

SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System



Customer Name : AE Phuket Maintenance : MA Date : 22 November 2024

Solar Panel				Inverter			
Brand	Model	Capacity	Install	Brand	Model	S/N	
<u>Exxon</u>	<u>GX 480 TC</u>	<u>10</u> Kwp.	<u>26</u> Panels	<u>Solis</u>	<u>89-GP3P102</u>	<u>1809060232180013</u>	

Before Preventive Maintenance Solar System

Solar Panels	Operating Voltage / Current				Time	Inspection		Remark
String 1	<u>13</u> Panels	Voc <u>500.6</u> Vdc	Vmp <u>418.7</u> Vdc	Isc <u>7.60</u> A.	<u>10 : 15</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 2	<u>13</u> Panels	Voc <u>497.7</u> Vdc	Vmp <u>414.9</u> Vdc	Isc <u>7.62</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>13</u> Panels	Voc <u>508.0</u> Vdc	Vmp <u>432.4</u> Vdc	Isc <u>7.86</u> A.	<u>11 : 19</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	<u>21/11/2024</u>
String 2	<u>13</u> Panels	Voc <u>498.0</u> Vdc	Vmp <u>418.1</u> Vdc	Isc <u>7.83</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

Device	Readings from Smarter Meter	Readings from Inverter Display	Field Measured Readings	Remark
Inverter	AC Line Voltage		AC Line Voltage	
	Phase L1 to Grd : <u>230.8</u> Vac	Phase L1 to Grd : <u>230.9</u> Vac	Phase L1 to Grd : <u>230.6</u> Vac	
	Phase L2 to Grd : <u>233.1</u> Vac	Phase L2 to Grd : <u>238.4</u> Vac	Phase L2 to Grd : <u>232.8</u> Vac	
	Phase L3 to Grd : <u>234.9</u> Vac	Phase L3 to Grd : <u>233.1</u> Vac	Phase L3 to Grd : <u>234.6</u> Vac	
	AC Line Current		AC Line Current	
	Phase L1 to Grd : <u>8.60</u> A	Phase L1 to Grd : <u>7.9</u> A	Phase L1 to Grd : <u>8.90</u> A	
	Phase L2 to Grd : <u>2.00</u> A	Phase L2 to Grd : <u>7.8</u> A	Phase L2 to Grd : <u>8.34</u> A	
	Phase L3 to Grd : <u>5.40</u> A	Phase L3 to Grd : <u>7.9</u> A	Phase L3 to Grd : <u>7.92</u> A	

Comment : Find 3012 from 52 073

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	49.8 C	Inside : 90.4 C	Outside : 46.0 C	Heatsync : 91.3 C		
AC Cabinet	38.0 C	MCB Breaker : 40 A.	RCCB Breaker : _____ A.	AC SPD : 3 Phase		
		36.6 C	_____ C	39.9 C		
		AC Cable : 6 Sq.m.	Smart Meter : 97.2 C	CT Ratio : 150 5 A.		
		AC Terminal : 37.2 C	3 Phase Meter Ratio : 30 A.			
		String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector
DC Cabinet 1	36.0 C	String 1	37.9 C	38.2 C	37.0 C	36.4 C
			_____ A.	_____ Vdc A.	_____ Vdc A.	
		String 2	38.2 C	37.9 C	36.9 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	37.0 C	AC Cable : 16 Sq.m.	Main Breaker : 50 A.	MCCB Feed : _____ A.		
		32.9 C	MDB / LC : 38.1 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 : ____ / ____ / ____