

SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System



Customer Name : <u>Dainius</u>	Maintenance : <u>MA</u>	Date : <u>19 November 2024</u>
Solar Panel		Inverter
Brand : <u>Canon</u>	Model : <u>CS480TC</u>	Capacity : <u>9</u> Kwp.
Install : <u>14</u> Panels	Brand : <u>Solips</u>	Model : <u>SB-GR1P5K</u>
		S/N : <u>1802090224140607</u>

Before Preventive Maintenance Solar System									
Solar Panels	Operating Voltage / Current					Time	Inspection		Remark
String 1	<u>7</u> Panels	Voc <u>263.8</u>	Vdc	Vmp <u>215.8</u>	Vdc	Isc <u>10.74</u> A.	<u>14:00</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass
String 2	<u>7</u> Panels	Voc <u>265.6</u>	Vdc	Vmp <u>221.2</u>	Vdc	Isc <u>10.79</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>7</u> Panels	Voc <u>263.4</u>	Vdc	Vmp <u>227.3</u>	Vdc	Isc <u>10.05</u> A.	<u>15:00</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass
String 2	<u>7</u> Panels	Voc <u>270.2</u>	Vdc	Vmp <u>230.3</u>	Vdc	Isc <u>9.96</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			AC Line Voltage
	Phase L1 to Grd : <u>233.7</u> Vac	Phase L1 to Grd : <u>234.6</u> Vac	Phase L1 to Grd : <u>233.9</u> Vac	
	Phase L2 to Grd : _____ Vac	Phase L2 to Grd : _____ Vac	Phase L2 to Grd : _____ Vac	
	Phase L3 to Grd : _____ Vac	Phase L3 to Grd : _____ Vac	Phase L3 to Grd : _____ Vac	
	AC Line Current			AC Line Current
	Phase L1 to Grd : <u>12.98</u> A	Phase L1 to Grd : <u>19.1</u> A	Phase L1 to Grd : <u>17.62</u> A	
	Phase L2 to Grd : _____ A	Phase L2 to Grd : _____ A	Phase L2 to Grd : _____ A	
Phase L3 to Grd : _____ A	Phase L3 to Grd : _____ A	Phase L3 to Grd : _____ 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	51.3 C	Inside : 52.8 C	Outside : 50.8 C	Heatsync : 55.2 C		
AC Cabinet	37.6 C	MCB Breaker : 40 A.	RCCB Breaker : 40 A.	AC SPD : 1 Phase		
		43.0 C	49.8 C	42.0 C		
		AC Cable : 10 Sq.m.	Smart Meter : 39.1 C	CT Ratio : 150 A.		
		AC Terminal : 41.0 C	1 Phase	Meter Ratio : 30 A.		
		String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector
DC Cabinet 1	42.2 C	String 1	47.9 C	68.9 C	46.8 C	41.2 C
			A.	Vdc A.	Vdc A.	
		String 2	51.4 C	50.1 C	44.4 C	42.8 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	40.1 C	AC Cable : 16 Sq.m.	Main Breaker : 50 A.	MCCB Feed : A.		
		Wireway : 38.3 C	MDB / LC : 42.2 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 , แผ่นซีก้าป้องกันน้ำ)	<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 : ____ / ____ / ____