SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System

Customer Name :	Craig Steven - Natal	Maintenance :	MA	Date :	14 November 2024

Solar Panel				Inverter		
Brand	Model	Capacity	Install	Brand	Model	S/N
Bamko	GKA120M450	Kwp.	36 Panels	Solis	RHI-3P10K-HVES-5G	1100A2218280036

Before Preventive Maintenance Solar System

Solar Panels	Operating Voltage / Current			Time	Inspection		Remark
String 1	9 Panels	Voc 318.7 Vdc	Vmp 251.0 Vdc	Isc 10.04 A.	10 : 49	☑ Pass	☐ Not Pass	
String 2	9 Panels	Voc 319.6 Vdc	Vmp 243.9 Vdc	Isc 9.20 A.	:	☑ Pass	☐ Not Pass	
String 3	9 Panels	Voc 322.2 Vdc	Vmp 248.1 Vdc	Isc 9.91 A.	:	☑ Pass	☐ Not Pass	
String 4	9 Panels	Voc 331.1 Vdc	Vmp 245.3 Vdc	Isc 11.75 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	9 Panels	Voc 314.0 Vdc	Vmp 239.5 Vdc	Isc 10.65 A.	12 : 00	☐ Pass	☐ Not Pass	
String 2	9 Panels	Voc 314.3 Vdc	Vmp 232.7 Vdc	Isc 7.62 A.	:	☐ Pass	☐ Not Pass	
String 3	9 Panels	Voc 317.6 Vdc	Vmp 240.6 Vdc	Isc 11.06 A.	:	☐ Pass	☐ Not Pass	
String 4	9 Panels	Voc 324.3 Vdc	Vmp 242.3 Vdc	Isc 12.67 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**	Back UP
	Phase L1 to Grd : 246.6 Vac	Phase L1 to Grd : 244.9 Vac	Phase L1 to Grd : 240.3 Vac	239.9 ✓
	Phase L2 to Grd : 251.2 Vac	Phase L2 to Grd : 244.4 Vac	Phase L2 to Grd : 245.4 Vac	248.5 ✓
	Phase L3 to Grd : 251.5 Vac	Phase L3 to Grd : 251.1 Vac	Phase L3 to Grd : 252.4 Vac	252.1 ✓
	AC Line Current	**AC Line Current**	**AC Line Current**	
	Phase L1 to Grd : 3.4 A	Phase L1 to Grd : 13.2 A	Phase L1 to Grd : 10.06 A	
	Phase L2 to Grd : 10.6 A	Phase L2 to Grd : 13.2 A	Phase L2 to Grd : 9.20 A	
	Phase L3 to Grd : 13.2 A	Phase L3 to Grd : 13.1 A	Phase L3 to Grd : 10.18 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	47.2 C	Inside : 60.8 C		Outside : 49.3 C		Heatsync : 62.7 C	
AC Cabinet	38.8 C	MCB Breaker : 63 A. / 38.9 C		RCCB Breaker : ____ A. / ____ C		AC SPD : 3 Phase / 38.4 C	
		AC Cable : 6 Sq.m.		Smart Meter : 38.7 C		CT Ratio : 150 / 5 A.	
		AC Terminal : 39.7 C		3 Phase		Meter Ratio 30 A.	
		String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector	
DC Cabinet 1	37.7 C	String 1	38.4 C / ____ A.	38.4 C / ____ Vdc ____ A.	38.3 C / ____ Vdc ____ A.	38.6 C	
		String 2	39.4 C / ____ A.	39.1 C / ____ Vdc ____ A.	37.7 C / ____ Vdc ____ A.	38.4 C	
		String 3	38.1 C / ____ A.	38.7 C / ____ Vdc ____ A.	37.7 C / ____ Vdc ____ A.	38.3 C	
		String 4	39.9 C / ____ A.	40.0 C / ____ Vdc ____ A.	38.4 C / ____ Vdc ____ A.	38.9 C	
EE Room	38.8 C	AC Cable : 25 Sq.m.		Main Breaker : 80 A.		MCCB Feed : ____ A. / ____ C	
		Wireway : 38.0 C		MDB / LC : 39.1 C			

Comment : _____

Inspection By : _____

(Bunharn Libnoy)
Project Engineer

Date : ____/____/____

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Preventive Maintenance Solar System

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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 ว่ามีจุดเสี่ยงที่จะทำให้เกิดน้ำร้าวได้หรือไม่ (ใช้ water proof , สิริโครน PU , แผ่นซิก้ำป้องกันน้ำ)	☑ 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 : _____/_____/_____