

Republic of the Philippines
DEPARTMENT OF AGRICULTURE
Regional Field Unit No. 5
San Agustin, Pili, Camarines Sur

Project Title: SUPPLY, DELIVERY, INSTALLATION AND COMMISSIONING OF SALVACION-COTNOGAN SPIS
Project Location: Brgy. Cotnogon, Polangui, Albay
Appropriation: ₱6,930,695.95
Source of fund : Rice 2022
Subject: BILL OF QUANTITIES AND COST PROPOSAL

Classification: Irrigation Facility
Number of Unit: 1
Net Length:
Project Duration : 137 C.D.
Starting Date: upon receipt of NTP

Scope of Work: -Delivery of Labor and Materials for the Construction of Water Pump Sump, Pump House, Solar Panel Framing Structure and Pump Stilling Basin/ Pool
-Installation of Solar Pump, Solar Panel Array, Electrical Wiring, Controller Devices and Components
-Installation and Laying of HDPE Pipe for Pump Irrigation Outlet

MINIMUM EQUIPMENT REQUIREMENT			TECHNICAL PERSONNEL REQUIRED		
Description	No.	Description	Description	No.	Description
Service Truck	1	3-5 m ³	Foreman	1	
Water Pump	1	4" diameter	Asst. Foreman	1	
Welding Machine	1	300 Amp, Gas Driven			
Electric Bar Cutter	1	12" Diameter Disc			
Hand Tools	enough				

COST OF PROPOSED WORK					
Item	Description	Quantity	Unit	Unit Cost (PhP)	Total Amount (PhP)
PART I	General Requirements				
	1.1.	Project Billboard/Signboard and Permanent Marker	1	e.a.	
	1.2.	Occupational Safety and Health Program	1	L.S.	
	1.3.	Mobilization / Demobilization	1	L.S.	
	1.4.	Construction of Camps, Other Temporary Facilities	1	L.S.	
	1.5.	Diversion of Water and Care of Creek	1	L.S.	
Sub-total					
PART II	SOLAR MOUNTING STRUCTURE, CONCRETE AND REINFORCEMENT				
	Part A EARTH WORKS				
	102	Common Soil Excavation	180.00	cu.m.	
	100(2)	Structural BackFill/Backfilling	120.00	cu.m.	
	201	Aggregate Sub Base Course (Gravel Fill)	12.00	cu.m.	
	Part B REINFORCE CONCRETE WORKS				
	405(1)	Concrete Class "A" w/ Forms (Pedestal)	7.00	cu.m.	
	405(2)	Concrete Class "A" w/out Forms (Pedestal Footing)	30.00	cu.m.	
	404	Reinforcing Steel Bar	2800.00	kgs.	
	Part C METAL WORKS				
	II.C.1	Vertical Structure	4.50	e.a.	
		-3" dia. G.I. Pipe S40 Post (25 pcs.) -10mm thk. Metal Plate (7.0 sq.m.) -8"x20mm dia. Anchor Bolt (432 set)			
	II.C.2	Horizontal Structure	4.50	e.a.	
	-1/4"x2"x5" Channel Bar/ C Bar (30 pcs.) -Pre-Fabricated PV Module Railings, (90 pcs.) -1/4"x2"x2" Angle Bar (Holder and Support), (4 pcs.) -1/4"x 1 1/2"x 1 1/2" Angle Bar (Strut), (144 pcs.) -2"x20mm dia. Bolt and Nut, (288 pcs.) -1 1/2" G.I. Pipe Support, (12 pcs.)				
Sub-total					
PART III	AMTEC TESTED PUMP (SUBMERSIBLE PUMP)				
	SPL1	6" Diameter, 30KW (40HP), 3 Phase 60Hz,	1.00	unit	
	-Capacity of at least 720-800 cubic meter per 5 hours operation per day at the following condition: 1. Pump Type : Submersible Pump 2. Total Dynamic Head : 60.0m (minimum) 3. Voltage : 460 Volt 4. Frequency : 60 Hz 5. Phase : Three Phase 6. Pump/Impeller : Stainless Steel 304/Cast Iron HT200 7. Working Principle : Submersible 8. Outlet Diameter : 6 Inches 9. Driver : Electric Power 10. Structure : Centrifugal 11. Shaft : Duplex Stainless Steel 12. Motor : NEMA Standard Three Phase Induction Type Motor 13. Temperature : -5°C to +120°C				
Sub-total					
PART IV	SOLAR PV MODULES, FITTINGS AND ACCESSORIES				
	SPL2	-450Wp PV Solar Module, Poly-Crystalline	126.00	pcs.	
	Max Power: 450 Watt Open Circuit Voltage: 49.60V Short Circuit Current: 11.53A Optimum Operating Voltage: 41V Optimum Operating Current: 10.98A Temperature: -40°C to +90°C				
Sub-total					
PART V	SOLAR INVERTER				
	SPL3	-38KW, 360V-700V DC Input, 3phase-460V-60Amp AC Output, Inverter	1	unit	
		-Built-in Maximum Power Point Tracking (MPPT) -AC/DC Compatibility -Overvoltage and Undervoltage Protection -Overload and Overcurrent Protection -Enclosure Class: IP 66			
SPL4	-Combiner Box (for 10 String)	1	unit		
Sub-total					

PART VI	PV DISCONNECT, PV PROTECT and COMBINER BOX					
	SPL5	DC-AC Line Protection	1	L.S.		
		-DC MCB, 20A 2P (10 pcs.) -DC SPD, 1000VDC 2P (10 pcs.) -AC MCB, 150A 3P (3 pcs.) -MC4 Straight (20 pcs.)				
			Sub-Total			
PART VII	CABLE WIRE and ACCESSORIES					
	SPL6	System Wiring Installation	1	L.S.		
		-Royal Cord 3C, 8 AWG (150 l.m.) -Royal Cord 2C, 14 AWG (200 l.m.)				
			Sub-Total			
PART VIII	OUTLET WORKS					
	Part A	EARTH WORKS				
	102	Common Soil Excavation	161.28	cu.m.		
	100(2)	Structural BackFill/Backfilling	155.00	cu.m.		
	Part B	PIPE OUTLET INSTALLATION				
	SPL7	Pump Outlet Pipe Installation	1	L.S.		
		-6m X 6" Diameter SDR17 HDPE Pipe (84 pcs.) -10 Bolts, 8" Diameter End Flange (4 sets)				
PART IX	PUMP INTAKE STRUCTURE, SUMP AND HOUSE					
	Part A	EARTH WORKS				
	102	Common Soil Excavation	74.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	40.00	cu.m.		
	201	Aggregate Sub Base Course (Gravel Fill)	2.00	cu.m.		
	Part B	REINFORCE CONCRETE WORKS				
	405(1)	Concrete Class "A" w/ Forms (Wall, Slab, Manhole and Landing)	10.00	cu.m.		
	405(2)	Concrete Class "A" w/out Forms (Flooring and Footing)	4.00	cu.m.		
	404	Reinforcing Steel Bar	1,800.00	kgs.		
	Part C	METAL WORKS				
	SPL8	Pump House Railings, Fabricated Steel Door, Trash Rack and Fish Screen	1.00	L.S.		
		Sub-Total				
PART X	PUMP STILLING POOL					
	Part A	EARTH WORKS				
	102	Common Soil Excavation	1.00	cu.m.		
	100(2)	Structural BackFill/Backfilling	0.50	cu.m.		
	201	Aggregate Sub Base Course (Gravel Fill)	0.30	cu.m.		
	Part B	REINFORCE CONCRETE WORKS				
	405(3)	Concrete Class "B" w/ Forms (Wall)	0.75	cu.m.		
	405(4)	Concrete Class "B" w/out Forms (Flooring)	0.35	cu.m.		
404	Reinforcing Steel Bar	65	kgs.			
		Sub-Total				
TOTAL PROJECT COST					~	

Note: All taxes, contractor's profit and hauling cost are included in unit cost per item.

NAME AND SIGNATURE OF BIDDER