SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System

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Customer Name :	Mr. AV (Olive Canyon)	Maintenance :	MA	Date :	2 December 2024

Solar Panel				Inverter		
Brand	Model	Capacity	Install	Brand	Model	S/N
Bamko	GKA 144M450	20 Kwp.	47 Panels	Solis	3P20K-4G	1107G2215030021

Before Preventive Maintenance Solar System

Solar Panels	Operating Voltage / Current			Time	Inspection		Remark
String 1 ____ Panels	Voc 470.6 Vdc	Vmp 352.6 Vdc	Isc 8.43 A.	12.00	☑ Pass	☐ Not Pass	
String 2 ____ Panels	Voc 468.4 Vdc	Vmp 350.1 Vdc	Isc 8.42 A.	:	☑ Pass	☐ Not Pass	
String 3 ____ Panels	Voc 914.3 Vdc	Vmp 422.6 Vdc	Isc 8.29 A.	:	☑ Pass	☐ Not Pass	
String 4 ____ Panels	Voc 560.8 Vdc	Vmp 423.4 Vdc	Isc 8.72 A.	:	☑ Pass	☐ Not Pass	
String 5 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 6 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 7 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 8 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 9 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 10 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 11 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 12 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	

After Preventive Maintenance Solar System

Solar Panels	Operating Voltage / Current			Time	Inspection		Remark
String 1 ____ Panels	Voc 488.0 Vdc	Vmp 389.9 Vdc	Isc 8.21 A.	13.00	☑ Pass	☐ Not Pass	
String 2 ____ Panels	Voc 471.0 Vdc	Vmp 389.3 Vdc	Isc 8.16 A.	:	☑ Pass	☐ Not Pass	
String 3 ____ Panels	Voc 919.9 Vdc	Vmp 418.8 Vdc	Isc 8.39 A.	:	☑ Pass	☐ Not Pass	
String 4 ____ Panels	Voc 532.8 Vdc	Vmp 418.8 Vdc	Isc 8.26 A.	:	☑ Pass	☐ Not Pass	
String 5 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 6 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 7 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 8 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 9 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 10 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 11 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	
String 12 ____ Panels	Voc ____ Vdc	Vmp ____ Vdc	Isc ____ A.	:	☐ Pass	☐ Not Pass	

Inverter Inspection

Device	Readings from Smarter Meter	Readings from Inverter Display	Field Measured Readings	Remark
Inverter	**AC Line Voltage**	**AC Line Voltage**	**AC Line Voltage**	
	Phase L1 to Grd : 234.9 Vac	Phase L1 to Grd : 234.9 Vac	Phase L1 to Grd : 234.1 Vac	
	Phase L2 to Grd : 232.5 Vac	Phase L2 to Grd : 233.9 Vac	Phase L2 to Grd : 234.9 Vac	
	Phase L3 to Grd : 236.1 Vac	Phase L3 to Grd : 235.1 Vac	Phase L3 to Grd : 234.9 Vac	
	AC Line Current	**AC Line Current**	**AC Line Current**	
	Phase L1 to Grd : 19.60 A	Phase L1 to Grd : 16.8 A	Phase L1 to Grd : 16.33 A	
	Phase L2 to Grd : 8.10 A	Phase L2 to Grd : 16.6 A	Phase L2 to Grd : 16.74 A	
	Phase L3 to Grd : 13.80 A	Phase L3 to Grd : 16.6 A	Phase L3 to Grd : 16.98 A	

Comment :

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Electrical Room Inspection

Customer Name :		Date :	

Solar Panel				Inverter		
Brand	Model	Capacity	Install	Brand	Model	S/N
		Kwp.	Panels			

Device	Ambient Temperature	Temperature				Remark
Inverter	44.3 C	Inside : 50.0 C		Outside : 46.7 C	Heatsync : 52.1 C	
AC Cabinet	38.0 C	MCB Breaker : 63 A. 41.0 C		RCCB Breaker : A. C	AC SPD : 3 Phase 38.7 C	
		AC Cable : 6 Sq.m. AC Terminal : 41.3 C		Smart Meter : 39.8 C 3 Phase	CT Ratio : 300 / 5 A. Meter Ratio 60 A.	
		String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector
DC Cabinet 1	39.6 C	String 1	40.1 C A.	41.1 C Vdc A.	39.2 C Vdc A.	38.6 C
		String 2	39.7 C A.	40.5 C Vdc A.	37.9 C Vdc A.	37.9 C
		String 3	39.6 C A.	41.2 C Vdc A.	38.7 C Vdc A.	38.4 C
		String 4	39.8 C A.	39.9 C Vdc A.	37.6 C Vdc A.	38.5 C
EE Room	38.8 C	AC Cable : 50 Sq.m. Wireway : 38.2 C		Main Breaker : 150 A. MDB / LC : 39.7 C	MCCB Feed : 50 A. 38.8 C	

Comment :

Inspection By : _____

(Bunharn Libnoy)
Project Engineer

Date : ____/____/____

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Preventive Maintenance Solar System

Item	Solar System Inspection	Inspection		Remark
1	Clean the Solar panel (Use clean water) ทำความสะอาดแผงโซล่า เซลล์ (ใช้น้ำสะอาด)	☑ Pass	☐ Not Pass	
2	Check to see if the solar panel's condition ตรวจสอบการแตกร้าวของแผงโซล่า เซลล์	☑ Pass	☐ Not Pass	
3	Inspect the mounting points of the roof mounting support legs for the risk of water leaking. (Use water Proof , Polyurethane PU,Sika MultiSeal AP to prevent water leakage) ตรวจสอบจุดยึดของ Support ที่ยึดกับหลังคา ว่ามีจุดเสี่ยงที่จะทำให้เกิดน้ำรั่วได้หรือไม่ (ใช้ water proof , สิริโครน PU , แผ่นซิก้าป้องกันน้ำ)	☑ Pass	☐ Not Pass	
4	Inspect the mounting parts of the solar cell. ตรวจสอบสภาพโครงสร้างทั้งหมด เพื่อดูว่า PV. Mounting และอุปกรณ์ประกอบอื่นๆ ไม่หลวม	☑ Pass	☐ Not Pass	
5	Inspect the condition of all cables to make sure The cables does not sag down to the roof. ตรวจสอบสภาพของสายทั้งหมดเพื่อให้แน่ใจว่า สายไม่หย่อนลงไปที่หลังคา	☑ Pass	☐ Not Pass	
6	Inspect the tightness of the wire terminals. ตรวจสอบความแน่นของขั้วสายไฟ			
6.1	-AC - Grid in Inverter	☑ Pass	☐ Not Pass	
6.2	-Back - up in Inverter (Specific model Hybrid)	☐ Pass	☐ Not Pass	
6.3	-Battery (Specific model Hybrid)	☐ Pass	☐ Not Pass	
6.4	-AC Breaker	☑ Pass	☐ Not Pass	
6.5	-DC Breaker	☑ Pass	☐ Not Pass	
6.6	-Fuse Holder	☑ Pass	☐ Not Pass	
6.7	-Surge Protection	☑ Pass	☐ Not Pass	
6.8	- Smarter Meter & CT (Current Transformer)	☑ Pass	☐ Not Pass	
7	Check whether the SISO Switch is defective ตรวจสอบ SISO Switch ว่าชำรุดหรือไม่	☑ Pass	☐ Not Pass	
8	Inspect for malfunctions of the inverter and other related electrical equipment. ตรวจสอบความผิดปกติของอินเวอร์เตอร์และอุปกรณ์ไฟฟ้าอื่น ๆ ที่เกี่ยวข้อง	☑ Pass	☐ Not Pass	
9	Insapect heat of the solar panel whether there is an abnormal heat point or not (checked by using a thermal camera) การตรวจสอบความร้อนของแผงโซลาร์เซลล์ว่ามีจุดความร้อนผิดปกติหรือไม่ (ตรวจสอบโดยใช้กล้องถ่ายภาพความร้อน)	☑ Pass	☐ Not Pass	

Comment : _____

Inspection By : _____

(Bunharn Libnoy)
Project Engineer

Date : _____/_____/_____