

SMARTER ENERGY SOLUTION

Preventive Maintenance Solar System



Customer Name : Andamaya A1 Maintenance : MA Date : 17 October 2024

Solar Panel				Inverter		
Brand	Model	Capacity	Install	Brand	Model	S/N
<u>EXIM</u>	<u>EX480TC</u>	<u>20</u> Kwp.	<u>92</u> Panels	<u>Solis</u>	<u>SG-GR3P20K</u>	<u>18090B0234040201</u>

Before Preventive Maintenance Solar System

Solar Panels	Operating Voltage / Current				Time	Inspection		Remark
String 1	<u>13</u> Panels	Voc <u>500.2</u> Vdc	Vmp <u>437.3</u> Vdc	Isc <u>1.95</u> A.	<u>13 : 45</u>	☒ Pass	☐ Not Pass	
String 2	<u>13</u> Panels	Voc <u>500.2</u> Vdc	Vmp <u>437.3</u> Vdc	Isc <u>1.95</u> A.	:	☒ Pass	☐ Not Pass	
String 3	<u>13</u> Panels	Voc <u>502.2</u> Vdc	Vmp <u>438.3</u> Vdc	Isc <u>2.71</u> A.	:	☒ Pass	☐ Not Pass	
String 4	<u>13</u> Panels	Voc <u>514.1</u> Vdc	Vmp <u>434.4</u> Vdc	Isc <u>2.74</u> A.	:	☒ Pass	☐ Not Pass	
String 5	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 6	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 7	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 8	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 9	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 10	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 11	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 12	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	

After Preventive Maintenance Solar System

Solar Panels	Operating Voltage / Current				Time	Inspection		Remark
String 1	<u>13</u> Panels	Voc <u>497.7</u> Vdc	Vmp <u>48.7</u> Vdc	Isc <u>1.89</u> A.	<u>14 : 30</u>	☒ Pass	☐ Not Pass	<u>21200877</u>
String 2	<u>13</u> Panels	Voc <u>498.0</u> Vdc	Vmp <u>499.8</u> Vdc	Isc <u>1.91</u> A.	:	☒ Pass	☐ Not Pass	
String 3	<u>13</u> Panels	Voc <u>501.1</u> Vdc	Vmp <u>497.1</u> Vdc	Isc <u>2.37</u> A.	:	☒ Pass	☐ Not Pass	
String 4	<u>13</u> Panels	Voc <u>508.7</u> Vdc	Vmp <u>497.9</u> Vdc	Isc <u>2.36</u> A.	:	☒ Pass	☐ Not Pass	
String 5	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 6	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 7	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 8	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 9	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 10	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 11	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ Not Pass	
String 12	_____ Panels	Voc _____ Vdc	Vmp _____ Vdc	Isc _____ A.	:	☐ Pass	☐ 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>233.6</u> Vac	Phase L1 to Grd : <u>233.8</u> Vac	Phase L1 to Grd : <u>236.9</u> Vac	
	Phase L2 to Grd : <u>234.5</u> Vac	Phase L2 to Grd : <u>235.7</u> Vac	Phase L2 to Grd : <u>234.9</u> Vac	
	Phase L3 to Grd : <u>233.3</u> Vac	Phase L3 to Grd : <u>234.6</u> Vac	Phase L3 to Grd : <u>236.0</u> Vac	
	AC Line Current		AC Line Current	
	Phase L1 to Grd : <u>2.74</u> A	Phase L1 to Grd : <u>2.5</u> A	Phase L1 to Grd : <u>3.47</u> A	
	Phase L2 to Grd : <u>3.56</u> A	Phase L2 to Grd : <u>3.7</u> A	Phase L2 to Grd : <u>3.95</u> A	
	Phase L3 to Grd : <u>2.88</u> A	Phase L3 to Grd : <u>3.9</u> A	Phase L3 to Grd : <u>3.95</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	39.4 °C	Inside : 42.2 °C	Outside : 40.0 °C	Heatsync : 43.7 °C		
AC Cabinet	39.6 °C	MCB Breaker : 40 A.	RCCB Breaker : _____ A.	AC SPD : 3 Phase		
		AC Cable : 10 Sq.m.	Smart Meter : 36.7 °C	CT Ratio : 150 / 5 A.		
		AC Terminal : 35.0 °C	3 Phase Meter Ratio : 30 A.			
		String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector
DC Cabinet 1	39.3 °C	String 1	39.7 °C	39.4 °C	39.6 °C	39.1 °C
			A.	Vdc A.	Vdc A.	
		String 2	39.9 °C	39.9 °C	39.4 °C	39.2 °C
			A.	Vdc A.	Vdc A.	
		String 3	39.4 °C	36.4 °C	39.6 °C	39.4 °C
			A.	Vdc A.	Vdc A.	
		String 4	39.8 °C	39.8 °C	39.8 °C	39.2 °C
			A.	Vdc A.	Vdc A.	
EE Room	37.4 °C	AC Cable : 29 Sq.m.	Main Breaker : 63 A.	MCCB Feed : _____ A.		
		Wireway : 39.2 °C	MDB / LC : 36.1 °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 (ใช้ผ้าสะอาด)	☒ Pass	☐ Not Pass	
2	Check to see if the solar panel's condition ตรวจสอบการแตกร้าวของแผงโซลาร์เซลล์	☒ Pass	☐ 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 , สีโพลียูรีเทน PU , แผ่นซีก้าป้องกันน้ำ)	☒ Pass	☐ Not Pass	
4	Inspect the mounting parts of the solar cell. ตรวจสอบสภาพโครงสร้างทั้งหมด เพื่อดูว่า PV, Mounting และอุปกรณ์ประกอบอื่นๆ ไม่หลวม	☒ Pass	☐ Not Pass	
5	Inspect the condition of all cables to make sure The cables does not sag down to the roof. ตรวจสอบสภาพของสายทั้งหมดเพื่อให้แน่ใจว่า สายไม่หย่อนลงไปที่หลังคา	☒ Pass	☐ Not Pass	
6	Inspect the tightness of the wire terminals. ตรวจสอบความแน่นของขั้วสายไฟ			
6.1	-AC - Grid in Inverter	☒ Pass	☐ Not Pass	
6.2	-Back - up in Inverter (Specific model Hybrid)	☐ Pass	☐ Not Pass	
6.3	-Battery (Specific model Hybrid)	☐ Pass	☐ Not Pass	
6.4	-AC Breaker	☒ Pass	☐ Not Pass	
6.5	-DC Breaker	☒ Pass	☐ Not Pass	
6.6	-Fuse Holder	☒ Pass	☐ Not Pass	
6.7	-Surge Protection	☒ Pass	☐ Not Pass	
6.8	- Smarter Meter & CT (Current Transformer)	☒ Pass	☐ Not Pass	
7	Check whether the SISO Switch is defective ตรวจสอบ SISO Switch ว่าชำรุดหรือไม่	☒ Pass	☐ Not Pass	
8	Inspect for malfunctions of the inverter and other related electrical equipment. ตรวจสอบความผิดปกติของอินเวอร์เตอร์และอุปกรณ์ไฟฟ้าอื่นๆ ที่เกี่ยวข้อง	☒ Pass	☐ 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)	☒ Pass	☐ Not Pass	

Comment : _____

Inspection By : _____
 (Bunharn Libnoy)
 Project Engineer
 Date : ____/____/____