

SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System



Customer Name : Piel Maintenance : MA Date : 22 November 2024

Solar Panel				Inverter		
Brand	Model	Capacity	Install	Brand	Model	S/N
<u>Gx100M</u>	<u>Gx480TC</u>	<u>10</u> Kwp.	<u>22</u> Panels	<u>Solis</u>	<u>SE-GR3P10K</u>	<u>1809060232180009</u>

Before Preventive Maintenance Solar System								
Solar Panels	Operating Voltage / Current			Time	Inspection		Remark	
String 1	<u>11</u> Panels	Voc <u>427.2</u> Vdc	Vmp <u>417.7</u> Vdc	Isc <u>1.78</u> A.	<u>14:45</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 2	<u>11</u> Panels	Voc <u>428.6</u> Vdc	Vmp <u>422.3</u> Vdc	Isc <u>1.61</u> A.	:	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 3	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 4	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 5	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 6	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 7	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 8	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 9	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 10	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 11	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 12	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	

After Preventive Maintenance Solar System								
Solar Panels	Operating Voltage / Current			Time	Inspection		Remark	
String 1	<u>11</u> Panels	Voc <u>437.0</u> Vdc	Vmp <u>428.2</u> Vdc	Isc <u>1.93</u> A.	<u>19:30</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 2	<u>11</u> Panels	Voc <u>434.7</u> Vdc	Vmp <u>428.2</u> Vdc	Isc <u>1.98</u> A.	:	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 3	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 4	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 5	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 6	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 7	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 8	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 9	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 10	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 11	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 12	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	

Inverter Inspection				Remark
Device	Readings from Smarter Meter	Readings from Inverter Display	Field Measured Readings	
Inverter	AC Line Voltage			
	Phase L1 to Grd :	<u>221.2</u> Vac	Phase L1 to Grd : <u>218.4</u> Vac	Phase L1 to Grd : <u>221.2</u> Vac
	Phase L2 to Grd :	<u>225.8</u> Vac	Phase L2 to Grd : <u>228.5</u> Vac	Phase L2 to Grd : <u>224.8</u> Vac
	Phase L3 to Grd :	<u>222.8</u> Vac	Phase L3 to Grd : <u>224.2</u> Vac	Phase L3 to Grd : <u>221.8</u> Vac
	AC Line Current			
	Phase L1 to Grd :	<u>0.60</u> A	Phase L1 to Grd : <u>1.0</u> A	Phase L1 to Grd : <u>0.88</u> A
	Phase L2 to Grd :	<u>1.20</u> A	Phase L2 to Grd : <u>1.1</u> A	Phase L2 to Grd : <u>1.05</u> A
	Phase L3 to Grd :	<u>4.80</u> A	Phase L3 to Grd : <u>1.0</u> A	Phase L3 to Grd : <u>0.97</u> A

Comment : _____

SMARTER ENERGY SOLUTION

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	38.7 C	Inside : 42.0 C	Outside : 39.7 C	Heatsync : 42.8 C		
AC Cabinet	37.0 C	MCB Breaker : 40 A.	RCCB Breaker : 40 A.	AC SPD : 3 Phase		
		37.2 C	37.1 C	36.7 C		
		AC Cable : _____ Sq.m.	Smart Meter : 37.7 C	CT Ratio : 190 S A.		
		AC Terminal : 36.4 C	3 Phase Meter Ratio : 30 A.			
		String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector
DC Cabinet 1	36.6 C	String 1	36.2 C	36.2 C	36.2 C	37.0 C
			A.	Vdc A.	Vdc A.	
		String 2	36.2 C	36.3 C	36.3 C	36.8 C
			A.	Vdc A.	Vdc A.	
		String 3	_____ C	_____ C	_____ C	_____ C
			A.	Vdc A.	Vdc A.	
		String 4	_____ C	_____ C	_____ C	_____ C
			A.	Vdc A.	Vdc A.	
EE Room	36.7 C	AC Cable : 25 Sq.m.	Main Breaker : 100 A.	MCCB Feed : _____ A.		
		Wireway : 39.7 C	MDB / LC : 36.2 C	_____ C		

Comment : _____

Inspection By : _____
 (Bunharn Libnoy)
 Project Engineer
 Date : ____ / ____ / ____

SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System



Item	Solar System Inspection	Inspection		Remark
1	Clean the Solar panel (Use clean water) ทำความสะอาดแผงโซลาร์เซลล์ (ใช้น้ำสะอาด)	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
2	Check to see if the solar panel's condition ตรวจสอบการแตกร้าวของแผงโซลาร์เซลล์	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> 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 , สีโรครัน PU , แคนซีก้าป้องกันน้ำ)	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
4	Inspect the mounting parts of the solar cell. ตรวจสอบสภาพโครงสร้างทั้งหมด เพื่อตัว PV, Mounting และอุปกรณ์ประกอบอื่นๆ ไม่หลวม	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
5	Inspect the condition of all cables to make sure The cables does not sag down to the roof. ตรวจสอบสภาพของสายทั้งหมดเพื่อให้แน่ใจว่า สายไม่หย่อนลงไปที่หลังคา	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
6	Inspect the tightness of the wire terminals. ตรวจสอบความแน่นของขั้วสายไฟ			
6.1	-AC - Grid in Inverter	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
6.2	-Back - up in Inverter (Specific model Hybrid)	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
6.3	-Battery (Specific model Hybrid)	<input type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
6.4	-AC Breaker	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
6.5	-DC Breaker	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
6.6	-Fuse Holder	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
6.7	-Surge Protection	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
6.8	- Smarter Meter & CT (Current Transformer)	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
7	Check whether the SISO Switch is defective ตรวจสอบ SISO Switch ว่าชำรุดหรือไม่	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
8	Inspect for malfunctions of the inverter and other related electrical equipment. ตรวจสอบความผิดปกติของอินเวอร์เตอร์และอุปกรณ์ไฟฟ้าอื่นๆ ที่เกี่ยวข้อง	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
9	Inspect heat of the solar panel whether there is an abnormal heat point or not (checked by using a thermal camera) การตรวจสอบความร้อนของแผงโซลาร์เซลล์ว่ามีจุดความร้อนผิดปกติหรือไม่ (ตรวจสอบโดยใช้กล้องถ่ายภาพความร้อน)	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	

Comment :

Inspection By : _____

(Bunharn Libnoy)
Project Engineer

Date : ____ / ____ / ____