

# SMARTER ENERGY SOLUTION

## Preventive Maintenance Solar System



Customer Name : <b>Kiri V. b - Jurgen</b>			Maintenance : <b>MA</b>	Date : <b>9 November 2024</b>		
Solar Panel			Inverter			
Brand	Model	Capacity	Install	Brand	Model	S/N
<b>Eastlux</b>	<b>EL 450M7-60H</b>	<b>10 Kwp.</b>	<b>22 Panels</b>	<b>Solis</b>	<b>S5-GR3P-10kW</b>	<b>1809060224220001</b>

Before Preventive Maintenance Solar System									
Solar Panels	Operating Voltage / Current					Time	Inspection		Remark
String 1	<b>11</b> Panels	Voc <b>408.6</b>	Vdc	Vmp <b>397.9</b>	Vdc	Isc <b>9.14</b>	A.	<b>10:19</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Not Pass
String 2	<b>11</b> Panels	Voc <b>408.0</b>	Vdc	Vmp <b>396.9</b>	Vdc	Isc <b>9.18</b>	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	<b>11</b> Panels	Voc <b>418.9</b>	Vdc	Vmp <b>336.9</b>	Vdc	Isc <b>6.36</b>	A.	<b>11:00</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Not Pass
String 2	<b>11</b> Panels	Voc <b>418.2</b>	Vdc	Vmp <b>342.7</b>	Vdc	Isc <b>6.32</b>	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 :	<b>230.5</b> Vac	Phase L1 to Grd : <b>223.4</b> Vac	Phase L1 to Grd : <b>232.2</b> Vac
	Phase L2 to Grd :	<b>233.3</b> Vac	Phase L2 to Grd : <b>223.0</b> Vac	Phase L2 to Grd : <b>232.7</b> Vac
	Phase L3 to Grd :	<b>229.6</b> Vac	Phase L3 to Grd : <b>229.6</b> Vac	Phase L3 to Grd : <b>229.0</b> Vac
	AC Line Current			
	Phase L1 to Grd :	<b>3.90</b> A	Phase L1 to Grd : <b>3.8</b> A	Phase L1 to Grd : <b>4.46</b> A
	Phase L2 to Grd :	<b>2.70</b> A	Phase L2 to Grd : <b>3.8</b> A	Phase L2 to Grd : <b>4.43</b> A
Phase L3 to Grd :	<b>4.80</b> A	Phase L3 to Grd : <b>4.0</b> A	Phase L3 to Grd : <b>4.43</b> A	

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

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# SMARTER ENERGY SOLUTION

## Electrical Room Inspection



Customer Name :	Date :
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Solar Panel				Inverter		
Brand	Model	Capacity Kwp.	Install Panels	Brand	Model	S/N

Device	Ambient Temperature	Temperature				Remark		
		Inside :	Outside :	Heatsync :				
Inverter	41.9 C	Inside : 43.7 C	Outside : 42.2 C	Heatsync : 44.5 C				
AC Cabinet	38.5 C	MCB Breaker : 40 A.	RCCB Breaker : _____ A.	AC SPD : 3 Phase				
		AC Cable : 6 Sq.m.	Smart Meter : 38.9 C	CT Ratio : 150/9 A.				
		AC Terminal : 38.2 C		3 Phase Meter Ratio : 30 A.				
DC Cabinet 1	38.9 C	String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector		
		String 1	38.2 C	38.2 C	37.9 C	38.6 C		
		String 2	38.1 C	38.1 C	37.7 C	38.1 C		
String 3								
EE Room	38.3 C	AC Cable : 25 Sq.m.	Main Breaker : 80 A.	MCCB Feed : _____ A.				
		Wireway : 37.7 C	MDB / LC : 38.7 C					

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

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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 ) ทำความสะอาดแผงโซลาร์ เซลล์ ( ใช้น้ำสะอาด )	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
2	Check to see if the solar panel's condition ตรวจสอบการแตกร้าวของแผงโซลาร์ เซลล์	<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 , สิริโครน PU , แผ่นซีก้าป้องกันน้ำ )	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
4	Inspect the mounting parts of the solar cell. ตรวจสอบสภาพโครงสร้างทั้งหมด เพื่อดูว่า 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. ตรวจสอบความผิดปกติของอินเวอร์เตอร์และอุปกรณ์ไฟฟ้าอื่น ๆ 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 : \_\_\_\_ / \_\_\_\_ / \_\_\_\_