The Benefit of iPV Tracker (DAT) (Dual-Axis Tracking System)

Big Sun Energy Technology Inc.
Type of Solar Tracking System

Wider angle tracked yield higher power and better profit

- iPV Tracker (DAT)
  - 360 Degree
- Dual-Axis Solar Tracker
  - 270 Degree
- Single-Axis Solar Tracker
  - 180 Degree
- Fixed-Tilt System

More Solar Radiation  More Power Generation  More Profit
iPV Tracker can bring forward Grid Parity earlier

Reduce LCOE Effectively

Grid Parity vs. LCOE

Global LCOE Chart

Source: Frankfurt School · Bloomberg New Energy Finance · Nov. 2015

iPV Tracker can bring forward Grid Parity earlier

Reduce LCOE Effectively

Grid Parity vs. LCOE

Global LCOE Chart
iPV Tracker elevate the grid utilization efficiency

**Gain 30 to 100%** Grid utilization against the Fixed-Tilt system

- Supplement the peak period (tip load) gap
- Match better with the Grid load curve and keep the Grid stable
- All Fixed tilt option shall induce **cost hiking**, **load impulse** and **abandoned power crisis**

Real benchmark data in China Experimental PV site in Xinjiang, TBEA

*Under full irradiance, varies according to Latitude and climatic region*
IPV Tracker elevate the power generation efficiency

Gain 30 to 100%* more power generation against the Fixed-Tilt system

One day
10.34 kWh

One Season
7.04 kWh

At 42° latitude,
Daily gain 90.42%

At 42° latitude,
Season gain 66.43%

+30~100%*

Better profit

Higher power

More irradiance

*Under full irradiance, varies according to Latitude and climatic region

Real benchmark data in China Experimental PV site in Xinjiang, TBEA
iPV Tracker revitalize the land usage benefit effectively

Gain 15 to 50%* more land usage Against the Fixed–Tilt system

**iPV Tracker (Dual-Axis Tracker System)**
Real benchmark data in China Experimental PV site in Xinjiang, TBEA
At 42° latitude / Module 280kW

**20GW Capacity = 42billion KWh Annual Yield = 25,000** hectare land usage

Yield higher power over the same 20GW capacity:

<table>
<thead>
<tr>
<th>系統</th>
<th>裝設量</th>
<th>年均日發電</th>
<th>年發電量</th>
<th>年增發電量</th>
</tr>
</thead>
<tbody>
<tr>
<td>雙軸追日系統</td>
<td>20GW</td>
<td>5.75度</td>
<td>420億度</td>
<td>提高 50.92%↑</td>
</tr>
<tr>
<td>固定型系統</td>
<td>20GW</td>
<td>3.81度</td>
<td>278億度</td>
<td></td>
</tr>
</tbody>
</table>

With lower land usage and cost:

<table>
<thead>
<tr>
<th>系統</th>
<th>裝設量</th>
<th>裝設投入</th>
<th>年發電量</th>
<th>使用土地</th>
<th>土地利用率</th>
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</thead>
<tbody>
<tr>
<td>雙軸追日系統</td>
<td>20GW</td>
<td>減少50%</td>
<td>420億度</td>
<td>2.5萬公頃</td>
<td>提高30%↑</td>
</tr>
<tr>
<td>固定型系統</td>
<td>30GW</td>
<td></td>
<td>420億度</td>
<td>3.2萬公頃</td>
<td></td>
</tr>
</tbody>
</table>

*With patented Backtracking function, more efficient land usage can be expected

*Under full irradiance, varies according to Latitude and climatic region
- iPV Tracker provide best availability/lowest energy consumption.

Promise reliable 99.9% availability rate and up

- Universal (cross) joint + stable & robust steel cable and pulley driving mechanism = Low O&M costs, high availability

- Under due O&M practice, iPV Tracker availability over 20 years is projected below:

<table>
<thead>
<tr>
<th>年份</th>
<th>第一年</th>
<th>第五年</th>
<th>第十年</th>
<th>二十年</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>99.9%</td>
<td>99.8%</td>
<td>99.5%</td>
<td>99%</td>
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</tbody>
</table>

- Due Diligence Verification

1st DAT in the world receiving due Diligence (Bankability) report

Issued by B&V, a global engineering consultant leader in Energy, water and telecommunication.
iPV Tracker’s precise synchronization with the Sun

**Tracking Accuracy within ± 0.5 °**

- High torque and miniature driven speed by steel cable and pulley promise tracking precision and better generation efficacy
- Assured under routine annual maintenance
iPV Tracker mitigate best against climate change

Autonomous Secured Power Plant, Lower Investment Risks

Wind Resistant
Dust Removal
Snow Removal
Backtracking
Flood Avoidance

Avoid Costly Climatic Risk
iPV Tracker can spur the growth in associated industries

Vertically integration and horizontally alliance towards Industrial 4.0

**Vertically Integration**

- PV industrial chain
- Peripheral industries (electrical, steel, civil engineering and others)

**Horizontally Alliance**

- Agrosolar, Aquasolar, solar and animal husbandry
- Energy sources & IoT
- Transportation & vehicle Ind.
- Tourism & landscape
Synergy of iPV Tracker and iPVita monitoring platform

Real Time Monitoring of power plant performance

Smart integration of iPV tracker hardware and iPVita monitoring software provide real time monitoring, diagnosis and super efficacy in Grid O&M
Summary of iPV Tracker **NINE BENEFITS**

- Reduce **LCOE**
- Raise Grid Utilization by **30~100%***
- Increase Power Generation by **30~100%***
- Elevate Land Usage rate by **15~50%***
- Solid **99.9%*** Availability Rate
- Accurate Tracking within **±0.5°** Deviation
- Mitigate **Climate Change** Impact
- Migrate to **Industrial 4.0**
- Synergy with **Energy Monitoring System**

*Under full irradiance, varies according to Latitude and climatic region*
iPV Tracker Application over 20MW installed globally

**Ground Type**

*Global Project*

日本滋賀
ShiGa, JAPAN
750 kW
地面型
iPV Tracker Application over 20MW installed globally

Roof Top

Global Project

台灣屏東
PingTung, Taiwan
840kW
屋頂型

World's Largest Rooftop Dual-Axis Solar Power Station
全球最大屋頂行雙軸追日電廠
iPV Tracker Application over 20MW installed globally

**AgroSolar**

Global Project

台灣 雲林
YunLin, TAIWAN
300kW
農棚型
Thanks for your attention