

SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System



Customer Name : Noo Restaurant Maintenance : MA Date : 11 November 2024

Solar Panel				Inverter		
Brand	Model	Capacity	Install	Brand	Model	S/N
<u>Exiom</u>	<u>G7480 HDT</u>	<u>10</u> Kwp.	<u>26</u> Panels	<u>Solis</u>	<u>S5-GR3P10K</u>	<u>1807060224220017</u>

Before Preventive Maintenance Solar System							
Solar Panels	Operating Voltage / Current				Time	Inspection	Remark
String 1	<u>13</u> Panels	Voc <u>611.9</u> Vdc	Vmp <u>465.2</u> Vdc	Isc <u>9.74</u> A.	<u>10:15</u>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Not Pass	
String 2	<u>13</u> Panels	Voc <u>611.0</u> Vdc	Vmp <u>477.9</u> Vdc	Isc <u>9.92</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>631.0</u> Vdc	Vmp <u>514.6</u> Vdc	Isc <u>10.04</u> A.	<u>11:00</u>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Not Pass	
String 2	<u>13</u> Panels	Voc <u>620.0</u> Vdc	Vmp <u>503.2</u> Vdc	Isc <u>9.81</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>227.6</u> Vac	Phase L1 to Grd : <u>227.4</u> Vac	Phase L1 to Grd : <u>225.3</u> Vac
	Phase L2 to Grd :	<u>229.3</u> Vac	Phase L2 to Grd : <u>233.9</u> Vac	Phase L2 to Grd : <u>228.7</u> Vac
	Phase L3 to Grd :	<u>224.9</u> Vac	Phase L3 to Grd : <u>221.3</u> Vac	Phase L3 to Grd : <u>225.1</u> Vac
	AC Line Current			
	Phase L1 to Grd :	<u>6.90</u> A	Phase L1 to Grd : <u>11.7</u> A	Phase L1 to Grd : <u>11.96</u> A
	Phase L2 to Grd :	<u>11.70</u> A	Phase L2 to Grd : <u>11.3</u> A	Phase L2 to Grd : <u>11.87</u> A
	Phase L3 to Grd :	<u>8.70</u> A	Phase L3 to Grd : <u>11.3</u> A	Phase L3 to Grd : <u>12.14</u> A

Comment : 9.9kw 3012 52024 52073

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	43.4 C	Inside : 90.8 C	Outside : 44.6 C	Heatsync : 92.2 C			
AC Cabinet	34.7 C	MCB Breaker : 40 A.	RCCB Breaker : _____ A.	AC SPD : 3 Phase			
		37.1 C	39.7 C	36.4 C			
		AC Cable : 6 Sq.m.	Smart Meter : 3 Phase	CT Ratio : 150/5 A.			
		AC Terminal : 34.7 C	3 Phase	Meter Ratio : 30 A.			
DC Cabinet 1	34.2 C	String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector	
		String 1	39.2 C	36.4 C	34.2 C	34.3 C	
			A.	Vdc A.	Vdc A.		
		String 2	39.0 C	36.3 C	34.2 C	39.1 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	34.8 C	AC Cable : 16 Sq.m.	Main Breaker : 80 A.	MCCB Feed : _____ A.			
		Wireway : 34.6 C	MDB / LC : 39.1 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 : ____ / ____ / ____