

SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System



Customer Name : <u>Seamwang Motorcycle</u>			Maintenance : <u>MA</u>		Date : <u>12 November 2024</u>	
Solar Panel				Inverter		
Brand	Model	Capacity	Install	Brand	Model	S/N
<u>Exxon</u>	<u>Gx480Tc</u>	<u>10</u> Kwp.	<u>26</u> Panels	<u>Solis</u>	<u>SS-AR3P10K</u>	<u>1805060232180017</u>

Before Preventive Maintenance Solar System							
Solar Panels	Operating Voltage / Current			Time	Inspection		Remark
String 1	<u>13</u> Panels	Voc <u>904.2</u> Vdc	Vmp <u>433.9</u> Vdc	Isc <u>9.46</u> A.	<u>10 : 49</u>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Not Pass	
String 2	<u>13</u> Panels	Voc <u>908.3</u> Vdc	Vmp <u>433.2</u> Vdc	Isc <u>9.34</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>916.7</u> Vdc	Vmp <u>439.3</u> Vdc	Isc <u>4.71</u> A.	<u>11 : 30</u>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Not Pass	
String 2	<u>13</u> Panels	Voc <u>914.3</u> Vdc	Vmp <u>443.7</u> Vdc	Isc <u>4.67</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>228.8</u> Vac	Phase L1 to Grd : <u>225.1</u> Vac	Phase L1 to Grd : <u>227.9</u> Vac	
	Phase L2 to Grd : <u>234.7</u> Vac	Phase L2 to Grd : <u>229.4</u> Vac	Phase L2 to Grd : <u>234.9</u> Vac	
	Phase L3 to Grd : <u>228.3</u> Vac	Phase L3 to Grd : <u>222.1</u> Vac	Phase L3 to Grd : <u>227.9</u> Vac	
	AC Line Current		AC Line Current	
	Phase L1 to Grd : <u>16.20</u> A	Phase L1 to Grd : <u>9.7</u> A	Phase L1 to Grd : <u>0.67</u> A	
	Phase L2 to Grd : <u>3660</u> A	Phase L2 to Grd : <u>9.7</u> A	Phase L2 to Grd : <u>0.69</u> A	
Phase L3 to Grd : <u>13.40</u> A	Phase L3 to Grd : <u>9.7</u> A	Phase L3 to Grd : <u>0.71</u> A		

Comment : _____

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Electrical Room Inspection



Customer Name : _____ Date : _____

Solar Panel				Inverter		
Brand	Model	Capacity Kwp.	Install Panels	Brand	Model	S/N

Device	Ambient Temperature	Temperature					Remark
Inverter	37.2 °C	Inside : 42.6 °C	Outside : 39.3 °C	Heatsync : 43.0 °C			
AC Cabinet	34.2 °C	MCB Breaker : 80 A.	RCCB Breaker : _____ A.	AC SPD : 3 Phase			
		AC Cable : 10 Sq.m.	Smart Meter : 38.7 °C	CT Ratio : 120/5 A.			
		AC Terminal : 34.7 °C	3 Phase	Meter Ratio : 30 A.			
DC Cabinet 1	34.7 °C	String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector	
		String 1	34.6 °C	34.7 °C	34.2 °C	34.6 °C	
		String 2	34.1 °C	34.9 °C	34.8 °C	34.9 °C	
		String 3	_____ °C	_____ °C	_____ °C	_____ °C	
		String 4	_____ °C	_____ °C	_____ °C	_____ °C	
EE Room	34.9 °C	AC Cable : 25 Sq.m.	Main Breaker : 100 A.	MCCB Feed : _____ A.			
		Wireway : 38.4 °C	MDB / LC : 36.7 °C	_____ °C			

Comment : _____

Inspection By : _____

(Bunharn Libnoy)
Project Engineer

Date : ____/____/____

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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 : ____ / ____ / ____