TRACKING THE SUN.
FROM DAWN TO DUSK.©

Scorpius Trackers
Lake Victoria, Uganda (650 kW)

Uttar Pradesh, India (4.5 MW)

Telangana, India (11 MW)

Osaka, Japan
WHY TRACK THE SUN?

Competitive bidding creates a need for developers to examine technology solutions for superior generation to boost returns, in comparison to other Solar developers.

Solar Trackers* are the ONLY known technology to boost energy generation for the same installed capacity of PV modules.

Since 2010, 85% of UTILITY solar systems globally use trackers.

GAIN ACHIEVED WITH TRACKING (kWh/kWp/hr)

ENERGY OUTPUT OVER FIXED PV
18% - 30%

INCREASE IN CAPEX PER MW
9% - 12%

*A solar tracker is an electro mechanical device that orients a payload toward the sun. Payloads can be photovoltaic panels, reflectors, lenses or other optical devices.
SCORPIUS TRACKERS

PROVEN TRACKER TECHNOLOGY
Enhances energy generation by upto 30%.

HIGHEST QUALITY STANDARDS
Scorpius trackers have been tested in the world’s leading wind tunnel facilities in Colorado, USA.

UNIQUE SOLUTION PROVIDER
The only company in the WORLD to provide both, array and row trackers.

STRENGTH IN INNOVATION
Robust product development pipeline of new products for driving rapid revenue growth. Global product and design patents.

PROVEN TRACK RECORD
Over 400 MW of supplies completed in India, USA, Africa, Middle East & Japan.

Tracker Technology has undergone Third Party Bankability

State-of-the-art facilities include Environmental Test Chambers, Salt Spray Chambers, Electronic Proto Lab, Clean Bench, PLC Oven, Metallurgical Microscope and Micro Hardness Tester.

<3.0 years payback on tracker investment
>3% IRR increase of overall project
>10% reduction of LCoE power generation

BLACK & VEATCH
Boundary Layer Wind Tunnel Testing of Structures completed

CERMak
PETERKA
PETERSen
HIGH PRODUCTIVITY & EASE OF INSTALLATION

- Less than 400 pedestals per MW, lowest in its class
- Least number of child parts
- Up to 93 module ROWS
- No welding or on-site fabrication required
- Minimal install time

DESIGN HIGHLIGHTS

- Globally patented CABLE DRIVE
- Bearings lifecycle tested for 150 years
- Bearings designed for SNOW and SAND
- MMS design based on Boundary Layer Wind Tunnel analysis, Bankability Certifications and Third party due diligence
- Thoroughly tested for Durability and Reliability, 30+ years
SRT 60 SINGLE AXIS ROW TRACKER

01 ZERO MECHANICAL MAINTENANCE
Over half a decade of solar tracker system design engineering and testing has resulted in uncompromising reliability with Maintenance-free motors and gears, lower moving parts, industrial motors and gears mean maintenance-free energy generation. Bearings tested for 150 years of life.

02 SELF-POWERED SYSTEM WITH SMART PERFORMANCE COMMUNICATION ARCHITECTURE
Self-contained units on each row include a dedicated charge PV module to provide power to the controller which drives the motor and hosts intelligent control electronics to position each tracker row for maximum yield.

03 INDEPENDENT BALANCED ROWS WITH +/-60° ROTATIONAL RANGE
Self-contained units on each row include a dedicated PV panel to provide power to the controller which drives the motor and hosts intelligent control electronics to position each tracker row for maximum yield.

04 LEADING TERRAIN ADAPTABILITY
Uneven terrain? Hill? Yes! Our flexibly linked architecture, with articulating driveline joints and forgiving tolerances, create the most adaptable system in market for following natural land contours and creates the greatest power generation potential from every site. Our patented Universal Joint allows for upto 2 variations within the same ROW unheard off in any competitor.

05 ROBOTIC CLEANING READY, FAST AND SIMPLE INSTALLATION
With a format similar to Fixed Tilt allowing for quick and easy installation with the use of Huck fasteners and Tools. Zero gaps between panels our trackers are robotic cleaning ready day one.

06 FAILURE-FREE WIND DESIGN
Designed and field tested to withstand some of the harshest conditions on the planet, reliably handling wind and lightning events with a fully integrated, fully automatic wind load mitigation system.

07 FLOOD CLEARANCE
1.4m/4-5ft clearance for tracker electrical & Controls standard (1P).
1.7m/5-6ft clearance for tracker electrical & Controls standard (2P).

08 MAXIMUM GCR WITH THE HIGHEST DENSITY OF ANY TRACKER
No limitation. Typical range 33%-66% depending on site condition. Higher density means less land, more power, more profit. Scorpius Trackers offers the unique ability to maximize the power density of each site, boasting 6% more density than the closest competitor comparable with Fixed Tilt Installations.
TECHNOLOGY FOR THE ECONOMICS TO WORK

BLACK & VEATCH
Independent Engineers Bankability Study

5 Tracker supplier diligence & comparison review

Boundary Layer Wind Tunnel Study for MMS Design

MMS Design Review as per IS 875 and ASCE 7-10 Building codes

Design and Technology review by India’s leading Owners Engineers, consulting firms

UNIQUE TECHNOLOGY FEATURES

- WiFi enabled communication
- No lubrication required
- Robust control algorithms
- Electronics for -10°C to +60°C
- Stowing at wind speeds
- No power consumption

UNIQUE CONTROL SYSTEM FEATURES

**GAIN**
Automatic Stow during cloudy atmosphere (to capture 180° GHI, results in up to 6% more generation than a fixed tilt plant on a cloudy day).

**SAFE**
Lightening detection to predict storms. Pressure detection.

**TRACK**
Individual Rows can be oriented and tilted independently at accurately calculated angles, for different elevation of adjoining Rows, to avoid shadows and Maximise gain.

**AREA**
Best slope tolerance in the WORLD, 2 bends in 90 mts in N-S single ROW. Globally patented Cable Drive allows installation on SLOPES.
In centrally driven ROW trackers, the Torsion builds up from both the edges towards the center. This is countered by using variable thickness Torque Tubes, Motion Dampers - which may need multiple replacement and O&M during a 30 year plant life.

In the Scorpius ROW Tracker, the SECTOR drive is connected at 3-5 locations, ABSORBING or EATING up the torsion buildup. Result is minimal torsion transfer towards the centre, minimal wear and stress on torque tube and NO requirement of motion dampers.

### SECTOR DRIVE SRT - UNIQUE FEATURES

<table>
<thead>
<tr>
<th>SCORPIUS FEATURE</th>
<th>BENEFIT</th>
<th>ADVANTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Sector Drive</td>
<td>Reduced Unsupported Torsional Length</td>
<td>Additional Torsional Stiffness</td>
</tr>
<tr>
<td>Distributed &amp; Lower Torque</td>
<td>More Design Stability</td>
<td>Uniform Torque tube Section Requirement</td>
</tr>
<tr>
<td>Low Torque Rating</td>
<td>Increased Durability</td>
<td>Lesser O&amp;M</td>
</tr>
<tr>
<td>Torsionally Stiffer</td>
<td>Minimal Aero-Elastic Instability</td>
<td>No Dampers Required (No OIL maintenance)</td>
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BEST-IN-CLASS N-S SLOPE TOLERANCE

Globally patented Sector Drive with a pivot connection to Torque tube, allows for N-S slopes with posts vertical in the ground.

COMPETITIVE ADVANTAGE

<table>
<thead>
<tr>
<th></th>
<th>SCORPIUS TRACKERS</th>
<th>COMPETITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROW and ARRAY</td>
<td>Both available, Bankable</td>
<td>Only ROW or ARRAY</td>
</tr>
<tr>
<td>Compatible with</td>
<td>Yes. No requirement of Frames, continuous Table</td>
<td>In some designs, bearing creates a gap every 8 modules, will need a special frame</td>
</tr>
<tr>
<td>Robotic Module Cleaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slope tolerances in N-S</td>
<td>2 bends allowed in N-S Torque tube</td>
<td>No bends allowed</td>
</tr>
<tr>
<td>Engineering Plastic -</td>
<td>No direct metal to metal contact, safe in a lightening strike</td>
<td>Metal to metal contact, will fuse in a lightening strike (high voltage)</td>
</tr>
<tr>
<td>Lightening strikes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motion dampers</td>
<td>No oil filled dampers</td>
<td>Oil filled dampers are an O&amp;M concern</td>
</tr>
</tbody>
</table>
India’s largest & world’s fastest growing tracker company

The ONLY company in the world to provide array and row trackers

Only tracker supplier from India to complete Independent Engineers Bankability Review

‘Solar Trackers Company of the Year 2015’
- 5th Global Solar EPC Summit

‘Solar Innovation & Excellence Award 2016’
- Solar Quarter’s India Solar Week

‘Solar Trackers Company of the Year 2016’
- 6th Global Solar EPC Summit

‘Top Ten Global Tracker Technology Companies for 2016’
- Greentech Media

‘Solar Innovation & Excellence Award 2017’
- Solar Quarter’s India Solar Week

‘Top Ten Global Tracker Technology Companies for 2017’
- Greentech Media

‘Solar Trackers Company of the Year 2019 - Single Axis’
- EQ’s PV Invest Tech Solar Award

‘Solar Trackers Company of the Year 2019 - Single Axis’
- Solar Quarter’s Solar Technovation Award
Tamil Nadu, India (11 MW)

India’s largest 10 degree TILT, Auto E-W tracking plant (20 MW)

Jericho City, Palestine (168 kW)

Madhya Pradesh, India (48 MW)
TRACKERS FOR BI-FACIAL, FRAMELESS, FRAMED IN 1P, 2P, 2H

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LOCATIONS
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- Japan
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- Thailand (South East Asia)
- UAE (Middle East, Africa)
- USA