

SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System



Customer Name : Stephanie's house Maintenance : MA Date : 13 November 2024

Solar Panel				Inverter		
Brand	Model	Capacity	Install	Brand	Model	S/N
<u>Exiom</u>	<u>EX 480TC</u>	<u>10 Kwp.</u>	<u>24 Panels</u>	<u>Solis</u>	<u>85-GR3P10K</u>	<u>1809060238040043</u>

Before Preventive Maintenance Solar System

Solar Panels	Operating Voltage / Current					Time	Inspection		Remark
String 1	<u>12</u> Panels	Voc <u>461.1</u> Vdc	Vmp <u>392.4</u> Vdc	Isc <u>3.31</u> A.		<u>13:00</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 2	<u>12</u> Panels	Voc <u>459.7</u> Vdc	Vmp <u>392.9</u> Vdc	Isc <u>3.29</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>12</u> Panels	Voc <u>470.4</u> Vdc	Vmp <u>401.2</u> Vdc	Isc <u>2.69</u> A.		<u>14:00</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 2	<u>12</u> Panels	Voc <u>469.7</u> Vdc	Vmp <u>408.3</u> Vdc	Isc <u>2.82</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>229.2</u> Vac	Phase L1 to Grd : <u>229.2</u> Vac	Phase L1 to Grd : <u>228.3</u> Vac
	Phase L2 to Grd :	<u>229.8</u> Vac	Phase L2 to Grd : <u>232.8</u> Vac	Phase L2 to Grd : <u>230.3</u> Vac
	Phase L3 to Grd :	<u>232.4</u> Vac	Phase L3 to Grd : <u>229.8</u> Vac	Phase L3 to Grd : <u>231.8</u> Vac
	AC Line Current			
	Phase L1 to Grd :	<u>8.40</u> A	Phase L1 to Grd : <u>2.20</u> A	Phase L1 to Grd : <u>3.07</u> A
	Phase L2 to Grd :	<u>1.80</u> A	Phase L2 to Grd : <u>2.20</u> A	Phase L2 to Grd : <u>0.76</u> A
	Phase L3 to Grd :	<u>2.40</u> A	Phase L3 to Grd : <u>2.20</u> A	Phase L3 to Grd : <u>0.81</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	42.9 C	Inside : 49.7 C	Outside : 48.3 C	Heatsync : 50.2 C			
AC Cabinet	42.7 C	MCB Breaker : 40 A	RCCB Breaker : 40 A	AC SPD : 3 Phase			
		43.2 C	42.9 C	42.7 C			
		AC Cable : 10 Sq.m.	Smart Meter : 43.3 C	CT Ratio : 190 9 A.			
		AC Terminal : 42.2 C	3 Phase Meter Ratio : 30 A.				
		String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector	
DC Cabinet 1	44.4 C	String 1	44.2 C	42.9 C	42.8 C	41.6 C	
			A.	Vdc A.	Vdc A.		
		String 2	43.1 C	42.6 C	40.6 C	41.1 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	43.7 C	AC Cable : 10 25 Sq.m.	Main Breaker : 100 A.	MCCB Feed : _____ A.			
		Wireway : 42.2 C	MDB / LC : 43.7 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 : ____/____/____