water Supply system (square meter)	636.3	m²				0.0
12.10	Site landscaping done to specification as refered to 12.1 for Olilim Water Supply system (square meter)	636.3	m²				0.0
13	**Solar Array mounting frame Installation**						
13.1	Install Solar Array mounting frame in Schedule 1 to Specifcations for - Kyamukonda water supply scheme	7	No			0.0	
13.2	Install Solar Array mounting frame in Schedule 1 to Specifcations for - Biiso water supply scheme	4	No			0.0	
13.3	Install Solar Array mounting frame in Schedule 1 to Specifcations for - Ulepi water supply scheme	4	No			0.0	
13.4	Install Solar Array mounting frame in Schedule 1 to Specifcations for - Inde water supply scheme	4	No			0.0	
13.5	Install Solar Array mounting frame in Schedule 1 to Specifcations for - Kuru water supply scheme	1	No			0.0	
13.6	Install Solar Array mounting frame in Schedule 1 to Specifcations for - Lefori water supply scheme	3	No			0.0	
13.7	Install Solar Array mounting frame in Schedule 1 to Specifcations for - Ayiilo water supply scheme	2	No			0.0	
13.8	Install Solar Array mounting frame in Schedule 1 to Specifcations for - Adilang water supply scheme	2	No			0.0	
13.9	Install Solar Array mounting frame in Schedule 1 to Specifcationse for - Pallabek- Kal water supply scheme	4	No			0.0	
13.10	Install Solar Array mounting frame in Schedule 1 to Specifcations for - Olilim water supply scheme	3	No			0.0	
14	**Solar Module Installation**						
14.1	Install Solar modules in Schedule 1 to Specifcations for - Kyamukonda water supply scheme	140	No			0.0	
14.2	Install Solar modules in Schedule 1 to Specifcations for - Biiso water supply scheme	80	No			0.0	
14.3	Install Solar modules in Schedule 1 to Specifcations for - Ulepi water supply scheme	80	No			0.0	
14.4	Install Solar modules in Schedule 1 to Specifcations for - Inde water supply scheme	80	No			0.0	
14.5	Install Solar modules in Schedule 1 to Specifcations for - Kuru water supply scheme	20	No			0.0	
14.6	Install Solar modules in Schedule 1 to Specifcations for - Lefori water supply scheme	60	No			0.0	
14.7	Install Solar modules in Schedule 1 to Specifcations for - Ayiilo water supply scheme	40	No			0.0	
14.8	Install Solar modules in Schedule 1 to Specifcations for - Adilang water supply scheme	40	No			0.0	
14.9	Install Solar modules in Schedule 1 to Specifcations for - Pallabek- Kal water supply scheme	80	No			0.0	
14.10	Install Solar modules in Schedule 1 to Specifcations - Olilim water supply scheme	60	No			0.0	
15	**Power Inverter & Pump Controller Installation**						
15.1	Install 30.0kW Power Inverter & Pump controller in Schedule 1 to Specifcations for - Kyamukonda water supply scheme	1	No			0.0	
15.2	Install 18.0kW Power Inverter & Pump Controller in Schedule 1 to Specifcations for - Biiso water supply scheme	1	No			0.0	
15.3	Install 11.0kW Power Inverter & Pump Controller in Schedule 1 to Specifcations for - Ulepi water supply scheme	1	No			0.0	
15.4	Install 15.0kW Power Inverter & Pump Controller in Schedule 1 to Specifcations for - Inde water supply scheme	1	No			0.0	
15.5	Install 3.7kW Power Inverter & Pump Controller in Schedule 1 to Specifcations for - Kuru water supply scheme	1	No			0.0	
15.6	Install 11.0kW Power Inverter & Pump Controller in Schedule 1 to Specifcations for - Lefori water supply scheme	1	No			0.0	
15.7	Install 7.5kW Power Inverter & Pump Controller in Schedule 1 to Specifcations for - Ayiilo water supply scheme	1	No			0.0	
15.8	Install 7.5kW Power Inverter & Pump Controller in Schedule 1 to Specifcations for - Adilang water supply scheme	1	No			0.0	
15.9	Install 15.0kW Power Inverter & Pump Controller in Schedule 1 to Specifcations for - Pallabek- Kal water supply scheme	1	No			0.0	
15.10	Install 11.0kW Power Inverter & Pump Controller in Schedule 1 to Specifcations - Olilim water supply scheme	1	No			0.0	

16	**Water Pump Installation**						
16.1	Install 22.0kW water pump in Schedule 1 to Specifcations for - Kyamukonda water supply scheme	1	No			0.0	
16.2	Install 13.0kW water pump in Schedule 1 to Specifcations for - Biiso water supply scheme	1	No			0.0	
16.3	Install 9.2kW water pump in Schedule 1 to Specifcations for - Ulepi water supply scheme	1	No			0.0	
16.4	Install 11.0kW water pump in Schedule 1 to Specifcations for - Inde water supply scheme	1	No			0.0	
16.5	Install 2.2kW water pump in Schedule 1 to Specifcations for - Kuru water supply scheme	1	No			0.0	
16.6	Install 7.5kW water pump in Schedule 1 to Specifcations for - Lefori water supply scheme	1	No			0.0	
16.7	Install 4.0kW water pump in Schedule 1 to Specifcations for - Ayiilo water supply scheme	1	No			0.0	
16.8	Install 4.0kW water pump in Schedule 1 to Specifcations for - Adilang water supply scheme	1	No			0.0	
16.9	Install 9.2kW water pump in Schedule 1 to Specifcations for - Pallabek- Kal water supply scheme	1	No			0.0	
16.10	Install 7.5kW water pump in Schedule 1 to Specifcations - Olilim water supply scheme	1	No			0.0	
	Well head assembly Installation						
17	Install Drop pipes for water pump made from PE/ HDPE in accordance to the pump installation depth inclusive of the Well head assembly structures and associated accessories done to specifications and to the satisfaction of the engineer for all water schemes in Lot	10	No			0.0	
	Remote Monitoring Unit Installation						
18	Install Data Monitors in Schedule 1 to Specifcations for all water schemes in Lot including all associatated accessories in order for remote monitoring to be done	10	No			0.0	
19	**PV-Disconnect Switch/ Minature Circuit breaker Installation**						
19.1	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Kyamukonda water supply scheme	7	No				0.0
19.2	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Biiso water supply scheme	4	No				0.0
19.3	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Ulepi water supply scheme	4	No				0.0
19.4	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Inde water supply scheme	4	No				0.0
19.5	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Kuru water supply scheme	1	No				0.0
19.6	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Lefori water supply scheme	3	No				0.0
19.7	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Ayiilo water supply scheme	2	No				0.0
19.8	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Adilang water supply scheme	2	No				0.0
19.9	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Pallabek- Kal water supply scheme	4	No				0.0
19.10	Install PV-Disconnect Switch in Schedule 2 to Specifcations - Olilim water supply scheme	3	No				0.0
20	**Change-over switch**						
20.1	Install 80A Change-over switch in Schedule 2 to Specifcations - Kyamukonda water supply scheme	1	No				0.0
20.2	Install 60A Change-over switch in Schedule 2 to Specifcations - Biiso water supply scheme	1	No				0.0
20.3	Install 60A, Change-over switch in Schedule 2 to Specifcations - Ulepi water supply scheme	1	No				0.0
20.4	Install 60A, Change-over switch in Schedule 2 to Specifcations - Inde water supply scheme	1	No				0.0
20.5	Install 60A, Change-over switch in Schedule 2 to Specifcations - Kuru water supply scheme	1	No				0.0
20.6	Install 60A, Change-over switch in Schedule 2 to Specifcations - Lefori water supply scheme	1	No				0.0
20.7	Install 60A, Change-over switch in Schedule 2 to Specifcations - Ayiilo water supply scheme	1	No				0.0
20.8	Install 60A, Change-over switch in Schedule 2 to Specifcations - Adilang water supply scheme	1	No				0.0
20.9	Install 60A, Change-over switch in Schedule 2 to Specifcations - Pallabek- Kal water supply scheme	1	No				0.0
20.10	Install 60A, Change-over switch in Schedule 2 to Specifcations - Olilim water supply scheme	1	No				0.0
21	**Assortment set of electrical cables Installation**						
21.1	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Kyamukonda water supply scheme	1	No				0.0
21.2	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Biiso water supply scheme	1	No				0.0
21.3	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Ulepi water supply scheme	1	No				0.0
21.4	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Inde water supply scheme	1	No				0.0
21.5	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Kuru water supply scheme	1	No				0.0
21.6	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Lefori water supply scheme	1	No				0.0
21.7	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Ayiilo water supply scheme	1	No				0.0
21.8	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Adilang water supply scheme	1	No				0.0
21.9	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Pallabek- Kal water supply scheme	1	No				0.0
21.10	Install Assortment set of electrical cables in Schedule 2 to Specifcations - Olilim water supply scheme	1	No				0.0
	System grounding Installation						
22	Install System grounding with equi-potential bonding in Schedule 2 to Specifcations for all water schemes in lot	10	No				0.0

23	**Lightenning Protection system Installation**						
23.1	Install Lightenning Protection system in Schedule 2 to Specifcations- Kyamukonda water supply scheme	3	No				0.0
23.2	Install Lightenning Protection system in Schedule 2 to Specifcations- Biiso water supply scheme	2	No				0.0
23.3	Install Lightenning Protection system in Schedule 2 to Specifcations- Ulepi water supply scheme	2	No				0.0
23.4	Install Lightenning Protection system in Schedule 2 to Specifcations- Inde water supply scheme	2	No				0.0
23.5	Install Lightenning Protection system in Schedule 2 to Specifcations- Kuru water supply scheme	1	No				0.0
23.6	Install Lightenning Protection system in Schedule 2 to Specifcations- Lefori water supply scheme	2	No				0.0
23.7	Install Lightenning Protection system in Schedule 2 to Specifcations- Ayiilo water supply scheme	1	No				0.0
23.8	Install Lightenning Protection system in Schedule 2 to Specifcations- Adilang water supply scheme	1	No				0.0
23.9	Install Lightenning Protection system in Schedule 2 to Specifcations- Pallabek- Kal water supply scheme	2	No				0.0
23.10	Install Lightenning Protection system in Schedule 2 to Specifcations- Olilim water supply scheme	2	No				0.0
24	**Auxiliary solar-PV lighting system Installation** Install Auxiliary solar-PV lighting system in Schedule 2 to Specifcations for all water schemes in lot	10	No				0.0
25	**Alarm system Installation** Install Alarm system set with siren for intrusion in Schedule 2 to Specifcations for all water schemes in lot	10	No				0.0
26	**Pre-assembled string combiner box Installation** Install Pre-assembled string combiner box (SCB) to support 6 strings in Schedule 2 to Specifcations- Kyamukonda water supply scheme	1	No				0.0
27	**System Testing** Installation systems testing and commissioning plus all costs associated with special kits for measuring and conducting functional tests as well as record keeping and analysis to ensure that functional guarantees are attained as well as monitoring, plus final commissioning and handover of facilities for sites in lot	10	No				0.0
28	**As-built Drawings** Provide As-built Drawings for each site including Solar array and Systems Layout, electrical wiring diagrams and all facilities (5 copies-printed in full-colour and well bound in a booklet) to satisfaction of Engineer	10	No				0.0
29	**After Sales Service** After Sales Service: Bidder shall offer free extended service to any malfunction of products bought from manufacturers which is caused by quality within the warranty, and permanent maintenance on purchaser's dispense for products beyond the warranty — a) Solar water pumping inverter: 5years from the date of installation at site b) Solar modules: 25 years for materials and workmanship from the date of installation at site; under standard test conditions, output power no less than 90% of rated power in 10 years and no less than 80% of rated power in 25 years guaranteed c) Water pump: 2years starting from the date of installation	10	No			0.0	
30	**User Training Methodology** User Training Methodology: Bidder shall provide full day re-orientation solar water pumping user training in Operations and Maintenance per scheme to the employer's personnel at the end of defects liability-monitoring period with emphasis placed on remote sensing capabilities incorporated in the pump controller	10	No			0.0	0.0
TOTAL (to Schedule No. 5. Grand Summary)						**0.0**	**0.0**

Name of Bidder	
Signature of Bidder	

Electricity Access Scale Up Project (EASP)- Water Component

Lot 2: Supply, Installation and Commissioning of 10 Solar Photovoltaic (PV) Energy Packages for Water Supply Schemes in Kyamukonda, Biiso, Ulepi, Inde, Kuru, Lefori, Ayiilo, Adilang, Pallabek- Kal and Olilim

Schedule of Rates and Prices

Schedule No. 5 Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
1	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad	0.0	
2	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		0.0
3	Total Schedule No. 3. Design Services		0.0
4	Total Schedule No. 4. Installation and Other Services	0.0	0.0
TOTAL		**0.0**	**0.0**
	Add 10% Contingency		
	Add 18% VAT		
	GRAND TOTAL (to Letter of Bid)		
		Name of Bidder	
		Signature of Bidder	