

We Believe In Green Energy
太陽光電集團

BIG SUN Energy Technology Inc.
www.bigsun-energy.com




BIG SUN
GROUP.

COMPANY PROFILE

About. BIG SUN

太陽光電集團架構

- **Date of Est. : 2006/5/19**

成立時間：2006年5月19日

- **Chairman : Mr. Summer Luo**

董事長：羅家慶先生

- **Product :**

Solar PV Products / PV Systems

Solar EPC / Solutions

經營產品：

太陽光電產品 / 系統 / 電站建置

營運 / 解決方案

AI ECSP

24小時太陽能儲能發電系統

Future Product

2023

24H Solar Energy Storage System

2020

iPV生態系統

iPV Eco system

iPVitaTM
with AI system



2019

榮獲農委會優良案場

Council of Agriculture
recognized excellent site



2017

與特斯拉合作 建置超級充電站

Tesla Supercharger
Station (EPC)



2012

iPVTracker

with AI system



2015

太陽寶島電業(股)公司



2011

SGP 太陽全球投資公司
SOLAR GLOBAL POWER



2009

topper Sun

2006



PRODUCTS

EPC

Leading EPC in Taiwan

台灣EPC第一品牌

◆ 聯絡業務 ◆

宋先生 **Jeff**
0987699998



提 案

Idea



規劃評估

Evaluation



政府文件申請

Project
Development &
Document filing



備料與施工

Regulatory



工程品管

Quality &
Assurance



上線與維護

Operation &
Maintenance

Global PV installation:

More than 550 worldwide installations(440 in Taiwan)

全球電廠建置實績：

全球超過550場電廠建置經驗(台灣440場)



AI PRODUCTS

iPVTracker

DAT-Dual Axis Tracker with AI system

雙軸追日系統

全自主研發設計：最強環境應變利器

◆ 聯絡業務 ◆

鄭先生 **Walter**

03-5980288 #1802



Simple & Affordable

Easy installation, operation, and low maintenance costs.

精簡經濟

精簡又穩定的鋼索與滑輪轉動結構=低建置、低維運成本



Accurate

Preprogrammed tracking algorithm. 360° dual-axis. 0°-30° tilt angle.

精準追日

智慧型日晷追蹤、獨家多方位十字軸設計。全球第一座360度方位角旋轉



High-efficiency Output

40%~80%* more annual power generation against the fixed tilt system.

高效發電

最大廣角接收日照量，對比固定式可增加40%~80%發電量
同步增加30%電網利用率；15%~50%的土地利用率



Durable & Reliable

Wind Resistant · Dust Removal · Snow Removal · Corrosion Resistant ·
Back tracking · Flood Avoidance · Light Pollution Avoidance

穩定可靠

高抗風·避沙塵·避積雪·避鹽害·避遮蔭·避淹水·避光害



Base Flexibility

Various foundations transcending landform limitation, back tracking
avoiding extensive land grading, concrete paving and curing time.

極限越野

多樣化地樁工法結合、鋼索力學平衡，超越地形限制，降低整地費用及時間



Intelligent

iPVita Anytime/Anywhere/Accurate

智慧控管

iPVita隨時隨地、精準監控管理電廠資訊

Combat Climate Changes and Hazards

高抗氣候變遷



Wind Resistant 高抗風

Automatically stow under the high wind loads platform to horizontal position(safety mode).

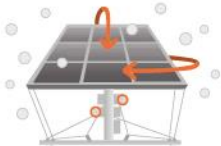
當風速達到一定強度時，可將太陽能板躺平為安全模式減少受風面積。



Dust Removal 避沙塵

iPV Tracker can rotate at a tilted angle to remove excessive dust.

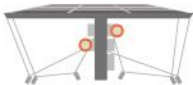
日落後可順應不同季節風向，調節跟蹤傾斜方位使之與風向平行，減少沙塵累積於跟蹤支架平台。



Snow Removal 避積雪

Rotation at tilted angle removes accumulated snow on the PV modules.

設定太陽能板角度至最傾斜並旋轉幫助在太陽能板上的積雪滑落。



Corrosion Resistant 避鹽害

Main bracket, Cable material : alloy, Hot dip galvanized 80μm ; Parts : stainless steel, magnesium zinc, aluminum alloy.

主支架、鋼索材質：熱浸鍍鋅80μm高標準處理。

零配件：不鏽鋼、鍍鎂鋁鋅、鋁合金。



Backtracking 避遮蔭

iPV Tracker is programmed to automatically adjust to an optimal angle according to location, season and time of day, to prevent mutual shading.

將太陽能板傾斜至相互不遮蔭的最大角度以吸收最多日照量並提高土地使用率。



Flood Avoidance 避淹水

The motors, controllers and other control elements are set 1.5M higher than the foundation to avoid the damage by flood.

將馬達、控制器等主要電機控制元件，設置不低於1.5M的立柱高度，降低極端氣候下洪水的衝擊及水淹故障的機率。



Light Pollution Avoidance 避光害

With the iPV Tracker tracking feature, the solar panels are always perpendicular to the sun's rays and will not induce Light polluton.

利用追日會旋轉的特性，太陽能板永遠與太陽光線垂直就不會反射造成光害。

AI PRODUCTS

Global Patent Presence

全球專利

iPVTracker with AI system



UL 3703 CE UL / CE
電控認證

Third Party Certification

第三方認證機構 - 系統安全認定

BLACK & VEATCH
Building a world of difference.

Due Diligence & Bankability Report

Certified by the largest independent third party engineering company in the United States

美國最大第三方獨立實驗室



Architecture and Building Research Institute Ministry of the Interior

建築研究所抗風設計



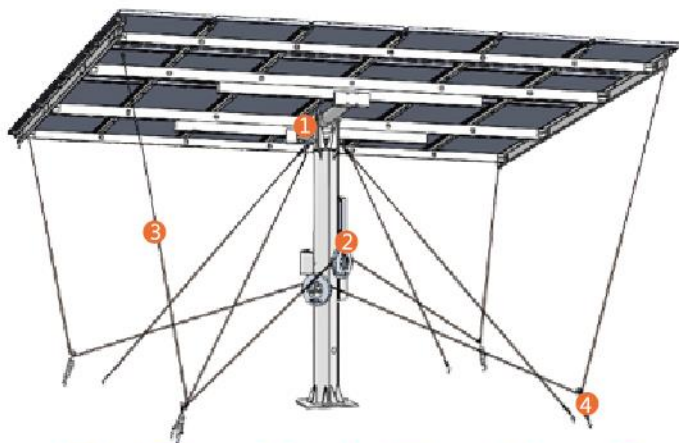
風洞試驗之 1/30 模型裝置情形

台灣專利權人與發明人姓名清單					發明名稱	
序	專利號碼	發明人姓名	專利類別	專利狀態	發明名稱	發明人姓名
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Patented Cable-driven Mechanism

獨家專利結構

Patented cable-driven structure can accommodate all types of modules, foundations and applications
獨家專利結構，可搭載各型模組多樣化基礎的應用與結合



The Universal Joint 十字雙軸

The universal joint is designed to support all types of modules, foundations and applications.
設置於支柱上，使平台能夠二維旋轉



The Reels 線盤

The reels accurately trace within $\pm 0.5^\circ$ deviation.
微幅傳動達 $\pm 0.5^\circ$ 精準追日



The Steel Cables 鋼索

The steel cables steer the platform while creating a dynamic balance.
帶動平台，並能協助動態平衡



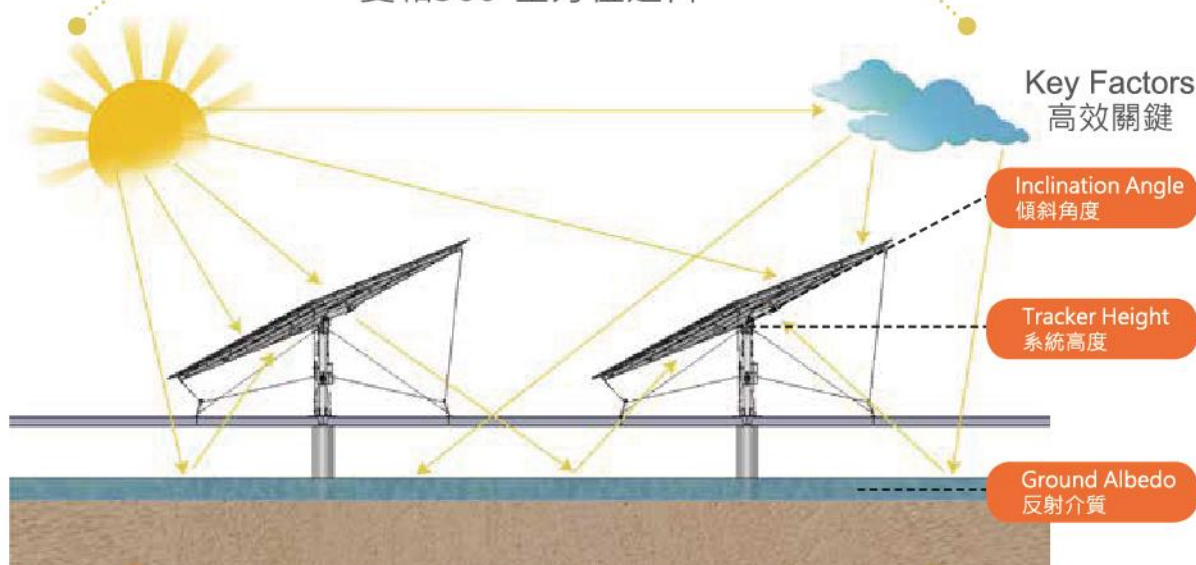
The Springs 彈簧

The springs act as cushions for wind gusts.
避震功能可幫助提升抗風性

iPV Dual Axis Tracking System

iPV Dual Axis Tracker + Bifacial Module

Dual-Axis 360° Tracking
雙軸360°全方位追日



Key Factors
高效關鍵

Inclination Angle
傾斜角度

Tracker Height
系統高度

Ground Albedo
反射介質

Albedo
反照率

10~20%
Mud Grass
泥草地

20~35%
Dry Gravel
乾砂礫土

20~50%
Light Cement
淺水泥地

45~80%
White & Snow
白底&雪地

>85%
Water Sur./Ref. Material
水面&反射物質

Ground
反射介質



Bifacial Module
Add Energy
增加發電

+5%

+10%

+15%

+20%

+25%

AI ECSP

AI ECSP Energy Storage System

AI 24小時太陽能儲能發電系統

AI ECSP is a patented solar dual-loop 24H power supply system. that uses molten salt to store heat energy, thus reducing the storage cost significantly to 1/3 of that of using lithium battery. With the 24H power supply and low storage cost, this green energy system can replace all traditional power sources.

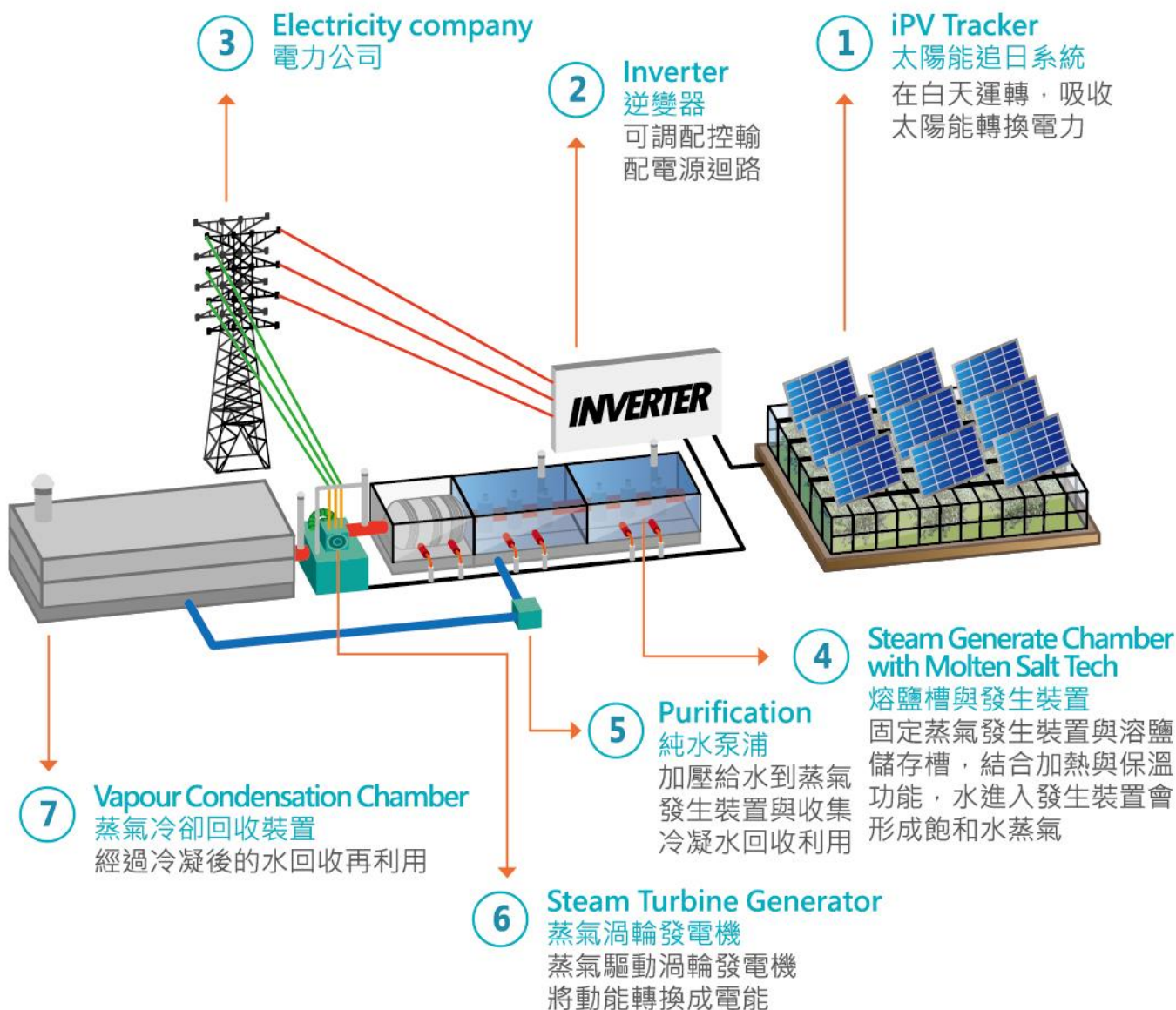
ECSP可透過白天太陽能發電並儲存電力，推動溶鹽槽產生蒸氣推動渦輪發電。

◆ 聯絡國外業務 ◆

鄭先生 **Walter**
03-5980288 #1802

◆ 聯絡日本業務 ◆

杜先生 **Mori**
03-5980288 #1079



AI PRODUCTS

iPVitaTM with AI system

SMART PV Monitoring System

智慧監控管理系統

Self developed, cloud based smart PV monitoring system

全產品自主研發，透過智慧IOT雲端系統，有效管理電廠，降低維運人力與成本。當發現異常時，Line即時傳送。

Product Features

產品特點



One device for multiple purposes

一機多用

當您的電廠同一地點劃分好幾案，只要實體線路接的上。我們可以協助您分成多案，無需增加「智慧盒」費用。



Single device operation

可單機作業

當您遇到公家單位或是科技廠的資安無法雲端連結，我們可以提供您單機版監控系統。



Built-in APP

內鍵App機制

當您現場網路斷線時但工班又急著查修通訊線路與發電資訊，您可以使用手機連上「智慧盒」查詢所需之資訊，無需雲端。

Show URL self-reliant

獨立網址顯示

當您還在每次為了客戶的帳號與密碼而重製資料時，請使用我們的動態獨立網址顯示，可降低您重工的時間。



◆ 聯絡業務 ◆

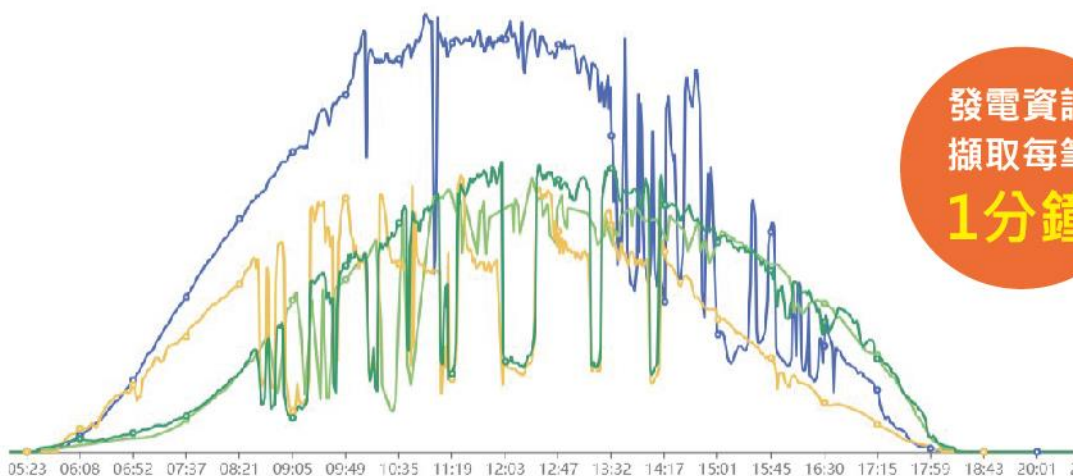
蘇先生 Jeffery
0936185841



因kW系統日均發電量數 / 等效日照小時(ESH) = 4.88 / 5.17 = PR值(%) 94.39



提供您完善資料，分析與報表



發電資訊
擷取每筆
1分鐘

DC_01	DC_02	DC_03	DC_04	DC_05	DC_06
100 %	99.62 %	97.6 %	91.61 %	92.27 %	93.11 %
98.86 %	100 %	98.5 %	92.48 %	94.84 %	95.69 %
99.02 %	100 %	99.09 %	94.18 %	92.71 %	93.38 %
99.29 %	100 %	99.43 %	95.66 %	95.48 %	95.48 %
99.96 %	99 %	100 %	93.96 %	94.01 %	95.18 %
98.96 %	99.45 %	100 %	96.67 %	97.07 %	98.27 %
100 %	97.81 %	99.05 %	93.92 %	94.86 %	95.33 %
100 %	99.45 %	97.97 %	96.49 %	96.3 %	97.54 %
98.82 %	100 %	99.14 %	94.96 %	95.03 %	95.54 %
100 %	98.21 %	99.19 %	97.53 %	98.34 %	93.54 %
98.8 %	100 %	97.77 %	93.98 %	95 %	95.88 %
97.95 %	98.26 %	94.23 %	100 %	95.88 %	73.68 %

即時串列監控

SERVE

Customer Service



● 每日監控



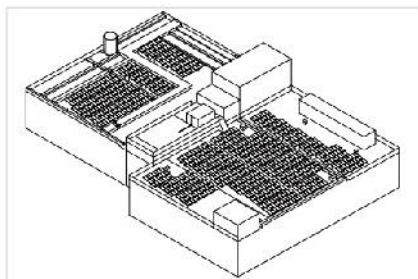
維運客服

用心守護您的幸福

Service guard your happiness carefully

聆聽您內心的需求

listen to your inner needs.



- 專案評估
排佈遮陰模擬
避免遮陰區塊



- 案場建置
專業證照團隊
進行案場建置



- 充電樁建置
家用、商用皆可評估建置
為地球盡一分心力

24hr 服務專線
0800-351-688

● 售電憑證





能源安心生產
Safe production of energy

日夜監控把關 · 無憂擁抱綠能

24hr Monitoring and Assurance: Embrace Green Energy with Peace of Mind



職人專業檢修
Professional maintenance



即時故障排除
Real-time Fault Resolution



強大維運團隊



客戶服務



維運服務



BIG SUN
GROUP.

Integrity · Professionalism
Innovation · Sustainability
Responsibility · Honor

誠實 · 專業 · 創新 · 永續 · 責任 · 榮譽

COLLABORATIONS 合作契機

Capital Investment ◆ 資金投資

Project Cooperation ◆ 項目合作

EPC ◆ 委託建置

Licensesing ◆ 授權經銷

Product Trading ◆ 產品買賣

Cross-boundary
Integration Solution ◆ 漁電、農電
跨界合作



www.bigsun-energy.com



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