

# SMARTER ENERGY SOLUTION

## Preventive Maintenance Solar System



Customer Name : <b>David Dobson</b>		Maintenance : <b>MA</b>	Date : <b>12 December 2024</b>
Solar Panel		Inverter	
Brand	Model	Capacity	Install
		Kwp.	Panels
Brand	Model	S/N	

Before Preventive Maintenance Solar System										
Solar Panels	Operating Voltage / Current				Time	Inspection		Remark		
String 1	Panels	Voc <u>514.6</u>	Vdc	Vmp <u>435.7</u>	Vdc	Isc <u>6.21</u>	A.	<u>9 : 49</u>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Not Pass	
String 2	Panels	Voc <u>516.9</u>	Vdc	Vmp <u>433.6</u>	Vdc	Isc <u>6.17</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	Panels	Voc <u>512.7</u>	Vdc	Vmp <u>429.2</u>	Vdc	Isc <u>8.09</u>	A.	<u>11 : 00</u>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Not Pass	
String 2	Panels	Voc <u>520.3</u>	Vdc	Vmp <u>423.2</u>	Vdc	Isc <u>2.98</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		AC Line Voltage	
	Phase L1 to Grd :	<u>231.8</u> Vac	Phase L1 to Grd :	<u>232.5</u> Vac
	Phase L2 to Grd :	<u>231.7</u> Vac	Phase L2 to Grd :	<u>236.7</u> Vac
	Phase L3 to Grd :	<u>230.7</u> Vac	Phase L3 to Grd :	<u>231.0</u> Vac
	Phase L1 to Grd :	<u>232.4</u> Vac	Phase L1 to Grd :	<u>229.4</u> Vac
	Phase L2 to Grd :	<u>229.4</u> Vac	Phase L2 to Grd :	<u>229.1</u> Vac
	Phase L3 to Grd :	<u>229.1</u> Vac	Phase L3 to Grd :	<u>229.1</u> Vac
	AC Line Current		AC Line Current	
	Phase L1 to Grd :	<u>6.60</u> A	Phase L1 to Grd :	<u>7.70</u> A
Phase L2 to Grd :	<u>6.00</u> A	Phase L2 to Grd :	<u>7.70</u> A	
Phase L3 to Grd :	<u>2.70</u> A	Phase L3 to Grd :	<u>7.70</u> A	
Phase L1 to Grd :	<u>6.72</u> A	Phase L1 to Grd :	<u>6.72</u> A	
Phase L2 to Grd :	<u>6.78</u> A	Phase L2 to Grd :	<u>6.78</u> A	
Phase L3 to Grd :	<u>6.98</u> A	Phase L3 to Grd :	<u>6.98</u> A	

Comment : \_\_\_\_\_

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# 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	38.6 C	Inside : 42.8 C	Outside : 39.8 C	Heatsync : 44.4 C		
AC Cabinet	37.8 C	MCB Breaker : 40 A. 38.1 C	RCCB Breaker : _____ A. _____ C	AC SPD : _____ Phase 37.6 C		
		AC Cable : 6 Sq.m. 38.1 C	Smart Meter : _____ C	CT Ratio : 120 VA. Phase Meter Ratio : 30 A.		
		AC Terminal : _____ C				
		String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector
DC Cabinet 1	39.4 C	String 1	37.6 C	37.3 C	38.0 C	38.0 C
		String 2	37.5 C	37.2 C	37.6 C	38.2 C
		String 3	_____ C	_____ C	_____ C	_____ C
		String 4	_____ C	_____ C	_____ C	_____ C
EE Room	_____ C	AC Cable : _____ Sq.m.	Main Breaker : _____ A.	MCCB Feed : _____ A.		
		Wireway : _____ C	MDB / LC : _____ 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 : \_\_\_\_ / \_\_\_\_ / \_\_\_\_