

# COMPANY PROFILE

**Star Energis** 

Clean Energy Create the Future World!





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ทะเบียนเลขที่ 0105566043959

แบบ พค. 0401

#### กรมพัฒนาธุรกิจการค้า ใบสำคัญแสดงการจดทะเบียนห้างหุ้นส่วนบริษัท

ใบสำคัญนี้ออกให้เพื่อแสดงว่า

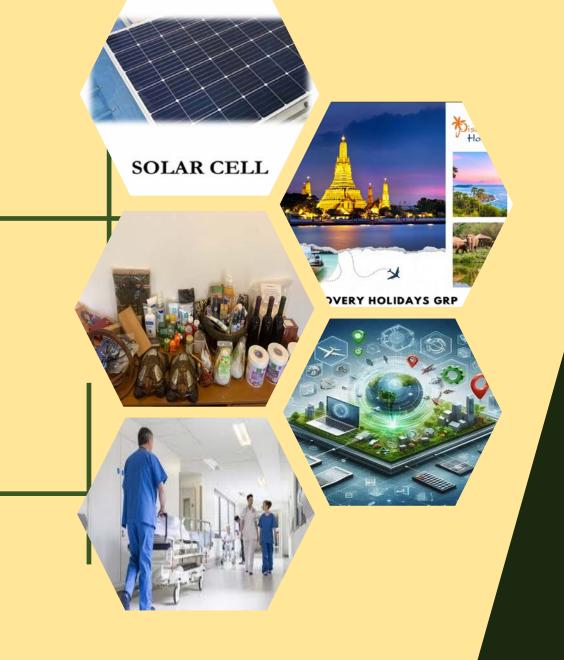
บริษัท สตาร์ เอเนอจิส จำกัด

ได้จดทะเบียนเป็นนิติบุคคลตามประมวลกฎหมายแพ่งและพาณิชย์ ณ สำนักงานทะเบียนหุ้นส่วนบริษัทกรุงเทพมหานคร

เมื่อวันที่ 27 กุมภาพันธ์ พ.ศ. 2566

ออกให้ ณ วันที่ 27 กุมภาพันธ์ พ.ศ. 256

(นาย สากส แก้วเนิน)



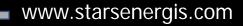
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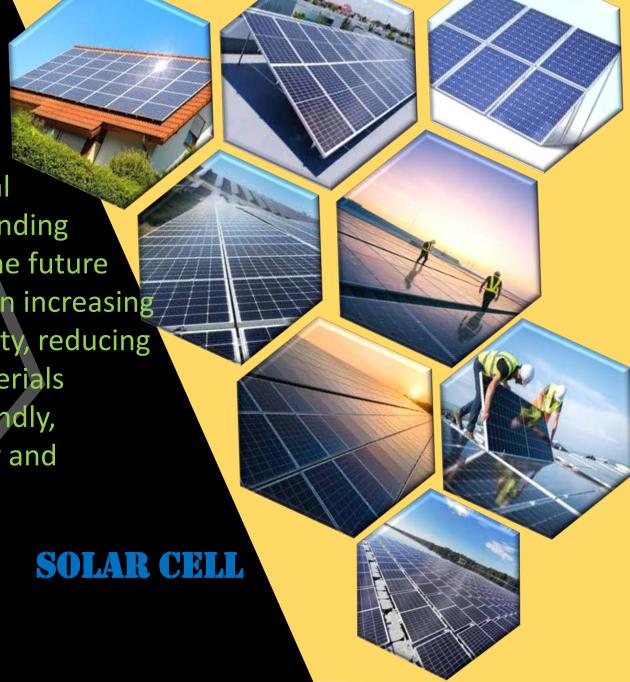
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# THE COMPANY MAIN OBJECTIVED

Our company sees the future of solar cells as bright and continuously developing, with the goal of increasing efficiency, reducing costs, and expanding the scope of applications to cover more areas. The future development of solar cell technology will focus on increasing the efficiency of converting sunlight into electricity, reducing production and installation costs, using new materials that are highly efficient and environmentally friendly, and integrating solar cells with digital technology and intelligent systems.



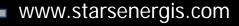




## THE COMPANY MAIN OBJECTIVED

The world is developing technology and innovation rapidly, causing humans to have to adjust their lifestyles to follow the changes. Therefore, our company sees an opportunity for us to be the leader in importing the best technology and innovation, one and only, and the first to import technology.









## 15 TARGET TECNOLOGY GROUP

- To meet customer needs and cover all aspects, we focus on 15 innovations.
- And importantly, we focus on technologies and innovations that are friendly to the world.

Number 1 is the synthesis of the entire genome.

Let's start with new innovations like Whole-Genome Synthesis, which has huge potential to advance many sectors. In medicine, this technology opens up opportunities to effectively treat and prevent genetic diseases. In agriculture, it enables the development of crop varieties with better disease resistance..



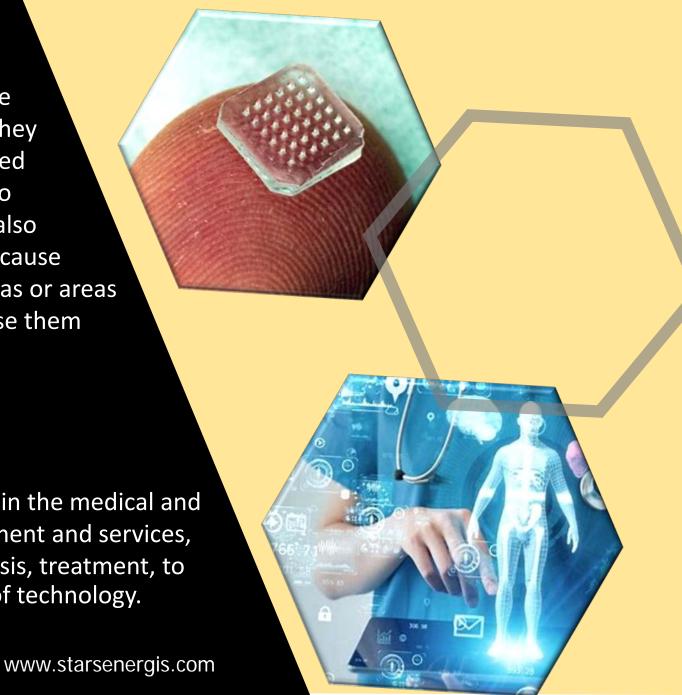
#### Microneedles

Interesting new innovations such as Microneedles are considered important medical innovations because they help reduce the pain from injections and are combined with technology to control the time of drug release to effectively support personalized medicine. They are also important in helping to reduce medical inequality because the smaller needle size allows patients in remote areas or areas where there is a shortage of medical personnel to use them by themselves.

#### Number 3

#### **Digital Health**

Digital Health is the application of digital technology in the medical and public health sectors to improve the quality of treatment and services, covering everything from disease prevention, diagnosis, treatment, to treatment monitoring, by integrating various forms of technology.



#### **Virtual Patients**

The process of developing a drug from the laboratory to human use takes an average of 12 years, but future advances in medical technology are helping to accelerate the process of testing the efficacy of drugs and vaccines, especially the development of virtual organs that can be used to test the efficacy of drugs or vaccines immediately, without having to wait to test in real human organs.

#### Number 5

#### **Artificial Muscle**

The process of developing a drug from the laboratory to human use takes an average of 12 years, but future advances in medical technology are helping to accelerate the process of testing the efficacy of drugs and vaccines, especially the development of virtual organs that can be used to test the efficacy of drugs or vaccines immediately, without having to wait to test in real human organs.



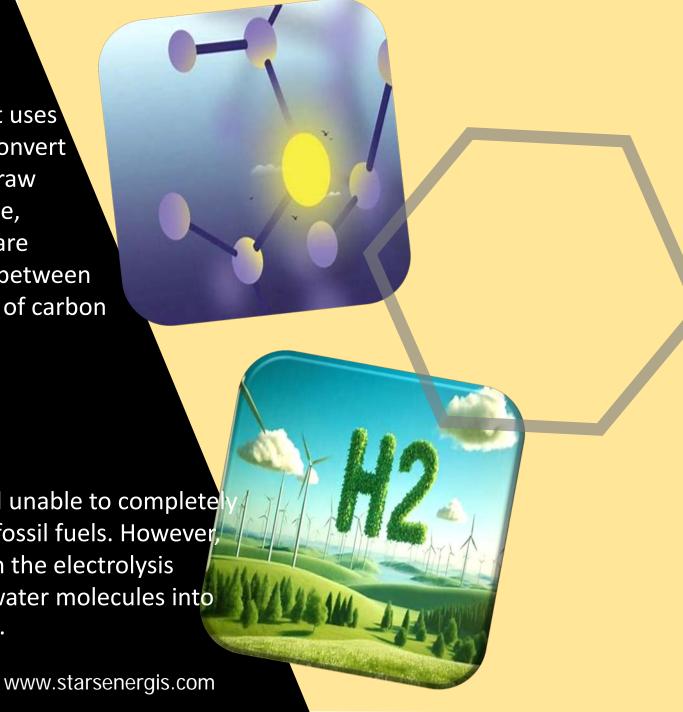
#### **Sun-Powered Chemistry**

Sun-Powered Chemistry is an innovative process that uses solar energy in combination with photocatalysts to convert unwanted gases, such as carbon dioxide, into useful raw materials in a variety of industries, including medicine, cleaning products, fertilizers, and textiles. Scientists are developing photocatalysts that can break the bonds between carbon and oxygen, potentially reducing the amount of carbon dioxide in the atmosphere.

#### Number 7

#### **Green Hydrogen**

Currently, the hydrogen gas production process is still unable to complete avoid zero carbon emissions because it still relies on fossil fuels. However, the innovation of green hydrogen production through the electrolysis process is gaining attention because it can separate water molecules into hydrogen and oxygen without any carbon dioxide gas.



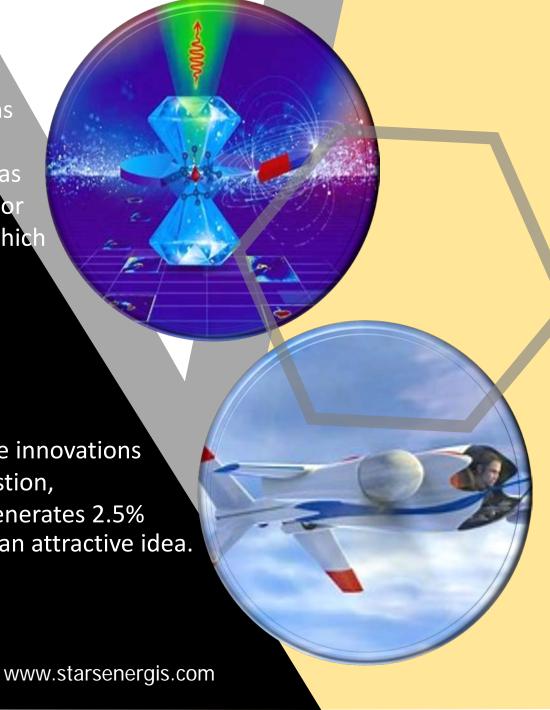
#### **Quantum Sensing**

Quantum Sensing is a cool innovation that uses quantum systems to measure and identify atomic particles. It has the potential to develop faster and more accurate earthquake warning systems, as well as being able to be applied to explore objects underground or underwater and inspect underground pipe systems efficiently, which greatly facilitates construction work.

#### Number 9

#### **Electric Aviation**

In recent years, the world has seen the success of electric vehicle innovations such as Tesla gain international recognition, which begs the question, 'Is electric flight possible?' Considering that aviation currently generates 2.5% of global carbon dioxide emissions, switching to electric flight is an attractive idea.

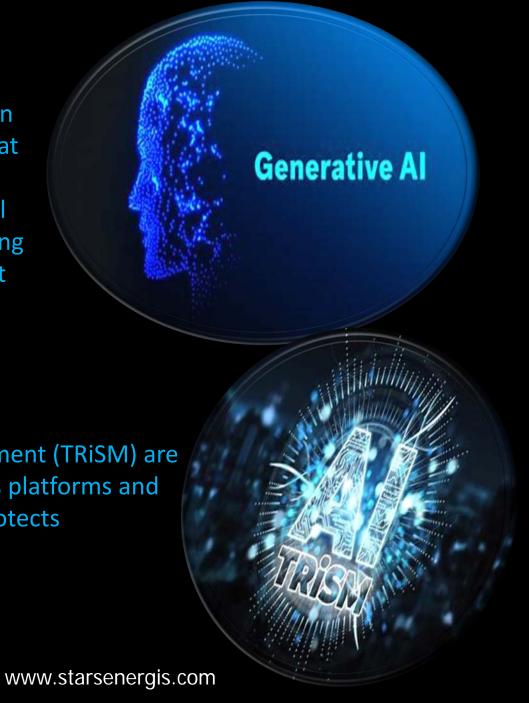


#### **Generative Al**

Generative AI (GenAI) is currently gaining popularity, especially in online content creation, as it can produce interesting content that effectively attracts viewers. Many organizations have therefore begun to apply this technology to increase sales, especially small businesses or businesses with limited marketing budgets, allowing them to reach a wider group of consumers and be more efficient without requiring as many resources as traditional marketing.

# Number 11 TRISM

Cool future innovations like AI Trust, Risk, and Security Management (TRiSM) are gaining more attention in this era of widespread use of AI across platforms and applications. TRiSM acts as an advanced security system that protects organizations from cyber threats and data attacks.



#### **Machine Customers**

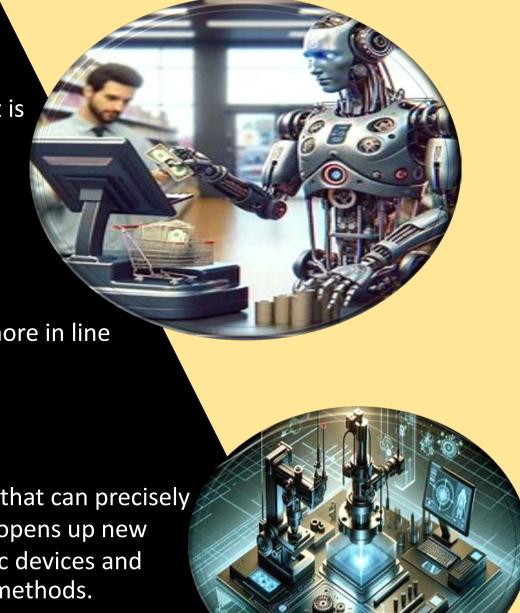
In 2024, Machine Customer or 'Custobots' is an Al innovation that is playing an important role in business management and customer relationship building, especially in the service sector, department stores and convenience stores that want to increase service efficiency. This Al system acts as an intermediary in the product ordering process, can answer customer questions quickly and accurately, increasing the opportunity to close sales effectively, allowing businesses to provide services to customers faster and more in line

Number 13

with their needs.

#### **Microscale 3-D Printing**

Microscale 3-D printing is an advanced manufacturing innovation that can precisely create small structures on the micrometer scale. This technology opens up new opportunities for developing miniature medical devices, electronic devices and sensors that cannot be produced with traditional manufacturing methods.



#### **Oculus Rift**

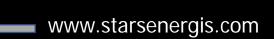
Oculus Rift is a VR headset developed by Oculus, now part of Meta (formerly Facebook). It is designed to create a immersive virtual world experience for users. With high-resolution display technology and precise motion tracking, users can see and interact with virtual environments naturally.

#### Number 15

#### Metaverse

Metaverse is a virtual world platform that combines virtual reality and augmented reality to create a digital space where users can interact with each other in the form of avatars, just like they are in the real world, using specific devices such as VR glasses or smart wearables.







# ABOUT OUR COMPANY

#### Company

With a professional and environmentally friendly approach, we strive to make our work process easy for our group of customers. Therefore, we understand that all of our customers' needs are taken into account, along with the quality of our services and the highest level of customer safety.





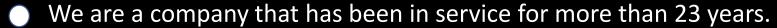




## **OUR GOALS**

The main goals of Star Energis Company are divided into 4 groups: Energis Business and Full-service Travel Business and Health and Nursing Business in the Future and Consumer Goods Export Business.

## WHY CHOOSE US?



- We are recognized both domestically and internationally.
- We have strong partners around the world.
- We prioritize customer service.
- We are licensed by government agencies and are the only company in the country that has been invited to work abroad.
- The work and impressions of customers that have always been given to us.
- And many more that we are willing to give to customers for their impressions.



## KEY SERVICES



#### **CONSULATION**

Our service is to find information that best meets the needs of our customers to ensure that they receive the right service. From the first time due to the differences in every aspect of customers in each area and each country

#### **ORGANISATION**

All company employees must receive training in providing services according to the main policy, which is "Customer's Needs Come First", and undergo health checks according to the company's rules. Therefore, customers can be confident in the highest level of safety.

## OBTAINING NEEDED DOCUMENTS

With over 23 years of experience in providing services, we have contacts with both government and private agencies. Therefore, you can be sure that we can handle documents directly and quickly, reaching every detail.

In the event that customers need documents from government agencies, such as medical certificates, etc., we will provide them with those documents!.

# 5-1-6

5

The company encourages employees to develop themselves to be better in order to work according to the organization's standards, improve standards, and overcome obstacles together.

E

The company promotes the creation of a working environment that is easy to share and exchange knowledge and supports activities that create good interactions between employees. T

All employees in the company are aware of the common goals of the company with standards and metrics for employees to compete with themselves and their colleagues. The company has a performance evaluation.

G

Employees are encouraged to seek new knowledge, learn from their mistakes, be creative, think outside the box and develop themselves through trainingall year round..

# COMING SOON!

Upcoming Services! Star Energis Co., Ltd.

We are going to launch OTOP export project to Middle Eastern customers and Green Clean Energy International Hospital projectand provide charter tour serviceincluding humanitarian project through Thai Foundation

#### Tour Guide Services in South Africa (Launching Soon!)

Cultural & Heritage Tours – Immersive experiences exploring South Africa's rich traditions and history. Luxury & Private Tours – Tailor-made premium travel experiences.

Adventure & Wildlife Safaris – Discover South Africa's breathtaking landscapes and diverse wildlife. Hiking & Outdoor Excursions – Experience the country's natural beauty through guided hikes and nature walks. Group & Private Tours – Flexible travel options with transportation and translator services available upon request.





# Our past work 2023 - 2025

#### We collaborate with partners











































**STAR ENERGIS** 

#### **O&M Project**











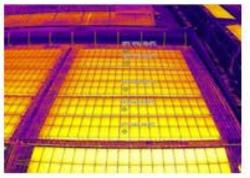
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0	2566	: โรงงาน Indo Thai, Nippon Steel	SEG
0	2567	: Lotus ไซยา, Lotus บ้านตาซุน, Lotus	SEG
0	2567	: Lotus สุราษฎร์ธานี Mall, Lotus	SEG
0	2567	: KICE KhonKaen International Expo	SEG

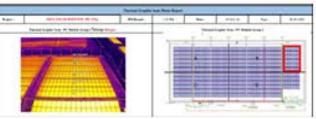
















O 2566 : Solar off Grid for Fusel ( 18 MB Project value)



















O 2566 : RFQ Lotus's Phase 3 Project, 5 site / total 4.1 MWp Fusel (15 MB Project value)





















O 2567 : Solar Power Plant Sawasdee Energy Holding, Total 10 MWp / 185,144 Units



















O 2567 : Solar Floating , Total 14 MWp / 187,144 Units

















O 2567: RFQ Lotus's Go Fresh Rooftop Project, 25 site / Total 900 KWp (18 MB Project value)















#### **Project Civil Progression**





#### **Permission and Design**

#### Construction

#### Construction

- 1. TSSR
- 2. Shop Drawing

- 3. Kick Off
- 4. Site Mobilisation
- 5. Facility Support (By Case)
- 6. Walkway (By Case)
- 7. PV Mounting
- 8. Inv. Station & Electric Panel
- 9. PV Installed
- 10. Ground System
- 11. Modify MDB & Tie-In
- 12. Commission & On Service
- 13. Water System & Accessory
- 14. Training

15. Notification form except16. Permission form, Electric size

17. Pat Test & Commission 18. FTOC

#### **Project O&M Progression**





**Permission and TSSR** 

**Cleaning Performance** 

**Preventive Maintenance** 

- 1. TSSR
- 2. Work permit & JSA

- 3. Roof top Visual Inspection
- 4. Water System Meter Check
- 5. PV Module Cleaning
- 6. Inverter H. Visual Inspection
- 7. Inverter H. Cleaning

11. After Check Cleaning

8. PM Inspection

9. Contract ROM For Down Site 10. PM Inspection (Plan A)

12. After Check PM







Quarter O&M Activity Check			
No	Equipment	Action Description	Frequency
1	PV panel	Visual Inspection, Module cleaning	4 Times / Year
2	Mounting structure	Visual Inspection	4 Times / Year
3	DC Combiner Box	Visual Inspection, Check Fuse status	4 Times / Year
4	Inverter	Visual Inspection & cleaning, Alarm inspection	4 Times / Year
5	Pyranometer	Visual Inspection & cleaning, Check batteries	4 Times / Year
6	Ambient temp. sensor	Visual Inspection, Availability in monitoring system	4 Times / Year
7	PV temp. sensor	Visual Inspection, Availability in monitoring system	4 Times / Year
8	Life-line	Visual Inspection	4 Times / Year
9	Walkway	Visual Inspection	4 Times / Year
10	Fire extinguisher	Visual Inspection	4 Times / Year
11	Water system	Visual Inspection (pressure, leakage)	4 Times / Year
12	Air Conditioner	Air conditioner Cleaning (Inverter room)	4 Times / Year







Yearly O&M Activity Check			
No	Equipment	Activity List	Frequency
1	PV panel	Visual Inspection, Module cleaning Thermography Inspect (Drone), TS4/MC4 Visual Inspection, I-V Curve test of string modules	4 Times / Year 1 Times / Year 1 Times / Year
2	Mounting structure	Visual Inspection Check tightening (Clip-lock, Mounting)	4 Times / Year 1 Times / Year
3	DC Combiner Box	Visual Inspection, Check Fuse status Thermography Inspect, Re-tourque in combiner box, Check grounding	4 Times / Year 1 Times / Year 1 Times / Year
4	Inverter	Visual Inspection & cleaning, Alarm inspection Thermography Inspect	4 Times / Year 1 Times / Year
5	Pyranometer	Visual Inspection & cleaning, Check batteries	4 Times / Year
6	Ambient temp. sensor	Visual Inspection, Availability in monitoring system	4 Times / Year
7	PV temp. sensor	Visual Inspection, Availability in monitoring system	4 Times / Year
8	Life-line	Visual Inspection	4 Times / Year
9	Walkway	Visual Inspection	4 Times / Year
10	Fire extinguisher	Visual Inspection	4 Times / Year
11	Water system	Visual Inspection (pressure, leakage)	4 Times / Year
12	Air Conditioner	Air conditioner Cleaning (Inverter room)	4 Times / Year

#### **Project O&M Schedule**





Yearly O&M Activity Check			
No	Equipment	Activity List	Frequency
13	Solar DB	Visual Inspection, Thermography Inspection	1 Times / Year 1 Times / Year
14	AC/DC cable	Visual Inspection (Insulation, connection) Check cable terminal (lugs)	1 Times / Year 1 Times / Year
15	DC Ground Station	Check grounding, Check lightening	1 Times / Year 1 Times / Year
16	UPS	Visual Inspection & cleaning, Check batteries	1 Times / Year 1 Times / Year
17	Cluster Controller	Check monitoring connection, Visual Inspection & cleaning, Check Alarm	1 Times / Year 1 Times / Year 1 Times / Year
18	Protection relay	Visual Inspection Check alarm islanding protection	1 Times / Year 1 Times / Year

#### **TSSR**





#### **TSSR SUPPORT**

















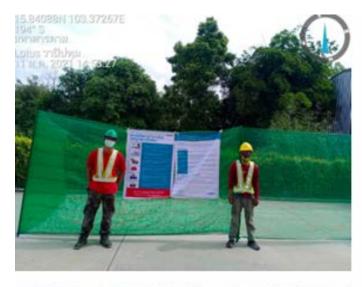


## **Kick off & Mobilize**





#### **Temporary Store**











## Morning Talk & Meeting on site



















## Facility Support (by case)





#### Main Leader











#### **Monkey Leader**



**STAR ENERGIS** 



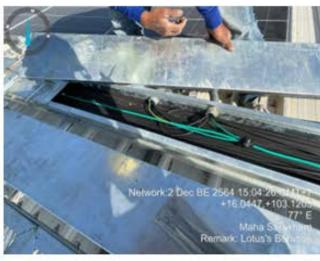
## **Walkway & Wiring**



















## **Inverter Housing**





















## **PV Module**

















## **Rooftop Accessory**





Pipe Bridge





Sky Light









#### Weather station





## **Ground System**





















## **Water System**

















## **Cut Off**



















## **Test & Commissioning**























## **Training & Defect for FTOC**

















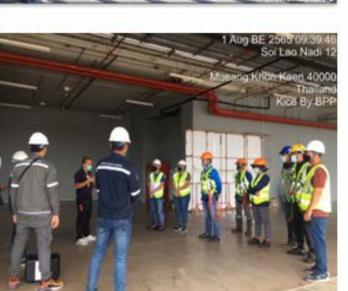
## **TSSR & Visual Check**

















## **PV** cleaning















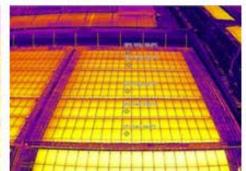


## **Preventive Maintenance (Outside)**





#### Thermo scan

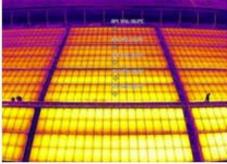


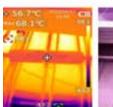
#### **Weather Station Cleaning**

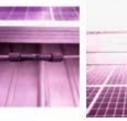


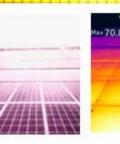
#### **Torque Testing**

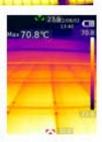














Water System Cleaning & Fixing







## **Preventive Maintenance (Outside)**





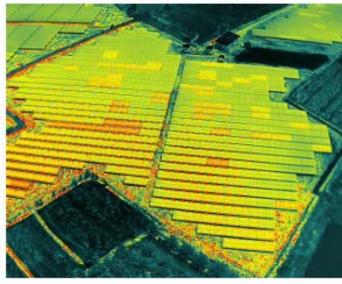
#### Thermo scan (drone)

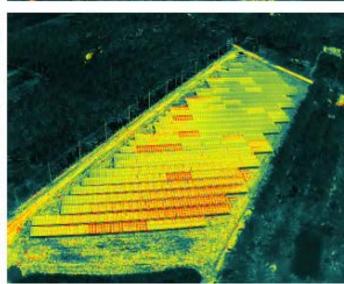










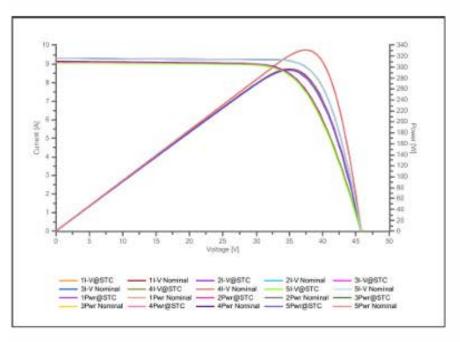


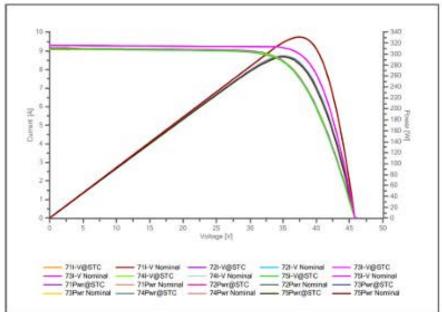
## **Preventive Maintenance (Outside)**





#### **IV Curve Testing**











## **Preventive Maintenance (Inside)**

















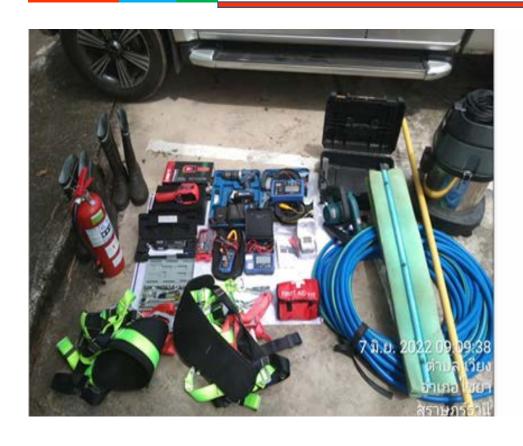




## **Solar Material**













### **O&M Material**





#### รถตัดหญ้า 6 แรงม้า



รกตัดหญ้า 13 แรงม้า



#### เครื่องทำดวามสะอาด Solar









#### ไม้มอบฟองน้ำแบบไม่ขาด

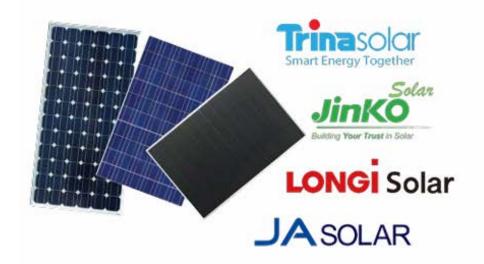


### **Product**





#### **PV Module**







#### **Product**





## **Battery**





#### **Accessories**



#### **Solar Material & Tool**











## **Safety**









# THANK YOU FOR ATTENTION

For More Information

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