

## INTRODUCTION

The Earth's  
Lowest Cost  
Energy System

# ERTHOS

Driving down cost, time, and risk in utility-scale solar

## OUR MISSION

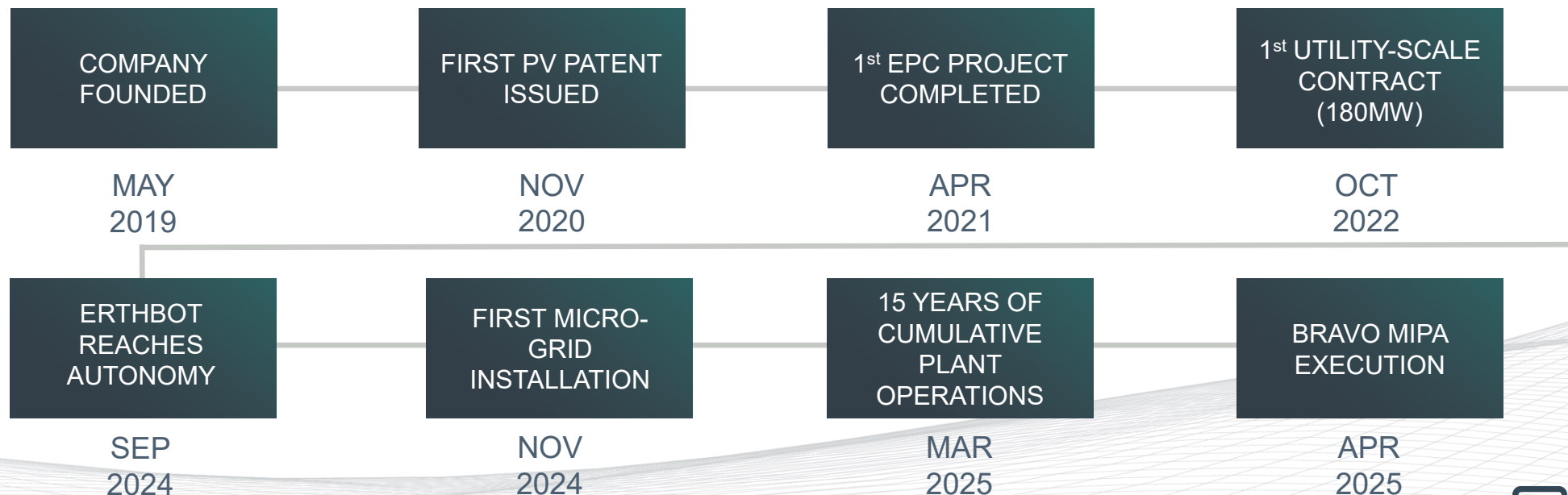
**To accelerate the  
world's transition to  
carbon-free energy**

**ERTHOS**



# ERTHOS OVERVIEW

| INDUSTRY         | HEADQUARTERS      | HEADCOUNT | CONTRACTS       |
|------------------|-------------------|-----------|-----------------|
| RENEWABLE ENERGY | CHANDLER, ARIZONA | 60        | 1,835 MEGAWATTS |



# OUR LEADERSHIP TEAM – 300+ YEARS OF COMBINED EXPERIENCE



**JIM TYLER**  
CEO – 28 yrs.



**KEITH DOWNIE**  
CIO – 37 yrs.



**JESSICA KNIGHT**  
COO – 18 yrs.



**LONNIE RICHEY**  
SVP, PROJECT  
EXECUTION – 28 yrs.



**JAYSON SUTHERLAND**  
SVP, ENGINEERING  
– 23 yrs.



**CHAD MEDCROFT**  
SVP, GLOBAL ENERGY  
SERVICES – 26 yrs.



**SAM BARTON**  
VP, PF & CAPITAL  
MARKETS – 13 yrs.



**JESSICA TIFFANY**  
VP, PEOPLE &  
CULTURE – 16 yrs.



**RICK VANCE**  
SR. DIR., SALES – 23 yrs.



**JACOB FRANTZ**  
SR. DIR, BUSINESS  
SYSTEMS – 21 yrs.

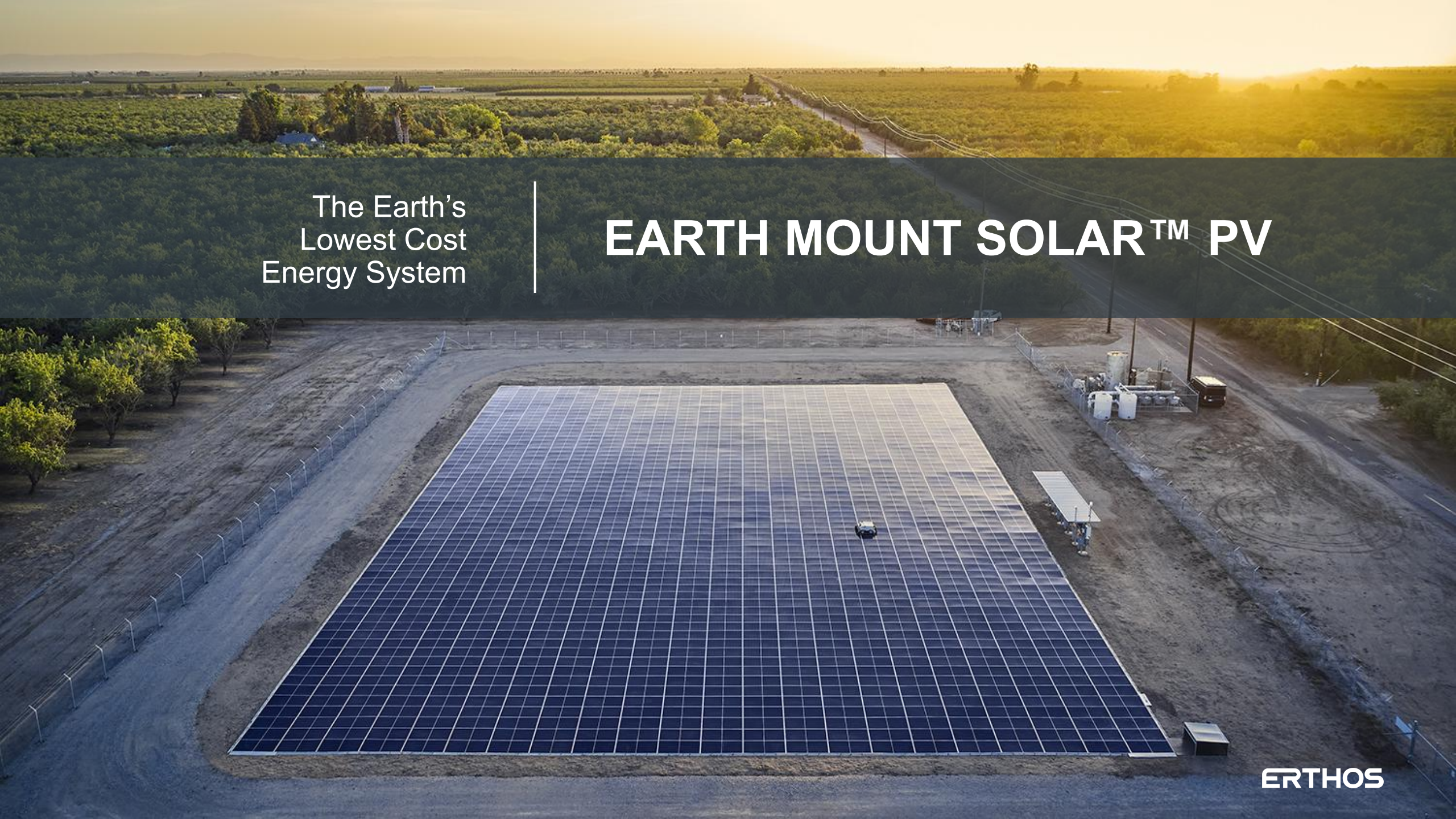


**MIKE ANDERSON**  
SR. DIR., PERFORMANCE  
& ANALYTICS –  
27 yrs.



**GUSTAVO GARZA**  
SR. DIR., GLOBAL SUPPLY  
CHAIN – 22 yrs.



An aerial photograph of a large-scale solar farm. The solar panels are arranged in a neat grid, reflecting the golden light of the setting sun. The farm is situated in a flat, open landscape with some trees and a dirt road visible in the background. The sky is a mix of orange and yellow, indicating dusk. A dark horizontal band across the middle of the image contains white text.

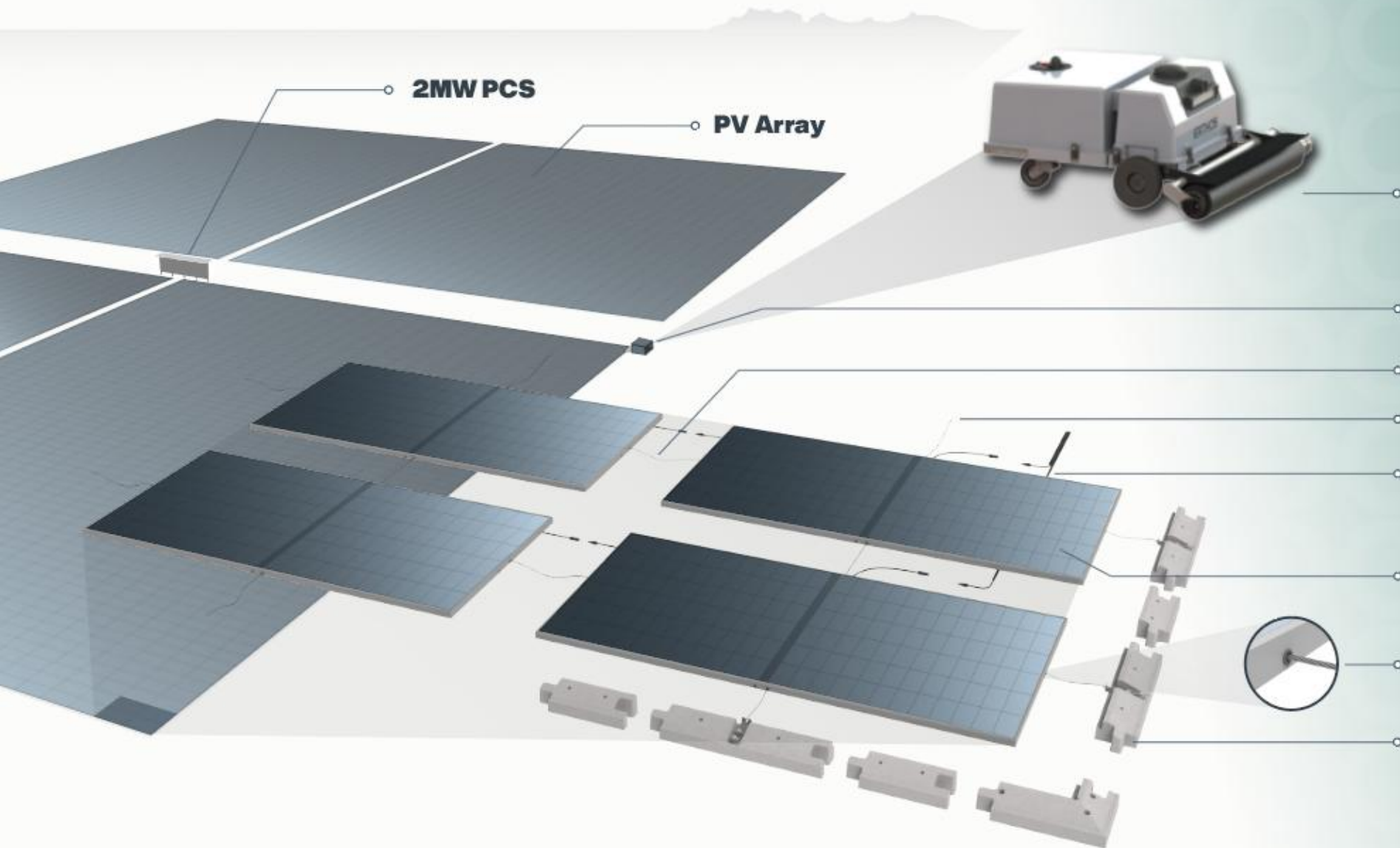
The Earth's  
Lowest Cost  
Energy System

# EARTH MOUNT SOLAR™ PV

ERTHOS

2 MW<sub>ac</sub> PCS





2MW PCS

PV Array



The Earth's  
Lowest-Cost  
Energy System

ErthBot™ Autonomous  
Cleaning Robot

ErthBot Docking Station

E/W Mesh Cable

N/S Mesh Cable

Laminated Cable  
Assembly

ErthCompatible™  
Solar Module

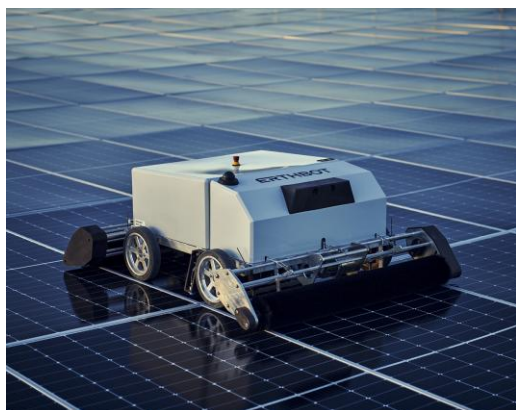
Mesh Cable Hole

Perimeter Block

# EARTH MOUNT SOLAR™ PV

Erthos has reinvented utility-scale solar by eliminating steel mounting structures, installing solar modules directly on the ground, and cleaning the array with its ErthBot autonomous cleaning robot.

With low-cost solar modules, it is more economical to add solar modules and eliminate mounting and tracking structures.



## KEY TECHNICAL BENEFITS

**ELIMINATES  
STRUCTURAL STEEL**



**HURRICANE  
PROOF**



**NO SUB  
SURFACE RISK**



**AUTONOMOUS  
CLEANING**



**70% LESS  
TRENCHING**



**70% LESS  
CABLE USAGE**



## RESULTING VALUE

**Lowest**

CAPEX,  
OPEX, LCOE

**>2X**

Energy  
Per Acre

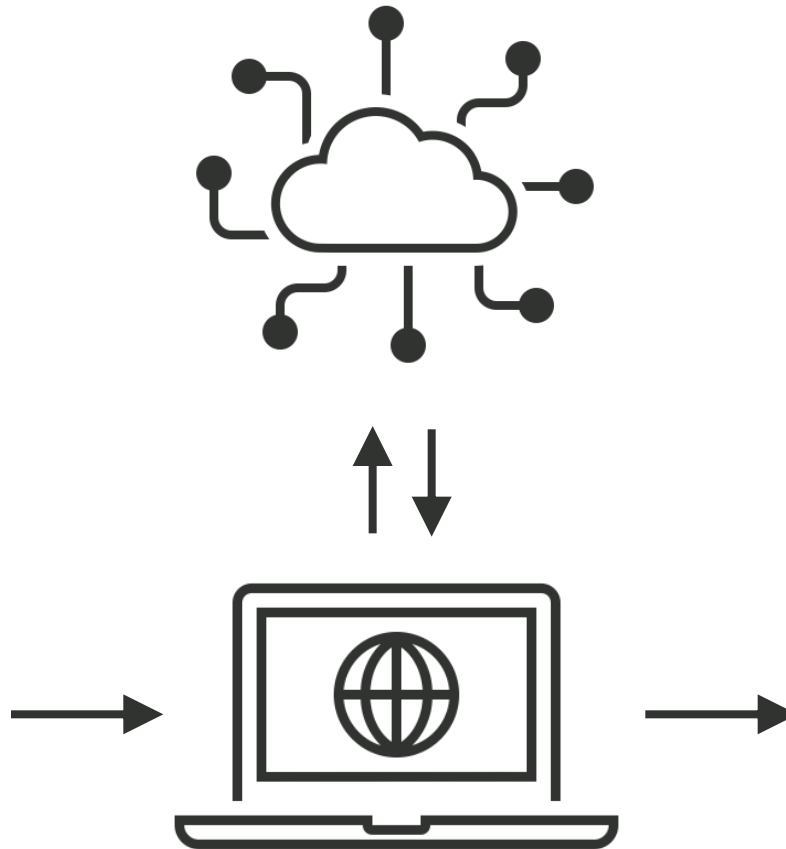
**~1/2**

Build  
Time

# INSTANT PROJECT ESTIMATES

## INPUTS

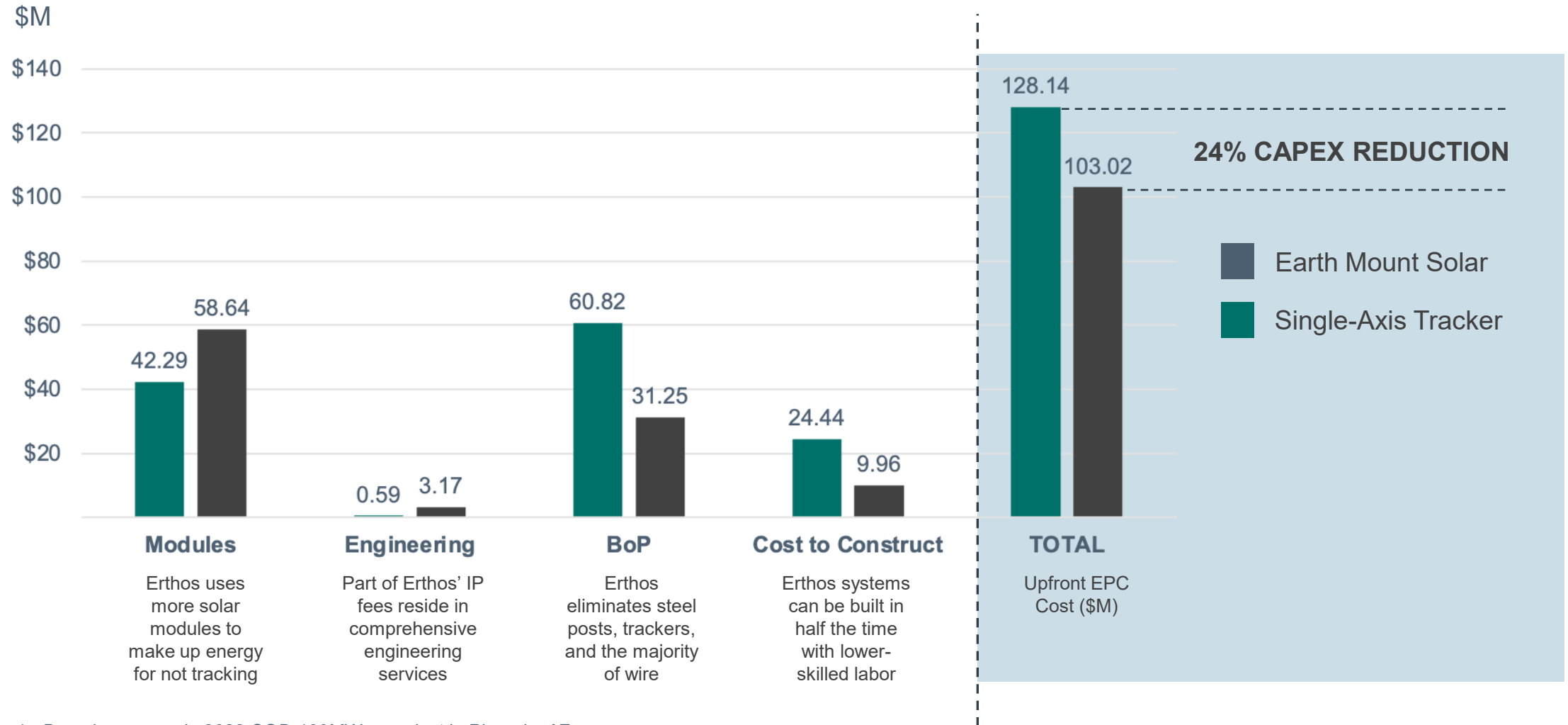
- **LOCATION**
- **BUILDABLE ACRES**
- **DISTANCE TO INTERCONNECT**
- **INTERCONNECT VOLTAGE**



## OUTPUTS

- **EQUIPMENT BOM**
- **COST TO BUILD**
- **OPEX**
- **ENERGY**
- **LAND USAGE**
- **TIME TO BUILD**

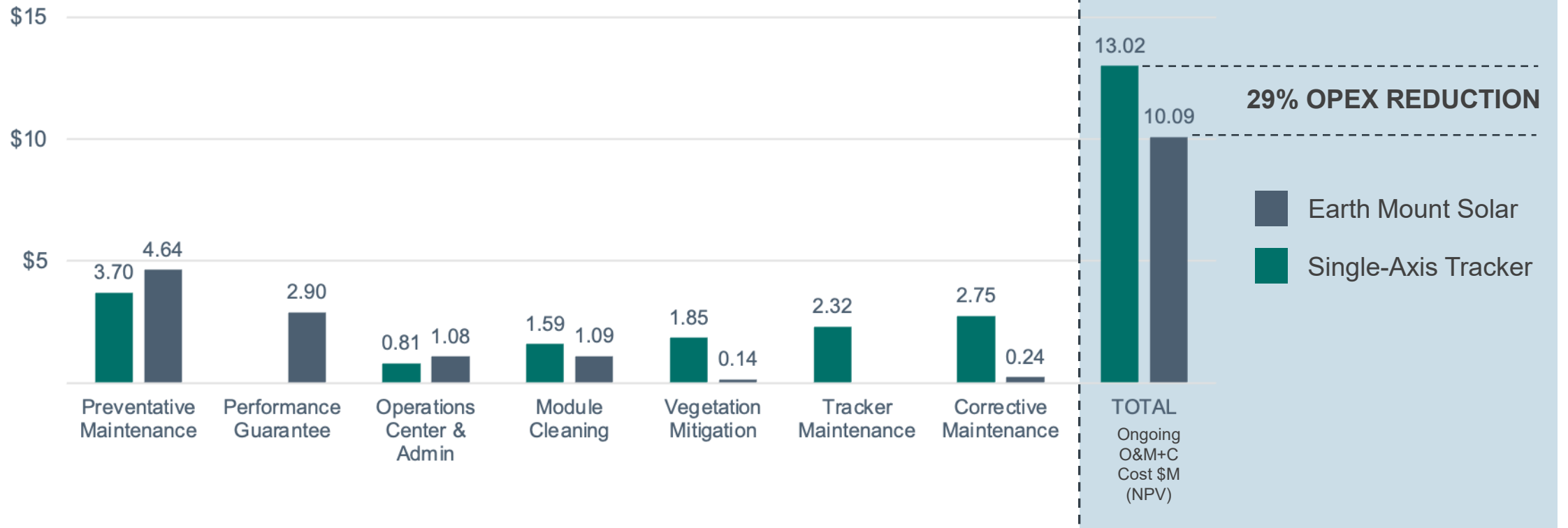
# CAPEX: ERTHOS VS. TRACKERS<sup>1</sup>



<sup>1</sup> - Based on example 2023 COD 100MWac project in Phoenix, AZ.

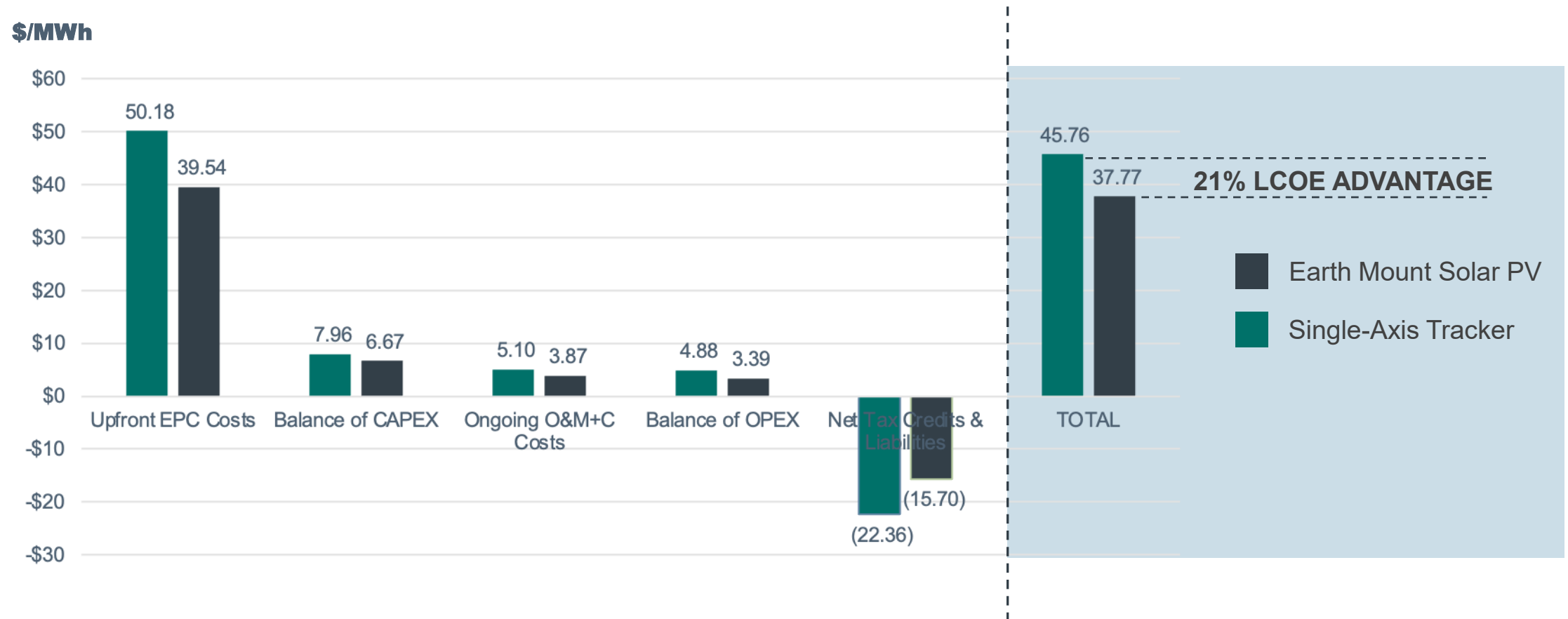
# O&M+C: ERTHOS VS. TRACKERS<sup>1</sup>

\$M (NPV)



<sup>1</sup> - Based on example 2023 COD 100MWac project in Phoenix, AZ. Assumes 10% discount rate.

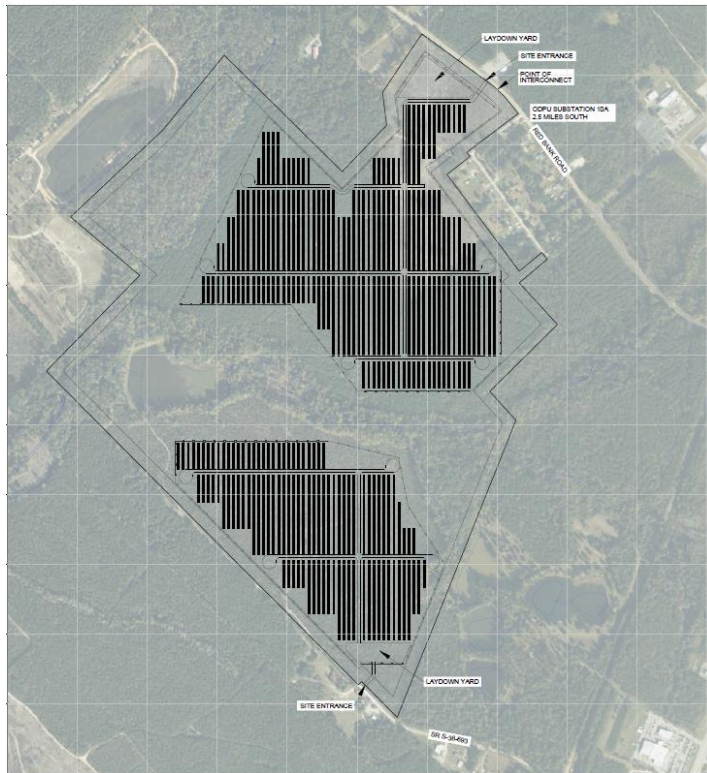
# INDICATIVE LCOE: ERTHOS VS. TRACKERS<sup>1</sup>



1 - Based on example 2023 COD 100MWac project in Phoenix, AZ. Opex and Energy discounted at 10% rate for both technologies. 40% Solar ITC assumed. Assumes AC interconnect constrained site.

# LAND COVERAGE COMPARISON – 25 MW PLANT

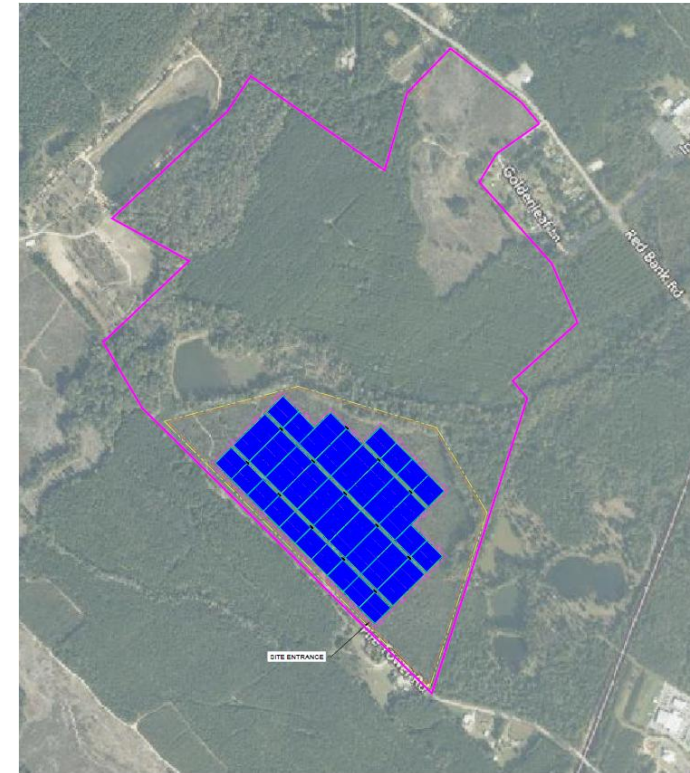
## Single-Axis Tracker



170 acres  
land coverage

5.6  
acres/MWac

## Earth Mount Solar™ PV



55 acres  
land coverage

2.2 acres/MWac

# SCOPE OF UTILITY-SCALE SOLAR PRODUCTS & SERVICES



## **Project Services**

Engineering, permitting, procurement services, onsite QC

## **ErthGear™ Product Supply**

Mechanical, DC electrical, SCADA, cleaning robot

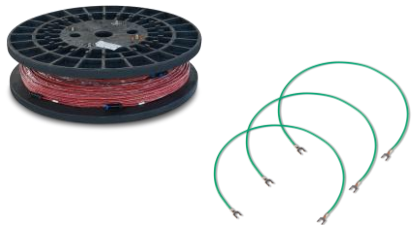
## **Energy Services**

Long-term, full-wrap O&M, including robotic cleaning

# ERTHGEAR™ PRODUCT FAMILIES

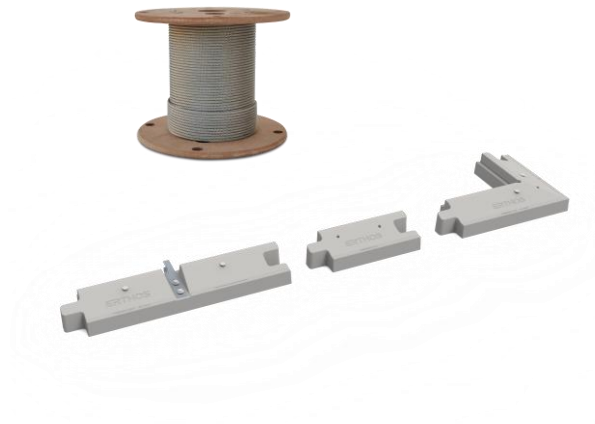
## DC Electrical Package

- Laminated Cable Assembly
- Module Bonding Jumper
- String Bonding Jumper
- Mesh Bonding Jumper
- C-Tap Crimp Connector
- Grounding Electrode
- Module Grounding Hardware



## Mechanical Package

- Perimeter Block
- Mesh Cable
- Cable Termination Hardware
- Snap-In Module Bushing



## Control Package

- SCADA Cabinet
- Met. Sensor
- GHI Pyranometer
- Back of Module RDT
- Soiling Sensor Mount
- Soiling Sensor
- Webcam
- Cell Modem
- WIFI Switch
- Metering Package
- AC Panel Board

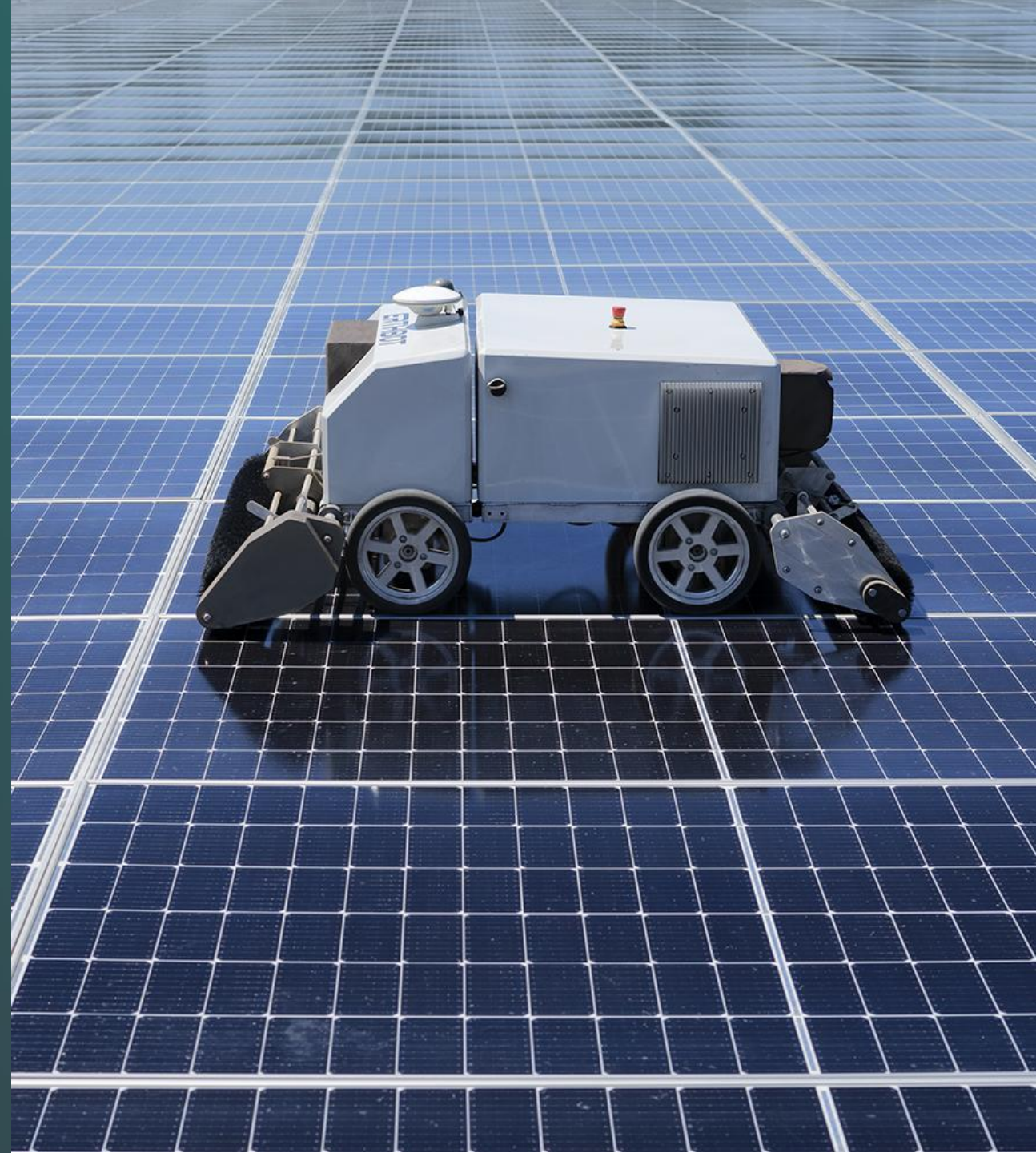
## Cleaning Package

- ErthBot
- Docking Station
- GPS RTK Base Unit
- Control Cabinet
- 5kVA Transformer
- Omni antenna
- Island Bridge



## ERTHBOT™ AUTONOMOUS CLEANING ROBOT

- Lowest cleaning cost due to amortization of 1 robot over 2 MWac
- Daily DC health checks reduce lost energy by reducing time before servicing faults
- Nightly cleaning
- Cleans in dry or wet conditions
- Development team led by former Intel® Industrial Robotics Technical Lead
- Robots deployed today on all operating systems



# EARTH MOUNT SOLAR™ PV: OPERATING PROJECTS



616 kWdc: Merced County, CA  
COD: July 1, 2022



656 kWdc: Tulare County, CA  
COD: July 12, 2022



616 kWdc: Madera County, CA  
COD: May 25, 2022



336 kWdc: Madera County, CA  
COD: May 25, 2022



336 kWdc: Kern County, CA  
COD: August 6, 2021

Crystalline & CdTe  
Test Sites –  
Erthos/Tracker  
comparisons

California, Arizona

# 100 MWAC PROJECT CASE STUDY

## 2X Energy Per Acre

- DEVELOPER: Industrial Sun
- LOCATION: Texas
- DESIGN GOAL: Maximize energy capacity
- ALLOWABLE INTERCONNECT CAPACITY: 100 MWac
- SOLUTION: Full power capacity with Earth Mount Solar™ PV

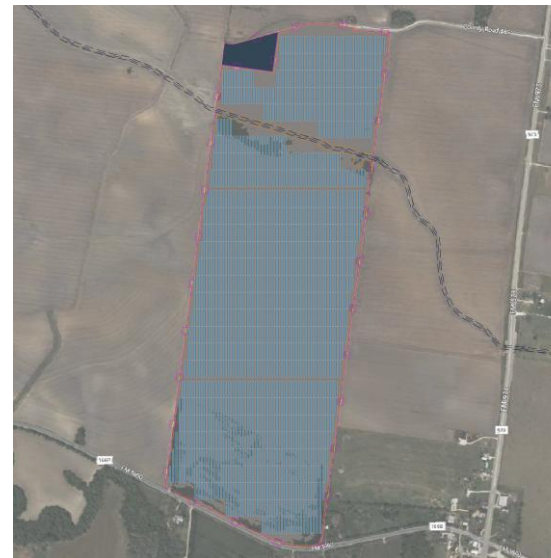
**ERTHOS**



## ERTHOS

Max Power:  
100 MWac

Energy Density:  
2.45 acres/MWac



## TRACKER

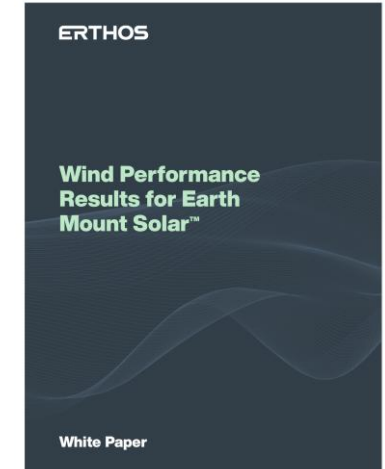
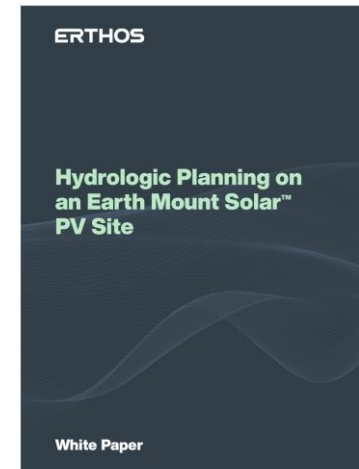
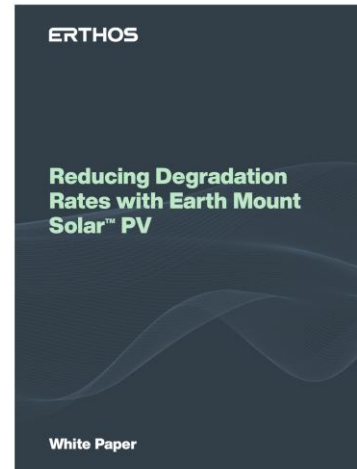
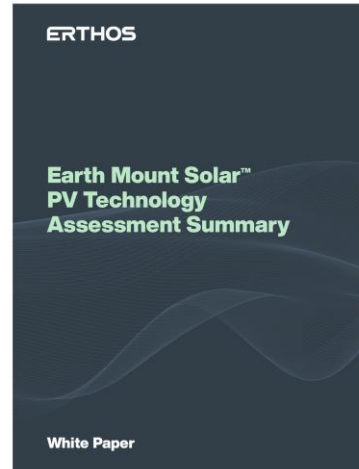
Max Power:  
49 MWac

Energy Density:  
5.0 acres/MWac

# RESOURCES

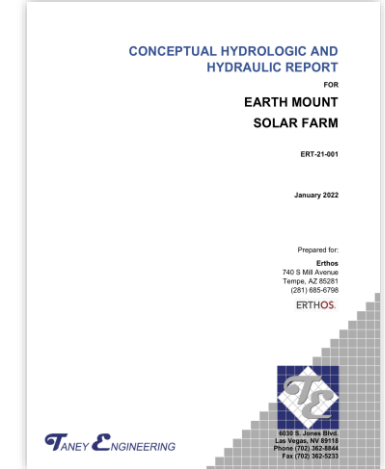
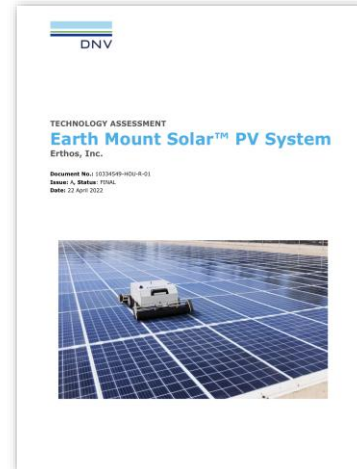
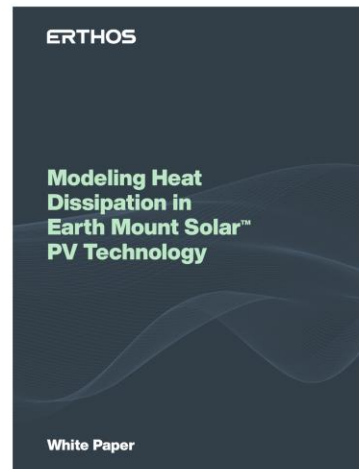
## WHITE PAPERS

- Tech Assessment Key Takeaways
- Degradation Benefits
- Hydrologic Design
- Wind Performance
- Thermal Performance



## 3<sup>RD</sup> PARTY REPORTS

- DNV Tech Assessment
- Wind Tunnel Report
- Hydrology Report



# Energy Services

# ERTHOS SOLAR ENERGY SERVICES



Full-Wrap Operations & Maintenance



Autonomous Robotic Cleaning



Performance-Based Price Guarantee

**ERTHOS**



# FULL SCOPE OF FEATURES & SERVICES

| Service                             | Typical O&M     | Energy Guard                     |
|-------------------------------------|-----------------|----------------------------------|
| Term of Service                     | 3-5 Years       | Life of PPA or Merchant Contract |
| PV Array Cleaning                   | Additional Cost | On Demand                        |
| Performance Guarantee               | Additional Cost | Incentive-Aligned Pricing        |
| Vegetation Mitigation               | Additional Cost | Included at ½ Cost               |
| Corrective Actions                  | Reactive        | Prescriptive                     |
| 24/7 Plant Operations               | Included        | Included                         |
| Preventative Maintenance            | Included        | Included                         |
| Warranty Claim Management           | Included        | Included                         |
| Reporting & Performance Engineering | Included        | Included                         |

# ENERGY GUARD COVERAGE

| Risk Factor        | Typical O&M Coverage | Energy Guard Coverage |
|--------------------|----------------------|-----------------------|
| Plant Uptime       | ✓                    | ✓                     |
| Module Degradation | ✗                    | ✓                     |
| DC Health          | ✗                    | ✓                     |
| AC Degradation     | ✗                    | ✓                     |
| Component Failure  | ✗                    | ✓                     |
| Force Majeure      | ✗                    | ✗                     |