

Section 6: Schedule of Supply

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1. List of Goods and Related Services

Package No. G-08			
Package Name: Purchase of Lab Equipment for JWPTI Dekiling-Solar Technology			
Item No.	Description	Unit of Measurement	Quantity
1	PV Solar irradiance meter	Nos.	5
2	PV Solar path finder	Nos.	2
3	Weather station	Set	1
4	PV Solar dryer system	Set	1
5	Hydronics heating training unit trainer board	Unit	1
6	Pyranometer	Nos.	2
7	Pipe bender	Nos.	4
8	PPR welding machine	Nos.	4
9	Refractometer	Nos.	4
10	Staple gun	Nos.	2
11	PEX crimping tool set	Set	10
12	Digital Megger	Nos.	2
13	Tool kit set	Set	20
14	Auto Soldering Iron kit	Set	8
15	Infrared camera	Nos.	1
16	Leakage current detector	Nos.	3
17	Laptops	Nos.	20
18	Programmable Logic Controller (PLC)	Set	4
19	Programmable Logic Controller (PLC)	Set	4
20	Programmable Logic Controller (PLC)	Set	4
21	Programmable Logic Controller (PLC)	Set	4
22	Programmable Logic Controller (PLC)	Set	4
23	Programmable Logic Controller (PLC)	Set	4
24	Programmable Logic Controller (PLC)	Set	16
25	Programmable Logic Controller (PLC)	Set	4
26	Programmable Logic Controller (PLC)	Set	4
27	Programmable Logic Controller (PLC)	Set	6

28	Programmable Logic Controller (PLC)	Set	4
29	Wire Fishing Tool Kits	Set	5
30	Electrical Wire threading Machine	Nos.	3
31	Solar module analyzer	Nos.	2
32	Seaward PV150 /Better Solar Installation Complete Test Kit	Set	3
33	Underground Power Cable Fault Location System Equipment	Set	1
34	Glycol Filling Machine	Set	1

2. Delivery and Completion Schedule

The delivery period shall start as of the date of supply order.


Item No.	Description of Goods or Related Services	Delivery Schedule (Duration)	Location	Required Arrival Date of Goods or Completion Date for Related Services
1	PV Solar irradiance meter	60 days	JWPTI, Dekiling, Sarpang	The goods should be delivered to JWPTI Dekiling, Sarpang within 60 days from the date of supply order.
2	PV Solar path finder			
3	Weather station			
4	PV Solar dryer system			
5	Hydronics heating training unit trainer board			
6	Pyranometer			
7	Pipe bender			
8	PPR welding machine			
9	Refractometer			
10	Staple gun			
11	PEX crimping tool set			
12	Digital Megger			
13	Tool kit set			
14	Auto Soldering Iron kit			

15	Infrared camera			
16	Leakage current detector			
17	Laptops			
18	Programmable Logic Controller (PLC)			
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27	Programmable Logic Controller (PLC)			
28	Programmable Logic Controller (PLC)			
29	Wire Fishing Tool Kits			
30	Electrical Wire threading Machine			
31	Solar module analyzer			
32	Seaward PV150 /Better Solar Installation Complete Test Kit			
33	Underground Power Cable Fault Location System Equipment			
34	Glycol Filling Machine			

3. Technical Specifications


1. PV Solar irradiance meter

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Measuring Range 0 to 1400 W/m² Resolution 1 W/m² Measuring Accuracy \pm (5 % + 5 Digit) Temperature Measurement Measuring range (°C) -22 °F to 212 °F (-30 °C to 100 °C) Resolution 0.2 °F (0.1 °C) / 1 °F @ >100 °F Measuring Accuracy \pm2 °F (\pm1 °C) @ 14 °F to 167 °F (-10 °C to 75 °C), \pm4 °F (\pm2 °C) @ -22 °F to 14 °F (-30 °C to -10 °C) and 167 °F to 212 °F (75 °C to 100 °C) Note: Temperature measurement response time: ~30 sec. Inclination Angle Measuring Range -90° to +90° Resolution 0.1° Measuring Accuracy \pm 1.5° @ -50° to +50°, \pm2.5° @ -85° to -50° and +50° to +85° \pm3.5° @ -90° to -85° and +85° to +90° Compass Measuring Range 0° to 360° Resolution 1° Measuring Accuracy \pm 7° Note: a) Measurements valid for device inclination between -20° and +20° to horizontal. Outside that range on the LCD. b) Result is referred to magnetic north. Temperature Operating Temperature IRR1-SOL -20 °C to 50 °C (humidity <80 %), non condensing Operating Temperature 80PR-IRR -30 °C to 100 °C Storage Temperature -30 °C to 60 °C (humidity <80 %) Altitude 0 m to max. 2000 m Electromagnetic Compatibility (EMC) International IEC 61326-1: Portable</p>		

	<p>Electromagnetic Environment CISPR 11: Group 1, Class A</p> <p>80PR-IRR External Temperature Probe with Suction Cup, C250 Carrying Case with Shoulder Strap, (4) AA Alkaline Batteries, User Manual.</p> <p>Protection IP Protection IP40 Power Supply & Battery Life Batteries 4 AA Alkaline/Lithium Batteries Battery Life (typical) 50 hours (> 9000 readings) Auto Power Off 30 minutes Dimensions L x W x H 5.90 x 3.14 x 1.37 in (150 x 80 x 35 mm) Weight 0.5 lb (231 g)elf. Class A:</p> <div style="text-align: center;">  </div>		
<p>Other Requirements</p>	<p>Warranty period of one year from the date of acceptance.</p>		


2. PV Solar path finder

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
<p>Make and Model</p>			
<p>Country of Origin</p>			
<p>Technical Specification and Minimum Requirements</p>	<p>Kit must Include: Printed Manual 20 Su path Diagrams (latitude & application specific)</p>		

	<p>Pathfinders must include "prepackaged" having: 5 - 25-31 degrees N. Latitude South facing 5 - 31-37 degrees N. Latitude South facing 5 - 37-43 degrees N. Latitude South facing 5 - 43-49 degrees N. Latitude South facing -Angle estimator -with white marking pen with extra leads Tool box specifically designed for the Pathfinder -secures Solar Pathfinder unit, pens, tripod -generous space for manual, Sunpath diagrams, -rugged enough for job site and truck</p> 		
<p>Other Requirements</p>	<p>Warranty period of one year from the date of acceptance.</p>		


3. Weather Station

Features	Required	Completed	Bidder's specifications												
		(Yes/No)	(Please attach the original brochures)												
Make and Model															
Country of Origin															
Technical Specification	<table border="1"> <tr> <td>Measured</td> <td>Measuring range</td> <td>Resolution</td> <td>Precision</td> </tr> <tr> <td>Humidity</td> <td>0%RH~100%RH</td> <td>0.1% RH</td> <td>±2%RH</td> </tr> <tr> <td>Temperature</td> <td>-40~80°C</td> <td>0.1°C</td> <td>±0.4°C</td> </tr> </table>	Measured	Measuring range	Resolution	Precision	Humidity	0%RH~100%RH	0.1% RH	±2%RH	Temperature	-40~80°C	0.1°C	±0.4°C		
Measured	Measuring range	Resolution	Precision												
Humidity	0%RH~100%RH	0.1% RH	±2%RH												
Temperature	-40~80°C	0.1°C	±0.4°C												


<p>and Minimum Requirements</p>	<p>Atmospheric pressure 0-120Kpa 0.1KPA ±0.15Kpa@25% Soil temperature -40~80°C 0.1°C ±0.5°C Soil temperature (moisture) 0~100% 0.1% ±2%RH Conductivity 0-20000ug/cm 10ug/CM ±2%RH Wind speed 0-60m/s 0.1M/S ±0.2M/S wind direction 8 orientation 1 position - Noise 30~120db 1db ±0.5DB Illuminance 0-200000lux — ±3% Rainfall 0-800mm 0.5mm ±2% PM2.5/PM10 0-1000ug/m3 1ug/m3 ±10% Solar radiation 0-2000W — <5% CO2 0-5000ppm 0.1ppm ±30ppm Supply mode AC220V,AC110V,DC24V, with solar power</p> 		
<p>Other Requirements</p>	<p>Warranty period of one year from the date of acceptance.</p>		

4. PV Solar dryer system

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
<p>Make and Model</p>			
<p>Country of Origin</p>			
<p>Technical Specification and Minimum Requirements</p>	<p>Dehydrator,voltage 12V, weight 200kg, Power:100W,Dimension(L*B*H) :2150x1150x700 mm, High Efficiency,material Food grade stainless steel,multifunctional,with CE/ISO certified.</p>		


			
<p>Other Requirements</p>	<p>Warranty period of one year from the date of acceptance.</p>		

5. Hydronics heating training unit trainer board

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
<p>Make and Model</p>			
<p>Country of Origin</p>			
<p>Technical Specification and Minimum Requirements</p>	<p>Demonstrates the operation of a radiator, boiler, unit heater and baseboard, expansion tank and can simulate fault components using faults. With three zones valves and thermostats. Electrical operated (240V; 50Hz, 100A, plug included) overall size (70" L x 33" W x 77" H)</p>  <p><i>Electric boiler option</i></p>		


Other Requirements	Warranty period of one year from the date of acceptance.		

6. Pyranometer


Features	Required	Complied	Bidder's specifications														
		(Yes/No)	(Please attach the original brochures)														
Make and Model																	
Country of Origin																	
Technical Specification and Minimum Requirements	<table border="0"> <tr> <td>Maximum irradiance (W/m²)</td> <td>4000</td> </tr> <tr> <td>Response time at 95%(s)</td> <td>12</td> </tr> <tr> <td>Sensitivity (μV/W/m²)</td> <td>4-6</td> </tr> <tr> <td>Accuracy (%),</td> <td>±3</td> </tr> <tr> <td>Spectral rang(nM)</td> <td>305-2800</td> </tr> <tr> <td>Temperature(C°)</td> <td>-40 to +80</td> </tr> <tr> <td>Calibration coefficient(μV/W/m²)</td> <td>4.4</td> </tr> </table> 	Maximum irradiance (W/m ²)	4000	Response time at 95%(s)	12	Sensitivity (μV/W/m ²)	4-6	Accuracy (%),	±3	Spectral rang(nM)	305-2800	Temperature(C°)	-40 to +80	Calibration coefficient(μV/W/m ²)	4.4		
Maximum irradiance (W/m ²)	4000																
Response time at 95%(s)	12																
Sensitivity (μV/W/m ²)	4-6																
Accuracy (%),	±3																
Spectral rang(nM)	305-2800																
Temperature(C°)	-40 to +80																
Calibration coefficient(μV/W/m ²)	4.4																
Other Requirements	Warranty period of 18 months from the date of acceptance.																

7. Pipe bender

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			

Country of Origin			
<p>Technical Specification and Minimum Requirements</p>	<p>Hand held, Lightweight aluminum for bending 1/4, 5/16, 3/8 (6, 8, 10mm) O.D tubing, for copper, brass, aluminum and thin steel pipes. Calibrated markings for accurate left-hand, right-hand, and offset bends up to 90°. Grey powder coating, high precision Angle with marking.</p> 		
Other Requirements	Warranty period of one year from the date of acceptance.		

8. PPR welding machine

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
<p>Technical Specification and Minimum Requirements</p>	<p>Single Phase (Voltage 220v, Frequency 50 Hz) Power 1500 Watt Material Mild Steel Welding Area 10 mm-63 mm</p> 		

Other Requirements	Warranty period of one year from the date of acceptance.		
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9. Refractometer


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Handheld Salinity Refractometer with ATC, Industrial-Grade, 0-100% Salinity Range, 1.000-1.070 Specific Gravity Range 		
Other Requirements	Warranty period of one year from the date of acceptance.		

10. Staple gun

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Air Inlet Coupler • Working Pressure: 6.5 bar (95PSI) • Avg. Air Consumption at 100% Duty Cycle: 142L/min (6CFM) • Minimum Compressor Required: 2HP/ 1.5KW		

	<ul style="list-style-type: none"> • Uses F series nails: 10 – 32mm • Uses ffg staples: 6 – 32mm 		
Other Requirements	Warranty period of one year from the date of acceptance.		

11. PEX crimping tool set


Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Pex Pipe Crimping Tool Kit with Interchangeable Crimping heads 3/8", 1/2", 3/4", Crimping Inserts 1" Tool sets to fasten PEX pipe to brass or poly fittings Using copper crimp rings With Go/No-Go Gauge Tough plastic tool kit with PEX Piping Cutter with Crimping Tool Kit</p> 		
Other Requirements	Warranty period of one year from the date of acceptance.		

12. Digital Megger

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>AC Voltage input range: 85-265 V rms, 50/60 Hz, 100VA Battery: 11.1 V, 5.2Ah Li-ion batteries, meet IEC 62133:2003,</p> <p>Battery: 6 hours (typical) continuous testing at 5 kV with a 100 MΩ load</p> <p>Battery charge time: 2.5 hours from deep discharge, 2 hours normal discharge</p> <p>Test voltages: 250 V, 500 V, 1000 V, 2500 V, 5000 V,</p> <p>Lock test voltage VL: 40 V to 1 kV in 10 V steps, 1 kV to 5 kV in 25 V steps, 5 kV to 15 kV in 25 V steps</p> <p>Voltage o/p accuracy: +4%, -0%, ±10 V nominal test voltage at 1GΩ load (0°C to 0°C)</p> <p>Resistance Range: 10 k to 10 TΩ @ 5 kV 20 k to 20 TΩ @ 10 kV 10 k to 30 TΩ @ 15 kV</p> <p>Safety: CATIV 600 V to 3000 m (5 kV, 10 kV) CATIV 1000 V to 3000 m (15 kV) Meets the requirements of IEC 61010-1</p> <p>Dimensions:L 315 mm x W 285 mm x H 181 mm Included Accessories 5 kV, 10 kV, 3 m leadset x 3, medium insulated clip and probe length of 1-2m.</p>		
Other Requirements	Warranty period of one year from the date of acceptance.		



13. Tool kit set

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Install and test tools with 19 nos. of tools set. Material: Metal/plastic Application: Optical fiber cold connection Toolkit Size: 37*25*11cm 		
Other Requirements	Warranty period of one year from the date of acceptance.		


14. Auto Soldering Iron Kit

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	80W, 220-240V, Soldering Iron with 5pcs Soldering Tips, Desoldering Pump Tweezers Soldering Wires.		

			
<p>Other Requirements</p>	<p>Warranty period of one year from the date of acceptance.</p>		


15. Infrared camera

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
<p>Make and Model</p>			
<p>Country of Origin</p>			
<p>Technical Specification and Minimum Requirements</p>	<p>Infrared resolution 640 x 480 pixels UltraMax (super-resolution) NETD • <40 mK, 24° @ +30°C (+86°F) • <50 mK, 6° @ +30°C (+86°F) Field of view • 24° x 18° • 6° x 4.5° Minimum focus distance • 0.15 m (0.49 ft.), 24° • 5.0 m (16.4 ft.), 6° • Macro mode 50 µm as option to 24° Minimum focus distance with MSX • 0.5 m (1.64 ft.), 24° Focal length • 17 mm (0.67 in.), 24° • 70 mm (2.8 in.), 6° Spatial resolution (IFOV) • 0.66 mrad/pixel, 24° • 0.17 mrad/pixel, 6° Available extra lenses • 42° (AutoCal) • 14° (AutoCal) • Dual FOV 24°/14° (service calibration required) Lens identification Automatic f number • 1.3, 24° • 1.35, 6° Image frequency 30 Hz Focus • Continuous LDM • One-shot LDM • One-shot contrast • Manual Field of view match</p>		

	<p>Digital zoom 1–8x continuous Detector data Focal plane array/spectral range Uncooled microbolometer/7.5–14 μm Detector pitch 12 μm</p> 		
<p>Other Requirements</p>	<p>Warranty period of one year from the date of acceptance.</p>		

16. Leakage current detector

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
<p>Make and Model</p>			
<p>Country of Origin</p>			
<p>Technical Specification and Minimum Requirements</p>	<p>Digital AC leakage current tester, 10uA ultra high resolution. AC current range 40mA, 400mA, 4A, 40A and 60A with AC voltage and resistance measurements. With carrying case, user manual, installed battery and test leads of 1-2m.</p>		

			
<p>Other Requirements</p>	<p>Warranty period of one year from the date of acceptance.</p>		

17. Laptops

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
<p>Make and Model</p>			
<p>Country of Origin</p>			
<p>Technical Specification and Minimum Requirements</p>	<p>Operating System: Windows 11 Pro, OEM (factory installed) digital license will not be accepted, Processor: Intel® Core™ Ultra 7 165H (24 MB cache, 16 cores, up to 4.8 GHz), Video Card Integrated: Intel® Arc™ Graphics NVIDIA® GeForce RTX™ 4050, 6 GB GDDR6, 30W Display: 14.5", 3.2K3200x2000, 120Hz, OLED, Touch, Infinity, low blue light, Memory: 32 GB: LPDDR5X, 6400 MT/s, dual-channel NVIDIA® GeForce® RTX™ 4050 discrete graphics card:32 GB: LPDDR5X, 7467 MT/s, dual-channel (onboard)Storage: 1 TB, Gen 4 PCIe NVMe, SSD, Color: Platinum, Camera:1080p at 30 fps FHD RGB-IR camera, Dual-array microphones, Ambient light sensor, Windows Hello compliant, Express Sign-In™, Intel Intelligent Collaboration, Audio and Speakers: Stereo speakers with Waves MaxxAudio Quad-speaker design with 2W Main x 2 Channel + 2W Tweeter x 2 Channel; 8W total peak output, Chassis: CNC machined aluminium with glass palm rest in graphite, Wireless: Intel® Killer™ Wi-Fi 6E 1675(Ax211), 2x2, 802.11ax,</p>		

	MU-MIMO, Bluetooth® 5.3 wireless card, Primary Battery: 6-cell, 70Whr, Lithium Ion Polymer, Keyboard: English International backlit keyboard with fingerprint reader, 64-key, Ports 3 Thunderbolt™ 4 (USB Type-C™) with Power Delivery and DisplayPort 1 headset (headphone and microphone combo) port, Slots: 1 microSDXC card reader v6.0 UHS-I/UHS-II, Touchpad: Multi-touch gesture-enabled precision touchpad with haptic function, Seamless glass touchpad with haptics, Support Services: Ms office 2021 activated,.		
Other Requirements	Warranty for one year from the date of acceptance.		

18. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	SIMATIC PM 1507 24 V/8 A Regulated power supply for SIMATIC S7-1500 input: 230 V AC, output: 24 V DC, 8 A		
Other Requirements	Warranty period of one year from the date of acceptance.		

19. Programmable Logic Controller (PCL)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			

Technical Specification and Minimum Requirements	SIMATIC S7-1500, CPU 1515-2 PN, Central processing unit with work memory 500 KB for Program and 3 MB for data, 1st interface: PROFINET IRT with 2-port switch, 2nd interface: PROFINET RT, 30 ns bit performance, SIMATIC Memory Card.		
Other Requirements	Warranty period of one year from the date of acceptance.		

20. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	SIMATIC S7-1500, Digital input module DI 16x24 V DC HF, 16 channels in groups of 16; Input delay 0.05-20 ms; Input type 3 (IEC 61131); diagnostics; Hardware interrupts		
Other Requirements	Warranty period of one year from the date of acceptance.		

21. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	SIMATIC S7-1500, Digital output module DQ16x24 V DC/0.5A HF; 16 channels in groups of 8; 4 A per group; Single-channel diagnostics; Substitute value		
Other Requirements	Warranty period of one year from the date of acceptance.		

22. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	SIMATIC S7-1500, Analog input module AI 8xU/I/RTD/TC ST, 16 bit resolution, Accuracy 0.3%, 8 channels in groups of 8, 4 channels for RTD measurement, "Common mode voltage 10 V; diagnostics; Hardware interrupts. Shield bracket and shield terminal.		
Other Requirements	Warranty period of one year from the date of acceptance.		

23. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	SIMATIC S7-1500, Analog output module AQ 4xU/I ST, 16 bit resolution, Accuracy 0.3%. 4 channels in groups of 4, diagnostics substitute value, shielded bracket and shield terminal		
Other Requirements	Warranty period of one year from the date of acceptance.		

24. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)

Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	SIMATIC S7-1500, Front connector Screw-type connection system, 40-pole for 35 mm wide modules incl. 4 potential bridges, and cable ties		
Other Requirements	Warranty period of one year from the date of acceptance.		

25. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	SIMATIC S7, memory card of 8MB for S7-1x 00 CPU/SINAMICS, 3V Flash, 4 MB		
Other Requirements	Warranty period of one year from the date of acceptance.		

26. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	SIMATIC S7-1500, Mounting rail 482 mm, grounding screw, integrated DIN rail.		
Other Requirements	Warranty period of one year from the date of acceptance.		

27. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	IE connecting cable IE FC RJ45 Plug180/IE FC RJ45 Plug-180; IE FC Trailing Cable GP Pre-assembled with 2x IE FC RJ45 plug 180; length 3.0m.		
Other Requirements	Warranty period of one year from the date of acceptance.		

28. Programmable Logic Controller (PLC)

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	SIMATIC HMI TP700 Comfort, Comfort Panel, Touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable from WinCC Comfort V11		
Other Requirements	Warranty period of one year from the date of acceptance.		

29. Wire Fishing Tool Kits

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			

Country of Origin			
Technical Specification and Minimum Requirements	Fish Tape steel wire puller with handle Dimension:L:240 ft,B: 15.4 In, H12.1 In. Wire Fishing Tools for Walls Electrical Conduit		
Other Requirements	warranty 1 year from the date of acceptance of the goods.		




30. Electrical Wire threading Machine

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	Net weight without battery 3 kg Threading cable 30m long, 5.8mm thick Work time 4 hours per fully-charged battery, 2 batteries included Battery: 21V lithium, 4000 mAh Pulling power 100 kg Noise level 1 dB at 40m Pulling speed 50m per minute Working modes pulling/pushing Motor speed 0-3,000 rpm Working power 18v/21v Automatic stop mechanism LED battery indicator		
Other Requirements	Warranty period of one year from the date of acceptance.		


31. Solar module analyzer

Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Rechargeable Lithium Battery, 3400mAh, 400 times of linear scan from 60V to 0V and 0A to 12A. Memory Size : 100 records, AC 240V Input, DC 15V / 1 ~ 3A Output Standards : 1:2006, 1:2001, CAT I 60V, Pollution Degree 2 Operation Environment : 5 C ~ 50 C, <85% RH 0 Temperature Coefficient : 0.1% of full scale / C(<18 C or >28 C) 0 0 0 Storage Environment: -20 C ~ 60 C, <75% RH 0 Dimension : 257 x 155 x 57mm (approx.) I-V Curve Test for Solar Panel / Module / Cell Max. Solar Panel / Module / Cell Power (Pmax) search by Auto-Scan : 60V, 12A (500W Capability) Resolution : 1mV, 1mA Manual Single Point I-V Test I-V Curve with Cursor to Display each Data Point Efficiency (%) Calculation of Solar Panel Solar Panel Area Setting : 0.001 m ~ 9999 m Standard Light Source Setting : 10 W/m ~ 1000 W/m Communicate with PC via USB Cable AC Adaptor and Rechargeable Lithium Battery Sampling Time of Data Logging : 0 ~ 99 min. Large LCD with Backlight</p> 		
Other Requirements	Warranty period of one year from the date of acceptance.		


32. Solar Installation Complete Test Kit

Features	Required	Complied	Bidder's specifications
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		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification and Minimum Requirements	<p>Display Range 0.0V DC – 1000V DC Measuring Range 5.0V DC- 1000V DC Resolution 0.1V DC maximum Accuracy ± (0.5 % + 2 digits) DC voltage polarity correct with reversed EARTH CONTINUITY RESISTANCE MEASUREMENT Test Voltage Open Circuit >4V DC, Nominal Test Current into 2 Ω >200mA Display Range 0.00Ω – 199Ω Measuring Range 0.05Ω – 199Ω Resolution 0.01Ω maximum Accuracy ± (2% + 5 digits) Test Leads Zero Zero up to 10Ω and 1-2m Visible Warning ≥30V AC or DC at inputs Circuit Protection Test(≥30V AC or DC at inputs)</p> 		
Other Requirements	Warranty period of one year from the date of acceptance.		


33. Underground Power Cable Fault Location System Equipment

Features	Required	Complied	Bidder's specifications
		(Yes/No)	(Please attach the original brochures)
Make and Model			
Country of Origin			
Technical Specification	Work power AC 240V, frequency 50Hz Humidity ≤85%RH Operating Temperature -10~50°C		

and Minimum Requirements	<p>Sampling frequency 30M,60M,120M Testing distance up to 165 Km Test pulse 0.2~9.9μs,arbitrary adjustable Deviation of ±0.25% Standard ISO 9000:2008 or Certification CE.</p> 		
Other Requirements	Warranty period of one year from the date of acceptance.		

34. Glycol Filling Machine

Features		Required	Compl ied	Bidder's specification s
			(Ye s/ N o)	(Please attach the original brochures)
Make and Model				
Country of Origin				
Technical Specification and Minimum Requirements	<p>HP-Volts- Phase: $\frac{1}{2}$ 230 - 1 Tank Volume: 55 gal Dimensions LxWxH 25"x25"x60" Pressure Range:10-100 psi Make-up Capacity :2.5 gpm@100psi SystemConnection:$\frac{3}{4}$"Copper</p>			

				
<p>Other Requirements</p>	<p>Warranty period of one year from the date of acceptance.</p>			

4. Drawings