



SYNERGYSUN

Energy for Futures.

Company profile

Switch on the sun

10 Years
Experience



SYNERGYSUN



“พลังงานของทุกคน”, ซินเนอร์ยีซันเชื่อในวิสัยทัศน์ของเราที่ว่า “ใครๆก็สามารถเข้าถึงพลังงานแสงอาทิตย์ได้” และระยะเวลา
มากกว่า 10 ปีที่ผ่านมา ผลงานการติดตั้งระบบโซลาร์เซลล์มากกว่า 130 MW ทั้งระบบโซลาร์เซลล์ติดตั้งบนพื้นดิน (Solar farm)
84 MW และติดตั้งบนหลังคา (Solar rooftop) กว่า 46 MW ทำให้เรายังคงยึดมั่นและจะทำให้ดีที่สุดต่อไป

พันธกิจของเราจึงต้องการ ถ่ายทอดความรู้ ประสบการณ์ ด้านเทคโนโลยีไฟฟ้าพลังงานรังสีอาทิตย์ ที่จะช่วยให้ลูกค้ามีค่าใช้จ่าย
พลังงานไฟฟ้าที่ลดลง อีกทั้งเป็นการช่วยลดระดับของคาร์บอนฟุตพริ้นท์ที่ส่งผลกระทบต่อปัญหาโลกร้อน

“SYNERGYSUN” เราจะยังคงรักษามาตรฐานเพื่อเป็นการสร้างสัมพันธ์ไมตรีในการดำเนินธุรกิจในระยะยาว มีความน่าเชื่อถือ
บริษัทฯ มุ่งเน้นการดำเนินงานอย่างเป็นระบบ ส่งมอบงานที่ดี มีคุณภาพ ตรงเวลา โดยให้ความสำคัญกับการพัฒนาประสิทธิภาพ
ในการทำงานและคุณภาพของงานให้ถูกต้องตรงตามหลักวิศวกรรม และได้มาตรฐานสากล อันเป็นปัจจัยหลักของการดำเนินงาน
พร้อมทั้งการให้บริการในระดับมืออาชีพ เพื่อให้ได้ระบบที่สามารถใช้งานได้ยาวนาน คู่แข่งกับการลงทุน

“Energy for All”, Vision

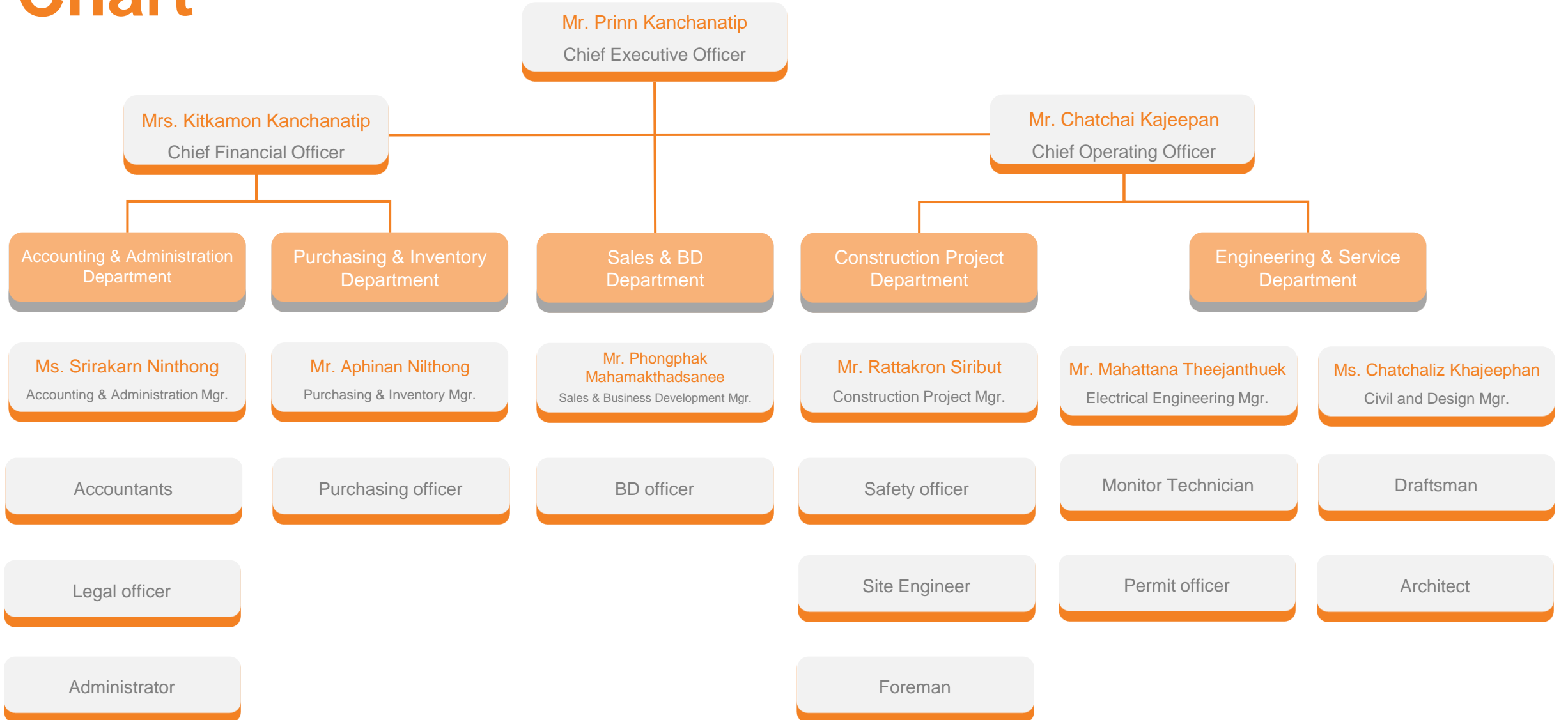
- To provide the best Solar energy installation services as a future energy for all.
- To make Solar energy accessible and affordable.
- We use technology to transform Solar energy in a form of Solar cell. With our 10 years experience, capacity of 130 MW have been installed, including 84 MW Solar farm and 46 MW Solar rooftop of solar cell system installation.
- We are committed to deliver the finest services of renewable energy to all.

Mission

To transfer knowledge and experience in solar energy technology that reduce customers' electricity costs. To produce a clean energy and reduce the level of carbon footprint that affects global warming.

We continue to uphold a high standard service to build and maintain long-term business relations with reliability. We focus on systematical operation to deliver high quality and punctuality services with emphasis on improving work efficiency and quality of work according to engineering principles to meet international standards which are the main factor of the service operation. As well as promote professional services which are sustainable and efficient.

Organization Chart



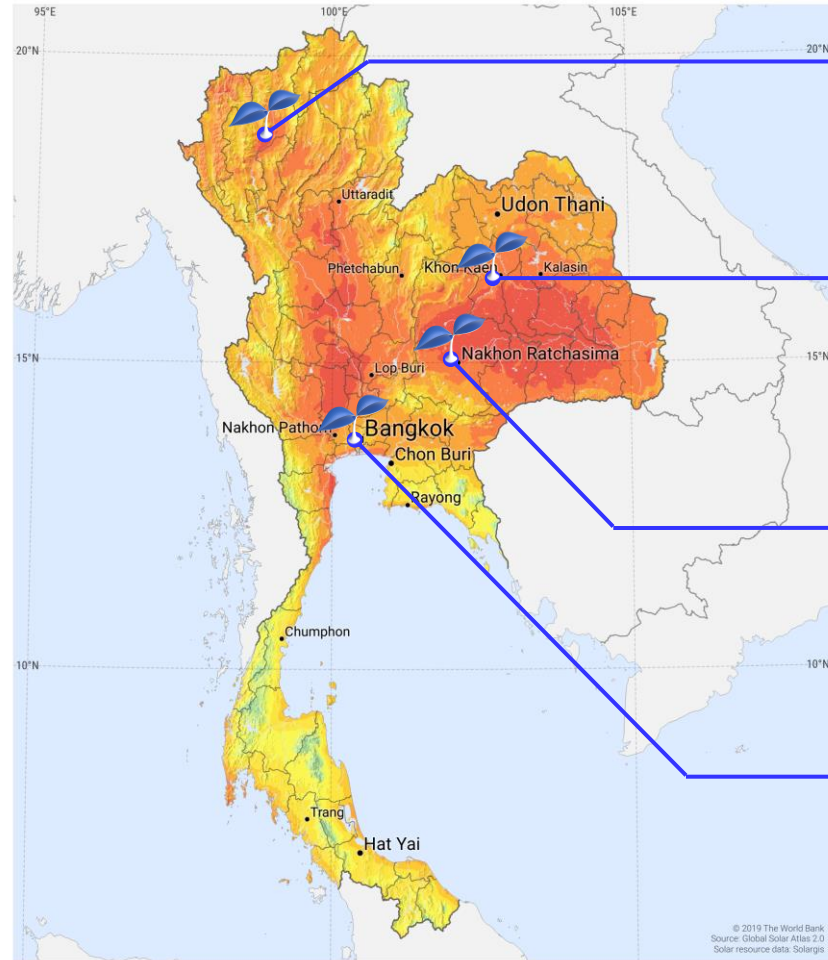
Synergysun's Service Location



SOLAR RESOURCE MAP

PHOTOVOLTAIC POWER POTENTIAL

THAILAND



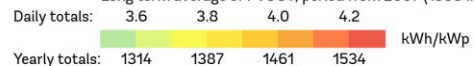
● Service office at Chiang Mai : North Zone

● Service and Training office at Khon Kaen : Northeast Zone

● Head office at Nakhon Ratchasima (KORAT)

● Service office at Bangkok : Center and Eastern Zone

Long term average of PVOUT, period from 2007 (1999 in the South) to 2018



This map is published by the World Bank Group, funded by ESMAP, and prepared by Solargis. For more information and terms of use, please visit <http://globalsolaratlas.info>.

Solar Rooftop Business



Client's investment



- Household :
3kWp to 25kWp
- Commercial, Office :
25 kWp to 100kWp
- Industrial :
100 kWp up
- Solar farm
2MW up
- EV Charger



SynergySun's Investment

- PPPA- Model
300 kWp to 5 MWp

Future plan

- Solar academy
- Smart micro grid
- Smart village



The Future of Business Development



	S1	S2	S3	M1	M2	M3	L1	L2	L3	XL1	XL2	XL3	
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ราคา Price	99,000	110,000	120,000	160,000	180,000	190,000	285,000	360,000	430,000	550,000	620,000	690,000	บาท Baht
โซลาร์เซลล์ Solar Capacity	2.70	3.15	3.60	4.50	5.40	6.30	9.90	12.60	15.30	19.80	22.50	25.20	kWp
เหมาะกับ ค่าไฟฟ้าเฉลี่ยต่อเดือน Recommend	2,500 - 4,000			4,500 - 8,000			10,000 - 17,000			20,000 - 30,000			บาท/เดือน (Baht/Month)
พื้นที่ติดตั้ง Area installation	15	17	20	25	30	32	55	70	80	110	120	130	ตร.ม. (Sq. m)
จำนวนแผง No. of Module	6	7	8	10	12	14	22	28	34	44	50	56	แผง (450Wp)
อินเวอร์เตอร์ Inverter size	3kW (1 Phase)	3kW (1 Phase)	3kW (1 Phase)	5kW (1 Phase)	5kW (1 Phase)	5kW (1 Phase)	10kW (3 Phase)	10kW (3 Phase)	12kW (3 Phase)	20kW (3 Phase)	20kW (3 Phase)	20kW (3 Phase)	kWac
ลดค่าไฟฟ้าเฉลี่ยต่อเดือน Avg. Saving	1,450	1,700	1,900	2,400	2,900	3,400	5,300	6,800	8,200	10,700	12,100	13,600	บาท/เดือน (Baht/Month)
ผลิตพลังงานไฟฟ้า Energy Product	320	370	430	540	640	750	1,180	1,500	1,830	2,370	2,700	3,000	หน่วย (kWh/month)
เทียบเท่ากับใช้เครื่องปรับอากาศ Equivalent to air conditioners	12,000	16,000	18,000	23,000	28,000	32,000	50,000	65,000	78,000	102,000	114,000	130,000	BTU
เทียบเท่าปลูกต้นไม้ Trees Absorbs CO ₂	19	22	25	32	38	45	70	90	110	140	160	180	
ระยะเวลาคืนทุน Return in	5 - 6			5 - 6			4 - 5			4 - 5			ปี (Year)
อุปกรณ์ และการรับประกัน Product and warranty													

หมายเหตุ : 1. ราคาที่ยังไม่รวมภาษีมูลค่าเพิ่ม 7% (These Prices Not Include VAT 7%)
 2. แพคเกจ "S" ยังไม่รวมค่าขออนุญาตติดตั้งแปลงอาคาร (Package "S" excluded cost of construction permit)

Contact: Info@synergysun.co.th
 Phongphak.ma@synergysun.co.th
 Tel: 04-400-0788
 Mobile number : 092-299-5055



Example for Household



Before install solar cell cost of electricity bill 4,000-5,000 Bath/Month



Solar Rooftop Installation 4.62 kWp

Solar Module

- PPM Polycrystalline 330Wp
- 14 Modules

Inverter

- Huawei SUN2000-5KTL

Investment

- 155,000 Bath

Saving

- Average 2,600 Bath/Month
- Total about 31,000 Bath/Year

Return in 5 Year

Example for Industrial



Solar Rooftop Installation 100.98 kWp

Solar Module

- PPM Polycrystalline 330Wp
- 306 Modules

Inverter

- GoodWe 60KN-MT

Investment

- 2,700,000 Bath

Saving

- Average 45,000 Bath/Month
- Total about 540,000 Bath/Year

Return in 5 Year

Before install solar cell cost of electricity bill 120,000-150,000 Bath/Month

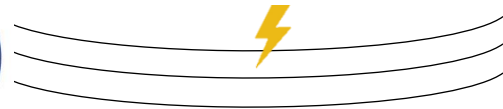
Private Power Purchase Agreement



The Private Power Purchase Agreement (PPPA) and Equipment Leasing are solutions those supplying whole PV Plant installation to the customer's building or area without any cost of construction, operation and development also selling the electricity which generated from PV system to customer with the discounted price regarding to PEA/MEA tariff rate.

Grid Provider

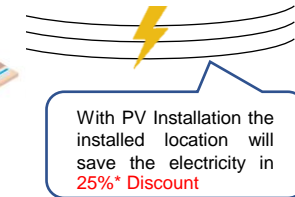
Client



Grid Provider

Client

SynergySun(SS)



1MW

Detail	Daytime	Night time	Unit
Provider	MEA/PEA	MEA/PEA	
Imported energy	167,308	115,221	kWh
Imported Rate	4.1839	2.6037	THB
Imported Billing	700,000	300,000	THB
Billing Month	<u>1,000,000</u>		THB

Detail	Daytime (OP)	Night time	Unit
Provider	MEA/PEA	SS	MEA/PEA
Imported energy	47,308	120,000	kWh
Imported Rate	4.1839	3.1379	THB
Imported Billing	197,932	376,551	THB
Billing Month	<u>874,483</u>		THB

Saving : 12%

- ✓ **Reduce electricity expense** by purchasing lower price (**20~30% Discount**) of electricity with **15-25 years** contract duration
- ✓ **System Transferred** to customer after end of contract duration with free of charge
- ✓ Customer has the right to **buy back** the system after 3 years of operation with the discounted price.
- ✓ Synergysun shall **operate and maintenance** the system all along the contract period.
- ✓ **Zero-Risk Taking**
- ✓ **Green Vision** with the Green Building & **Cool** your Building
- ✓ **Reducing** the Raindrop noise (Metal Sheet Rooftop)

Partners & Equipment Usage



JinkoSolar is one of the largest and most innovative solar module manufacturers in the world. JinkoSolar has built a vertically integrated solar product value chain, with an integrated annual capacity of 20 GW for mono wafers, 11 GW for solar cells, and 25 GW for solar modules, as of September 30, 2020.

Market Cap USD2.08B



LONGi leads the solar PV industry to new heights with product innovations and optimized power-cost ratio with breakthrough monocrystalline technologies. LONGi supplies more than 30GW of high-efficiency solar wafers and modules worldwide yearly, about a quarter of global market demand.

Market Cap CNY309.17B



Trina Solar is a leading global provider of solar solutions and has installed over 11 GW worldwide. Trina solar panels are designed and manufactured to the highest quality standards.

Market Cap CNY38.20B



United Renewable Energy ("URE", or "the Company", 3576 TT), is achieving successful strategic transformation over the past year after the merger in 2018. Over the past year, URE invested in solar business, URE focus on own-brand module and PV system after the merger. URE modules take up nearly 50% market share in Taiwan in 2018. And cell factory form Thailand

Market Cap: TWD 40.246B



Solar PPM Company Limited, the one-stop solar power system provider. With expertise in installing solar power systems in the industrial sector. Including a variety of unbeatable value-added services is one of Solar PV Module manufacturers in Thailand with a capacity of more than 150 MW. Authorized Capital 60,000,000 Thai Baht

Market Cap: THB 548.60M

SELECTED CRITERIA

- Good Financial
 - Positive Cashflow and EBITDA
 - Low D/E Ratio
- Proved Technology
- Market Competitiveness
- Profitability
 - High Retained Earning
- Customer Service and Warranty
 - Good Record on customer services
 - Good Warranty Condition

PV MODULE



Partners & Equipment Usage



Huawei, a leading global ICT and network energy solutions provider, serves more than one-third of the world's population. Its solutions, products and services are used in over 170 countries. Huawei provides new generation string inverters with smart management technology to create a fully digitalized Smart PV Solution – FusionSolar. FusionSolar is smart, safe and reliable whilst consistently delivering high yields and ROI, making Huawei the preferred choice for investors and developers worldwide. Huawei has been ranked as No.1 in the world for global inverter.

Market Cap \$ -

TOP
3



Sungrow is a global leading inverter solution supplier for renewables with over 49GW installed worldwide as of June 2017. Founded in 1997 by University Professor Renxian Cao.

Market Cap \$100.841B

TOP
3



GoodWe is a leading, strategically-thinking enterprise which focuses on research and manufacturing of PV inverters and energy storage solutions. With an accumulative installation of 16 GW installed in more than 80 countries

Market Cap \$19.272B

TOP
3



SMA is a leading global specialist in photovoltaic system technology for 35 years, SMA is setting the standards today for the decentralized, digital and renewable energy supply of tomorrow. More than 3,000 SMA employees in 20 countries have devoted themselves to this task.

Market Cap \$2.013B

SELECTED CRITERIA

- Good Financial
 - Positive Cashflow and EBITDA
 - Low D/E Ratio
- Proved Technology
- Market Competitiveness
- Profitability
 - High Retained Earning
- Customer Service and Warranty
 - Good Record on customer services
 - Good Warranty Condition

INVERTE



Partners & Equipment Usage



Clenergy is a high-tech company which specializes in solar power station solutions and ancillary products. Clenergy was founded in 2007. Headquartered in Xiamen, it has developed four domestic branches in Beijing, Shanghai, Hong Kong and Xi'an, with two factories in Xiamen and Tianjin. Clenergy set six main offices overseas and its cooperation network is worldwide.

Clenergy focuses on three major businesses-Smart Solar Solution, Clean Energy Service and Clean Energy Investment. Guided by the ideology of "Innovation, Quality and Service".

SHA:603628

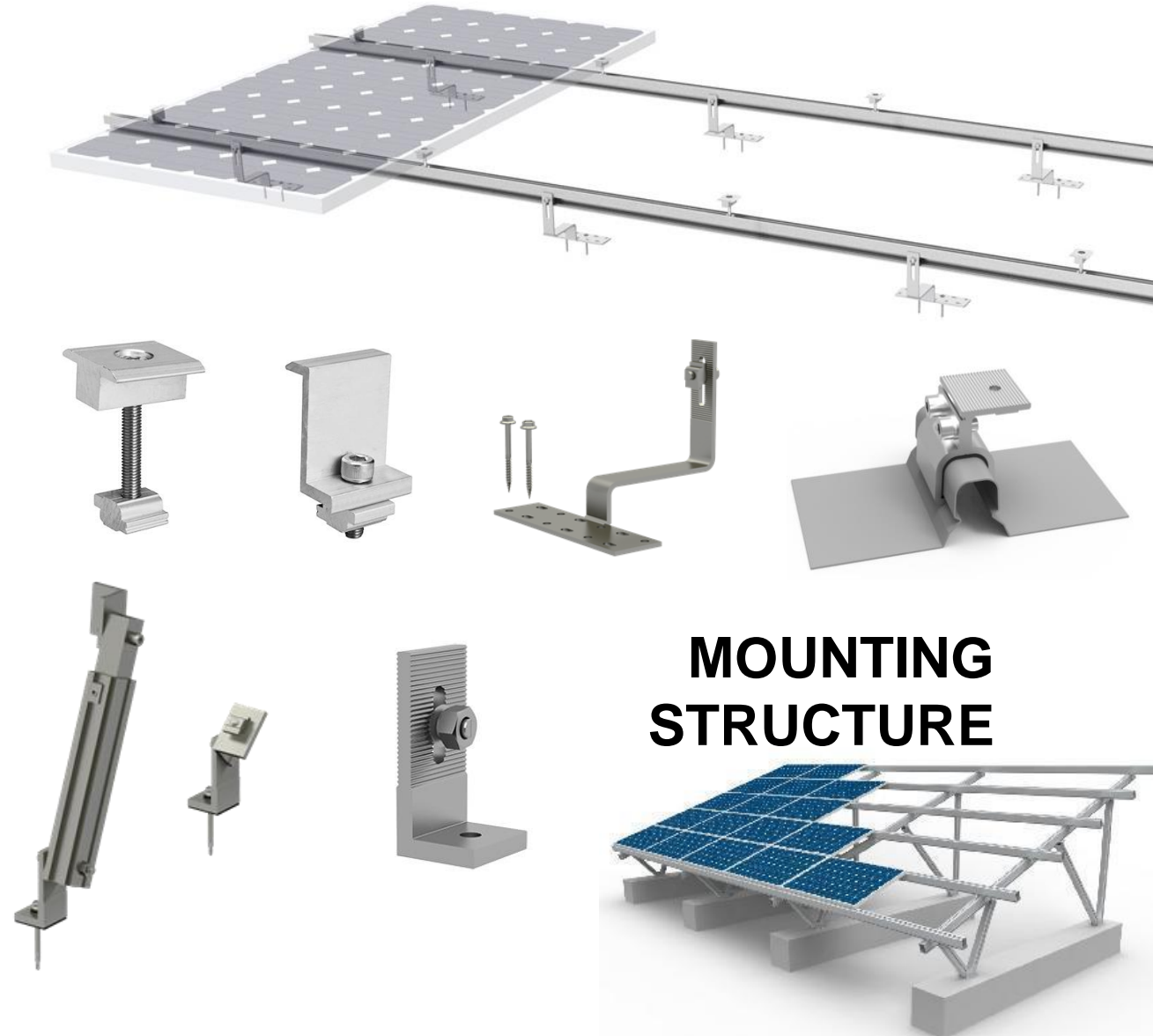
Clenergy Xiamen Technology Co Ltd

Market Cap \$2.23B

Material : Main AL6005-T5 , SUS 304

Wind load : More 30 m/s

Warranty : 12 Years and Product Lifetime 25 Years



**MOUNTING
STRUCTURE**

Partners & Equipment Usage



CUSTOMIZE TO CUSTOMER'S
REQUIREMENT

JJ-LAPP CABLE

Prysmian
Group

YAZAKI

**phelps
dodge**

LNK
American Standard

United MS
UNITED MODULAR SYSTEM CO.,LTD.

PRECISE

ASEFA
THE MEANING OF SERVICE MINDED

Schneider
Electric

ABB

STÄUBLI

TIC
GROUP THAILAND

QTC
QTC ENERGY P.C.L.

EKARAT

Kumwell
Grounding & Lightning Protection System

Panasonic

References



BMW
CHERDCHAI AUTOHAUS
100.98 kWp
7,000 Trees

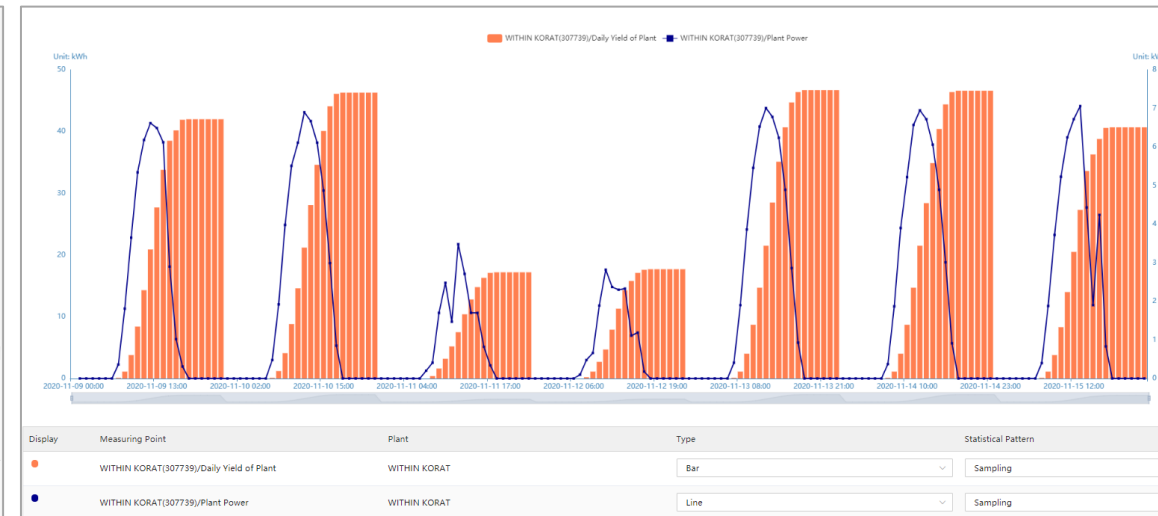
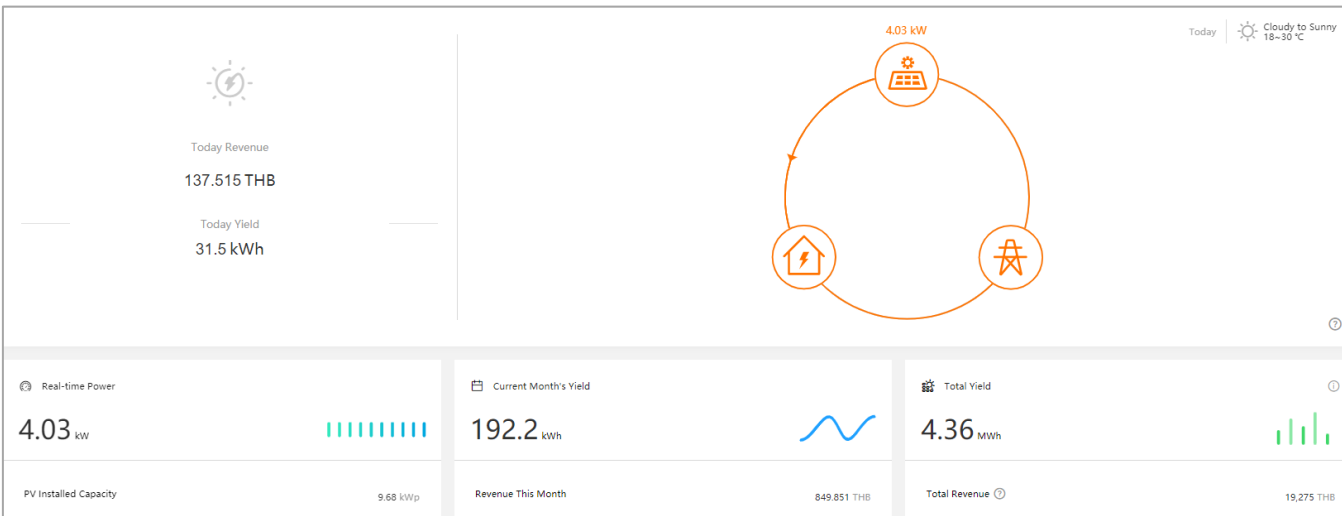


References



WITHIN KORAT 9.68 kWp

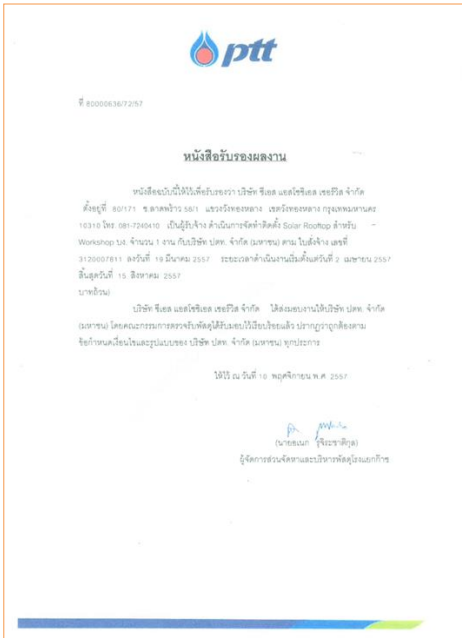
 70 Trees



References



PTT
186 kWp
13,000 Trees



TPBI
1,999 MWp
140,000 Trees




In Rayong

References



HEMARAJ INDUSTRIAL
ESTATE
370 kWp



 25,900 Trees
In Rayong



RUENGSIRI
GROUP
500 kWp

 35,000 Trees

In Maha Sarakham

References



Metro M.D.F.
1 MWp

METRO



70,000 Trees

In Kanchanaburi



Site7 R.I.L
Industrial Estate
140 kWp
9,800 Trees

In Rayong

References



Bangkok Aviation
Fuel Services
(BAFS)

138.38 kWp



9,660 Trees



In Samut Prakan

References

CP LAND
179.84kWp



12,530
Trees




In
KHON KAEN
NAKHON RATCHASIMA
NAKHON SRI THAMMARAT

References



Muang Thai
Life Academy
174.72 kWp



 12,230 Trees
In Ratchaburi

Lumpini Tower
(Rama4)
57.6 kWp



 4,000 Trees
In Bangkok

References



Hitech Apparel 1.90 MWp

Phase1	:	65.00	kWp
Phase2	:	318.06	kWp
Phase3	:	316.75	kWp
Phase4	:	1,198.08	kWp



133,000 Trees

In Cambodia

References



Solar farm 12 Sites 84.172 MWp

- Solar farm Korat 1 : 6.123 MWp
- Solar farm Korat 2 : 6.123 MWp
- Solar farm Korat 3 : 6.123 MWp
- Solar farm Sakon Nakhon 1 : 6.123 MWp
- Solar farm Khon Kaen 1 : 7.460 MWp
- Solar farm Khon Kaen 3 : 7.460 MWp
- Solar farm Khon Kaen 4 : 7.460 MWp
- Solar farm Khon Kaen 5 : 7.460 MWp
- Solar farm Khon Kaen 7 : 7.460 MWp
- Solar farm Khon Kaen 9 : 7.460 MWp
- Solar farm Udon Thani 1 : 7.460 MWp
- Solar farm Loei 2 : 7.460 MWp



5,892,040 Trees

Technologist

Consultant

Project Management

Safety

Energy Analysis

PVsyst Programs Analysis

Quality Control

Zero Accidents

Business Development

Construction Project

Feasibility Study

Good Support Information

Standard and Procedure

Delivery on Time

The Best Price

10 Years Experienced

Standard Regulation



Service-minded

MEA, PEA, EIT, IEC, TUV

Monitor online 24 hrs. Response

Permit and License

Engineering

Service

48 hrs. Onsite

Civil, Electrical, Architect

In house Design

Professional Analysis

O&M

Service report