

# SMARTER ENERGY SOLUTION

## Preventive Maintenance Solar System



Customer Name : The Fairway Villa 3 Maintenance : MA Date : 11 December 2024

Solar Panel				Inverter		
Brand	Model	Capacity	Install	Brand	Model	S/N
		Kwp.	Panels			
				<u>Solis</u>	<u>SE-GR3P10K</u>	<u>1809060236276036</u>

### Before Preventive Maintenance Solar System

Solar Panels	Operating Voltage / Current			Time	Inspection		Remark
String 1	Panels Voc <u>519.4</u> Vdc Vmp <u>423.2</u> Vdc Isc <u>9.93</u> A.			<u>12:00</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 2	Panels Voc <u>362.0</u> Vdc Vmp <u>307.6</u> Vdc Isc <u>10.48</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	Panels Voc <u>524.8</u> Vdc Vmp <u>424.8</u> Vdc Isc <u>10.12</u> A.			<u>13:00</u>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Not Pass	
String 2	Panels Voc <u>372.6</u> Vdc Vmp <u>309.4</u> Vdc Isc <u>10.78</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>237.2</u> Vac	Phase L1 to Grd : <u>234.2</u> Vac	Phase L1 to Grd : <u>236.2</u> Vac	
	Phase L2 to Grd : <u>237.2</u> Vac	Phase L2 to Grd : <u>232.7</u> Vac	Phase L2 to Grd : <u>228.7</u> Vac	
	Phase L3 to Grd : <u>229.2</u> Vac	Phase L3 to Grd : <u>240.1</u> Vac	Phase L3 to Grd : <u>236.7</u> Vac	
	AC Line Current			
	Phase L1 to Grd : <u>9.90</u> A	Phase L1 to Grd : <u>10.2</u> A	Phase L1 to Grd : <u>9.91</u> A	
Phase L2 to Grd : <u>6.00</u> A	Phase L2 to Grd : <u>10.3</u> A	Phase L2 to Grd : <u>9.91</u> A		
Phase L3 to Grd : <u>8.70</u> A	Phase L3 to Grd : <u>10.3</u> A	Phase L3 to Grd : <u>9.80</u> A		

Comment : \_\_\_\_\_

# SMARTER ENERGY SOLUTION

## 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	43.7 C	Inside : 54.3 C	Outside : 47.2 C	Heatsync : 56.2 C		
AC Cabinet	38.1 C	MCB Breaker : 40 A. 39.4 C	RCCB Breaker : 40 A. 38.1 C	AC SPD : 3 Phase 38.4 C		
		AC Cable : 10 Sq.m.	Smart Meter : 38.7 C	CT Ratio : 150 9 A.		
		AC Terminal : 38.5 C	3 Phase Meter Ratio : 30 A.			
		String No.	DC Fuse	DC Breaker	DC SPD	MC4 Connector
DC Cabinet 1	38.7 C	String 1	43.2 C	43.0 C	40.9 C	39.1 C
		String 2	44.4 C	43.0 C	38.6 C	39.7 C
		String 3	C	C	C	C
		String 4	C	C	C	C
EE Room	38.3 C	AC Cable : 16 Sq.m.	Main Breaker : 30 A.	MCCB Feed :   A.		
		Wireway : 37.2 C	MDB / LC : 38.4 C	C		

Comment : \_\_\_\_\_

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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 , 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 : \_\_\_\_\_

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Inspection By : \_\_\_\_\_  
 ( Bunharn Libnoy )  
 Project Engineer  
 Date : \_\_\_\_/\_\_\_\_/\_\_\_\_