

OPERATION & MAINTENANCE SERVICE FOR ROOFTOP SOLAR SYSTEM

Open Letter

Dear valued customers

Firstly, Vu Phong Energy Group would like to wish you and your company the most respectful greetings!

With more than 12 years of experience and expertise in developing clean energy in Vietnam, Vu Phong Energy Group have been considered a trusted partner who brings high quality solar power products and services to its customers. Vu Phong has been focused on its core business in solar energy, serving as a professional EPC contractor and providing operation & maintenance services as well as researching and developing renewable energy devices. It has been proving with our track records that many international investors as well as big local developers have signed up and chosen us as their partners in renewable energy business (such as Total Energies, Cleantech Solar, Ecoligo, Shire Oak, ...)

So far, we have made significant progress toward becoming the EPC and Operation and Maintenance (O&M) contractor for solar projects with capacity of more than 500MWp. We are conducting O&M work for Solar Farms with a capacity of 325 MWp through collaboration and knowledge transfer with major businesses such as Bouygues, AC Renewable, and others.

As the above should serve as a brief overview of our capabilities, we also hope that we will always receive the trust of our customers and partners, in order to maximize your investment in solar energy.

Contact us:

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O&M SERVICES FOR ROOFTOP SOLAR SYSTEM

1. BASIC O&M PACKET

- **Monitoring** : Centralized monitoring by dedicated monitoring engineers
- **Preventive Maintenance (4 times/year)**: Carry out routine maintenance work according to SOW.
- **Corrective Maintenance (10 times/year)** : Perform diagnostic and repair work to keep the system working properly.
- **Report** : Monthly maintenance reports , Yearly maintenance reports, incident reports,...
- **Cleaning (4 times/year)** : Perform periodic cleaning of solar panels with water

2. EXTRA SERVICES

- **Smart I-V Curve Diagnosis** carry out online I-V curve analysis on entire strings. The scanning would help to find out and identify the strings with low performance or faults.
- **Electricity Grid Managent** : Schedule power-cut for maintenance purpose, Monitor reactive power and frequency.
- **PV module cleaning** : Cleaning services tailored to the needs of the customer
- **Corrective Maintenance**: In addition to the quantity specified in the standard
- **Power system quality assessment** : Conduct tests on operating current, power factor, current harmonics
- **Repair items** : module, inverter, cable replacement, frame reinforcement,... (major repairs).

Vu Phong Solar's O&M photos



O&M training



Operating



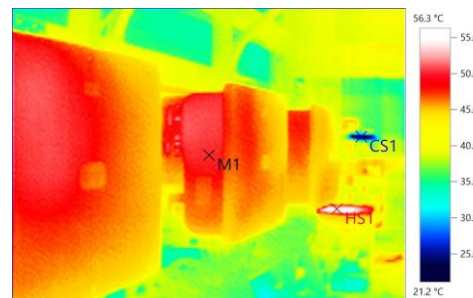
Check hotspot on PV panel



Check Inverter



PV cleaning robot



Inverter temperature imaging

Maintenance Schedule

STT	Contents for O&M activities	Annual maintenance schedule				
		As needed	Daily	Monthly	Quarterly	Annual
1	Monitoring		X			
2	Preventive Maintenance (4 times/year)				X	
3	Corrective Maintenance (10 times/year)	X				
4	Cleaning (4 times/year)				X	
5	Report			X		X

Quotation table for operation and maintenance of the system.

STT	Contents for O&M activities	Unit	Unit Amount (USD)	Remark
1	BASIC O&M PACKET	Per Year	6000	(1Mw/Year)
2	PV MODULE CLEANING	Per Cycle	785	At the request of the investor or in addition to the standard package
4	COMBO EX (PV MODULE CLEANING + SITE CHECKING)	Per Cycle	825	Combined panel cleaning and system testing.
5	CORRECTIVE MAINTENANCE	Per Cycle	100	At the request of the investor or in addition to the standard package
6	I-V TEST	Per Cycle		Quotation for each specific project
7	REPAIR ITEMS	Per Cycle		Quotation for each specific project

