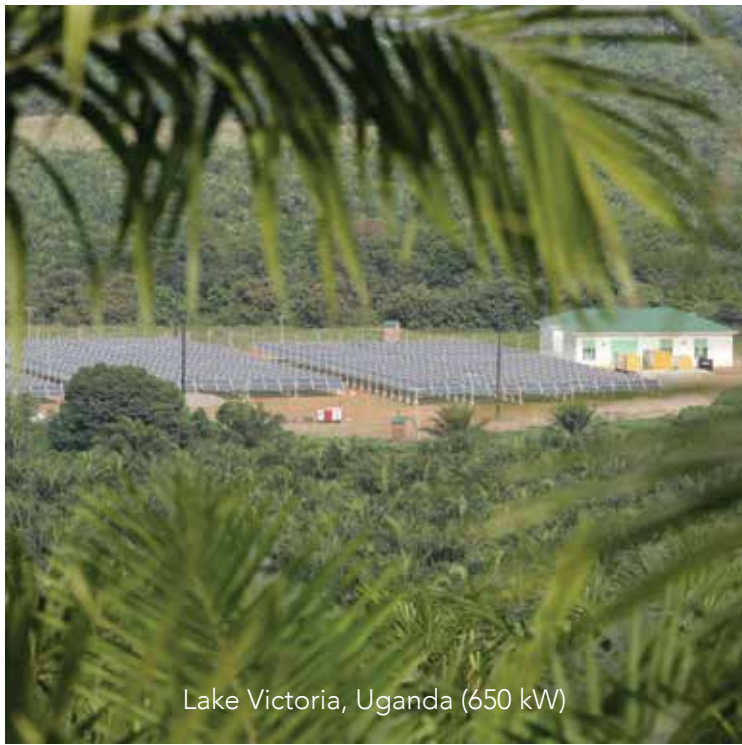


TRACKING
THE SUN.
FROM DAWN
TO DUSK. ©



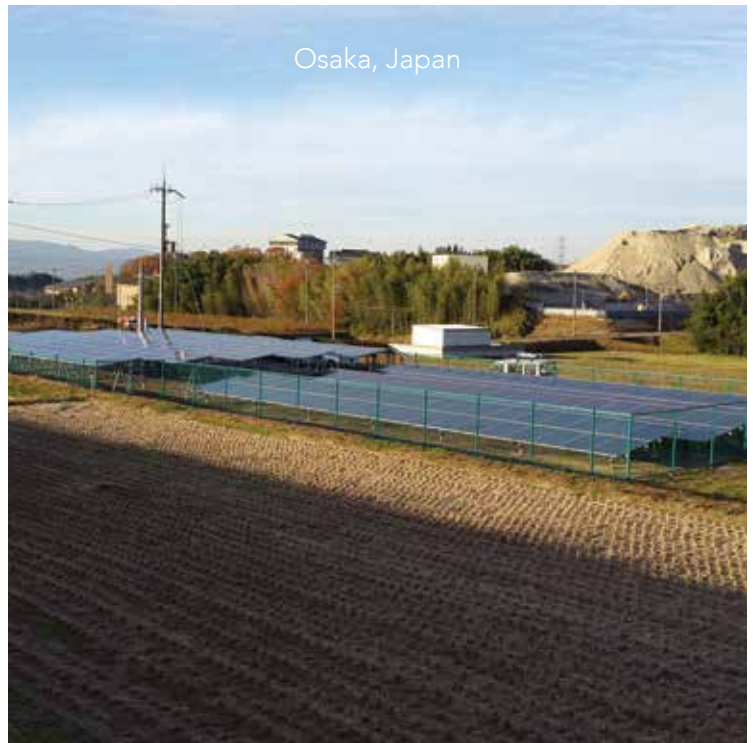
Lake Victoria, Uganda (650 kW)



Telangana, India (11 MW)



Uttar Pradesh, India (4.5 MW)



Osaka, Japan

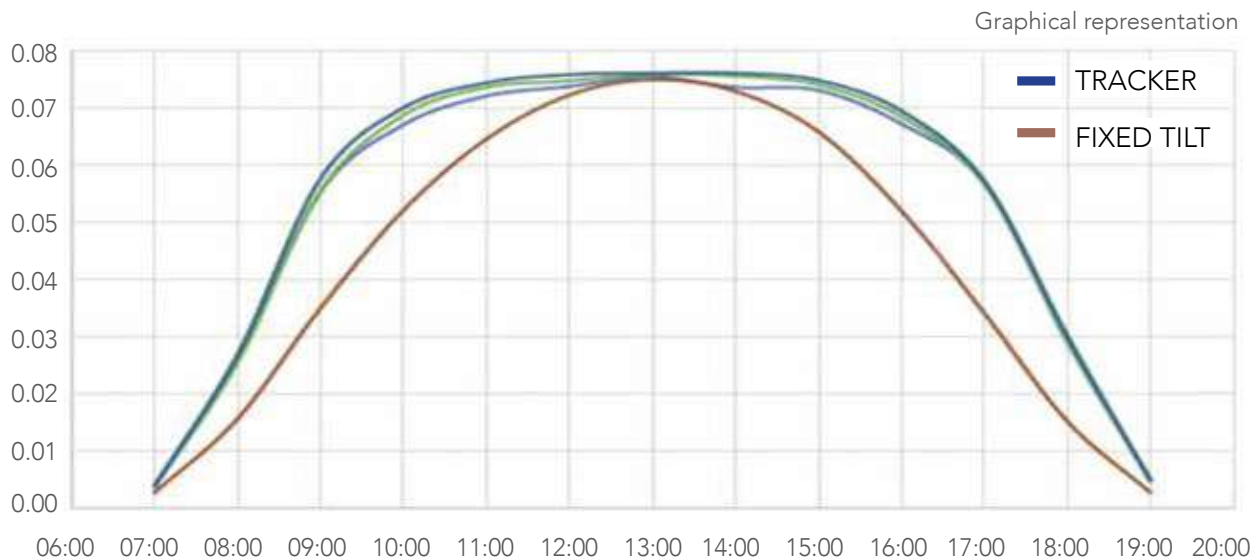
WHY TRACK THE SUN?

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.

TRACKING THE SUN. FROM DAWN TO DUSK.©

SGM Trackers offers the best in Tracking Technology; from maintenance-free bearings for the lifetime of the plant, to electronics and actuators that are self-powered. Truly, world-class bankable technology at very competitive upfront CAPEX and minimal O&M costs.

In-house facilities and instrumentation enable research, validation and testing.

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.

Tracker Technology has undergone Third Party Bankability



BLACK & VEATCH

Boundary Layer Wind
Tunnel Testing of Structures
completed



CERMAK
PETERKA
PETERSEN

SGM 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

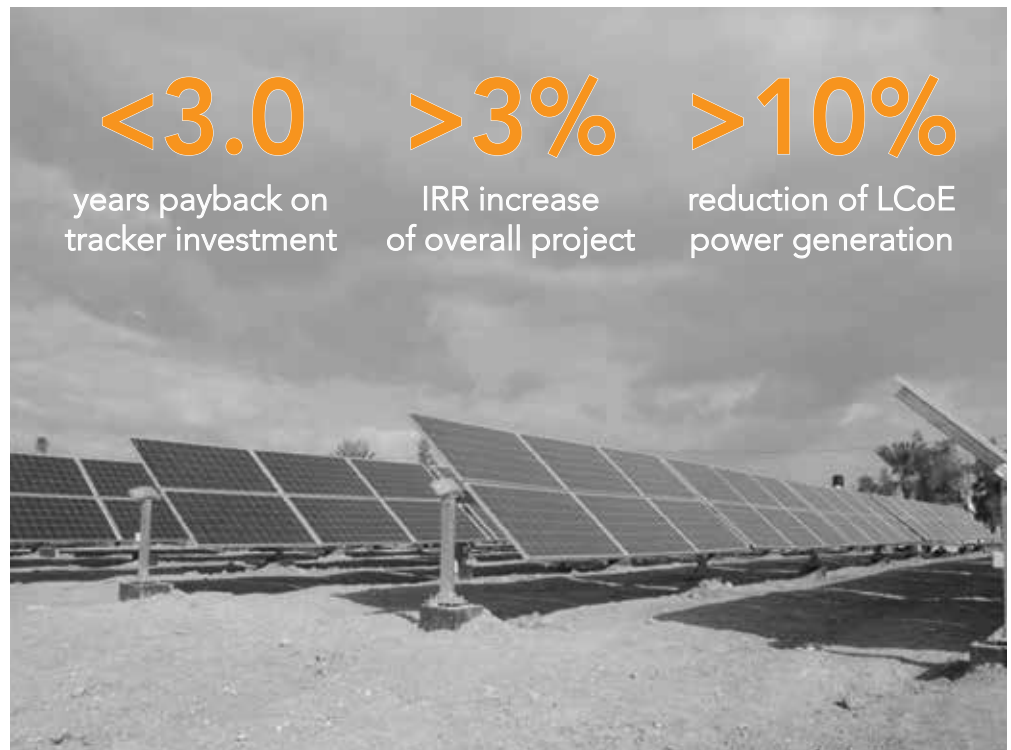
The only company in the WORLD to provide both, array and row trackers.

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.



400+ MW

SUPPLIED GLOBALLY

10,000+ MW

GLOBAL PIPELINE



adani™

TATA
TATA POWER

PREMIER
SOLAR

CleanMax
SOLAR

MYTRAH

SUN
PHARMA

ReNew
POWER
TRANSFORMING ENERGY

M+
SOLAR
AMPLUS SOLAR
WITH YOU
AT THE CORE

A member of PETRONAS group

HERO
FUTURE
ENERGIES
planet positive power

harsha
abakus solar

Shapoorji Pallonji

Customers: EPC
& IPP Players

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

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

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



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



Boundary Layer Wind Tunnel Study for MMS Design



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

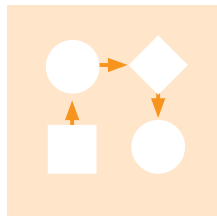
UNIQUE TECHNOLOGY FEATURES



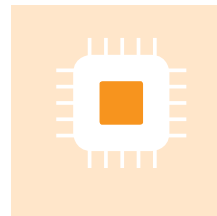
WiFi enabled communication



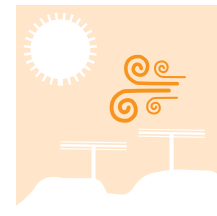
No lubrication required



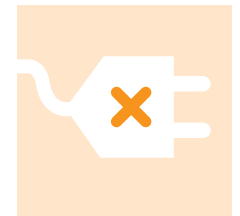
Robust control algorithms



Electronics for -10°C to +60°C



Stowing at wind speeds



No power consumption

UNIQUE CONTROL SYSTEM FEATURES

GAINMAX

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).

SAFEMAX

Lightening detection to predict storms.
Pressure detection.

TRACKMAX

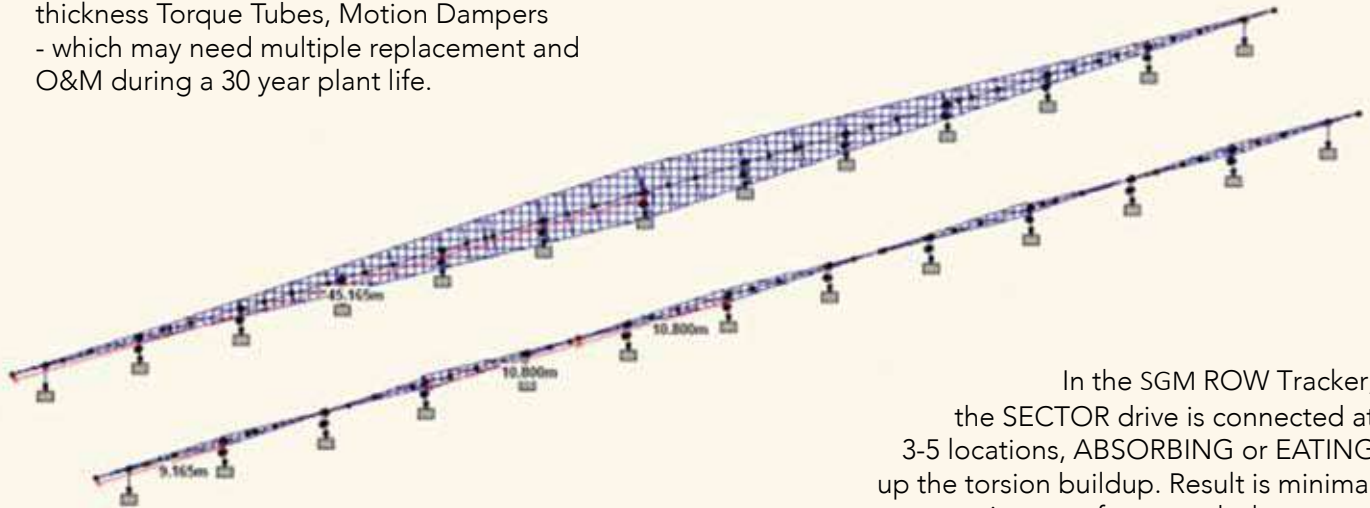
Individual Rows can be oriented and tilted independently at accurately calculated angles, for different elevation of adjoining Rows, to avoid shadows and Maximise gain.

AREAMAX

Best slope tolerance in the WORLD, 2 bends in 90 mts in N-S single ROW.
Globally patented Cable Drive allows installation on SLOPES.

SECTOR DRIVE SRT - IMPROVED STABILITY

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.



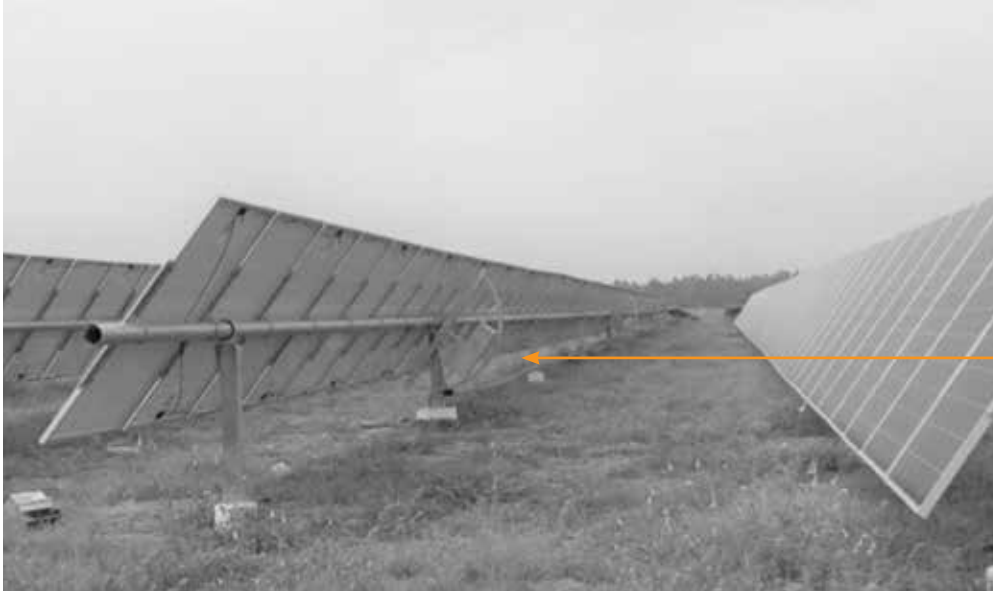
In the SGM ROW Tracker, the SECTOR drive is connected at 3-5 locations, ABSORBING or EATING up the torsion buildup. Result is minimal torsion transfer towards the centre, minimal wear and stress on torque tube and NO requirement of motion dampers.

SECTOR DRIVE SRT - UNIQUE FEATURES

FEATURE	BENEFIT	ADVANTAGE
Multiple Sector Drive	Reduced Unsupported Torsional Length	Additional Torsional Stiffness
Distributed & Lower Torque	More Design Stability	Uniform Torque tube Section Requirement
Low Torque Rating	Increased Durability	Lesser O&M
Torsionally Stiffer	Minimal Aero-Elastic Instability	No Dampers Required (No OIL maintenance)



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

	SGM TRACKERS	COMPETITORS
ROW and ARRAY	Both available, Bankable	Only ROW or ARRAY
Compatible with Robotic Module Cleaning	Yes. No requirement of Frames, continuous Table	In some designs, bearing creates a gap every 8 modules, will need a special frame
Slope tolerances in N-S	2 bends allowed in N-S Torque tube	No bends allowed
Engineering Plastic - Lightning strikes	No direct metal to metal contact, safe in a lightning strike	Metal to metal contact, will fuse in a lightning strike (high voltage)
Motion dampers	No oil filled dampers Globally patented Sector Cable drive	Oil filled dampers are an O&M concern

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

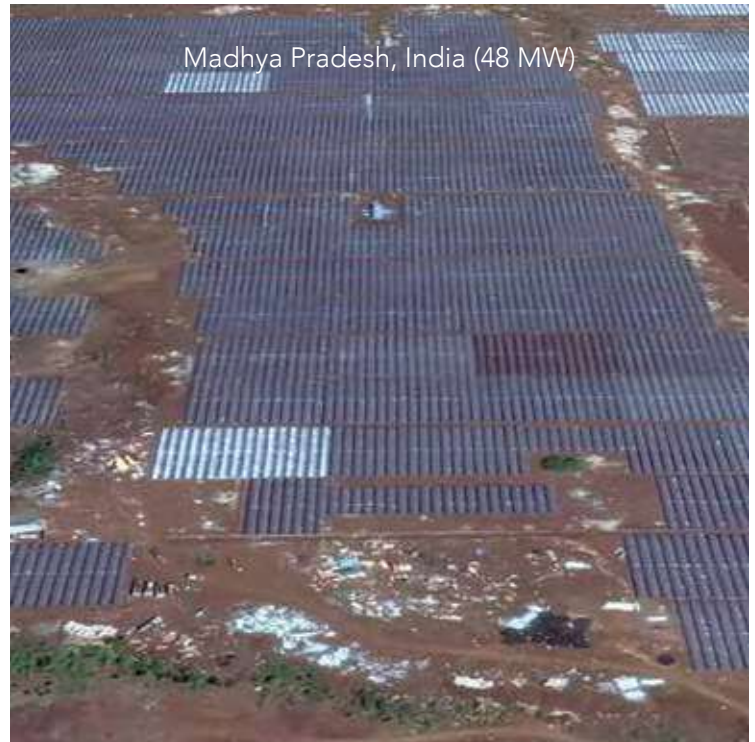
'Solar Trackers Company of the Year 2019 - Single Axis'
- Solar Quarter's Solar Technovation Award

Tamil Nadu, India (11 MW)



Jericho City, Palestine (168 kW)

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



Madhya Pradesh, India (48 MW)

TRACKERS FOR BI-FACIAL, FRAMELESS, FRAMED IN 1P, 2P, 2H



emPOWERing solutions
inspired for ENERGY SAVING

LOCATIONS

-  Australia
-  India
-  Japan
-  Portugal (Europe, Mexico, Brazil)
-  Thailand (South East Asia)
-  UAE (Middle East, Africa)
-  USA