



ASTRONERGY

About Astronergy



Astronergy has always taken sustainability as its innate mission and is committed to achieving carbon neutrality across entire value chain by 2050.

## About Astronergy

GOLD | Top 5%

ecovadis

Sustainability Rating

DEC 2024



### Operation

As a green manufacturing enterprise, Astronergy implements low-carbon actions through every PV module, practices green behaviors through every employee, and guides our partners in the PV industry chain to build a sustainable ecology together.



### Products

Astronergy uses large-size wafers for all of its modules and actively promotes the use of thinner wafers, fluorine-free backsheets, etc., to continually improve module efficiency and reduce the carbon emissions and energy consumption of ASTRO N series modules.



### Customer

Astronergy always puts customers' needs first and focuses on communication and cooperation. We are constantly looking for new ways to better serve our customers with more convenient services and sustainable products.



### Employee

Astronergy is deeply committed to employee welfare and implements various initiatives in recruitment, training and corporate culture, emphasising equal opportunities and respecting employees from different backgrounds.

## International Initiatives



Note: Data in this product flyer was collected at Apr.2025 The information contained on this flyer is subject to change without notice.



Committed to  
**Sustainability Strategy**



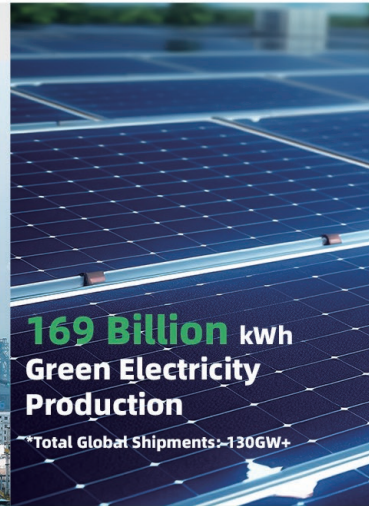
**34.92 tCO<sub>2</sub>e/MW**  
Cell Unit Product Scope  
1+2 GHG Emissions Intensity

**6.47 tCO<sub>2</sub>e/MW**  
Module Unit Product Scope  
1+2 GHG Emissions Intensity



**169 Billion kWh**  
**Green Electricity**  
**Production**

**\*\*Total Global Shipments: ~130GW+**



**34.74 tons/MW**  
**Water Consumption**  
**Intensity (Cell & Module)**



**Diverse Workforce**  
of **38** Countries and  
**42** Nationalities



**ASTRONERGY**

**Key Figures in 2024**

**22.22%**  
**Proportion of Female**  
**Directors**



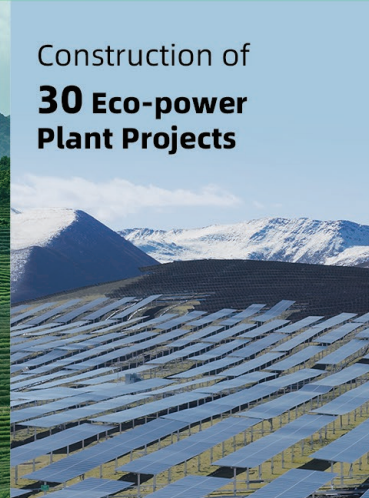
**Solar The Future**  
Astronergy First Public  
Welfare Program



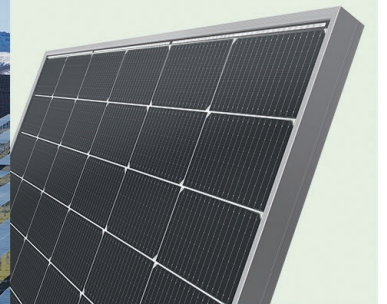
**All Core Suppliers**  
Obtained  
**ISO 45001/14001**  
**Certification**



Construction of  
**30 Eco-power**  
**Plant Projects**



**38 Main Products**  
Product  
**Life Cycle Assessments**



## Certification



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# ZERO BY 2050

Carbon Neutrality

# Sustainability Strategy

2035  
Year

**100**

Eco-power Plant

**40%**

Female Employee Proportion

**100%**

Operate With Renewable Energy

**0**

Landfill Waste

**8**

Zero Carbon Factories

**1st**

Zero Carbon Factory

**CRE4 ECS**

French Carbon Footprint Certification

**1,000**

Employees Gain Support For Their Continuous Education

**30%**

Female Senior Management Staff Proportion

**100%**

Core Suppliers Obtained ISO 14001/45001 Certification

**10,000**

Farmers Gained Help For Income Increase

**30%**

Female Technician Proportion

**90%**

Product Recycling Rate

2028  
Year

2023  
Year



Download Astronergy  
ESG Report



# Sustainability Approach

As a clean energy industry involver, Astronergy is still on its way to practicing its vision of creating a sustainable and net-zero carbon world with solar power. We believe, with combined efforts, we can contribute to a green, sustainable life in the near future and realize the harmonious co-existence between humans and nature.

## Building A Green Supply Chain

- Green Supplier
- Green Design
- Green Manufacturing
- Green Recycling
- Green Data Disclosure

## Addressing Climate Changes

- Carbon Neutrality
- Sustainable Energy

## Creating A Harmonious Community

- Human Rights
- Community Relations

## Protecting Environments

- Water
- Waste
- Biodiversity Conservation

## Advancing Products And Services

- Product Quality Assurance
- Sci-tech Innovation



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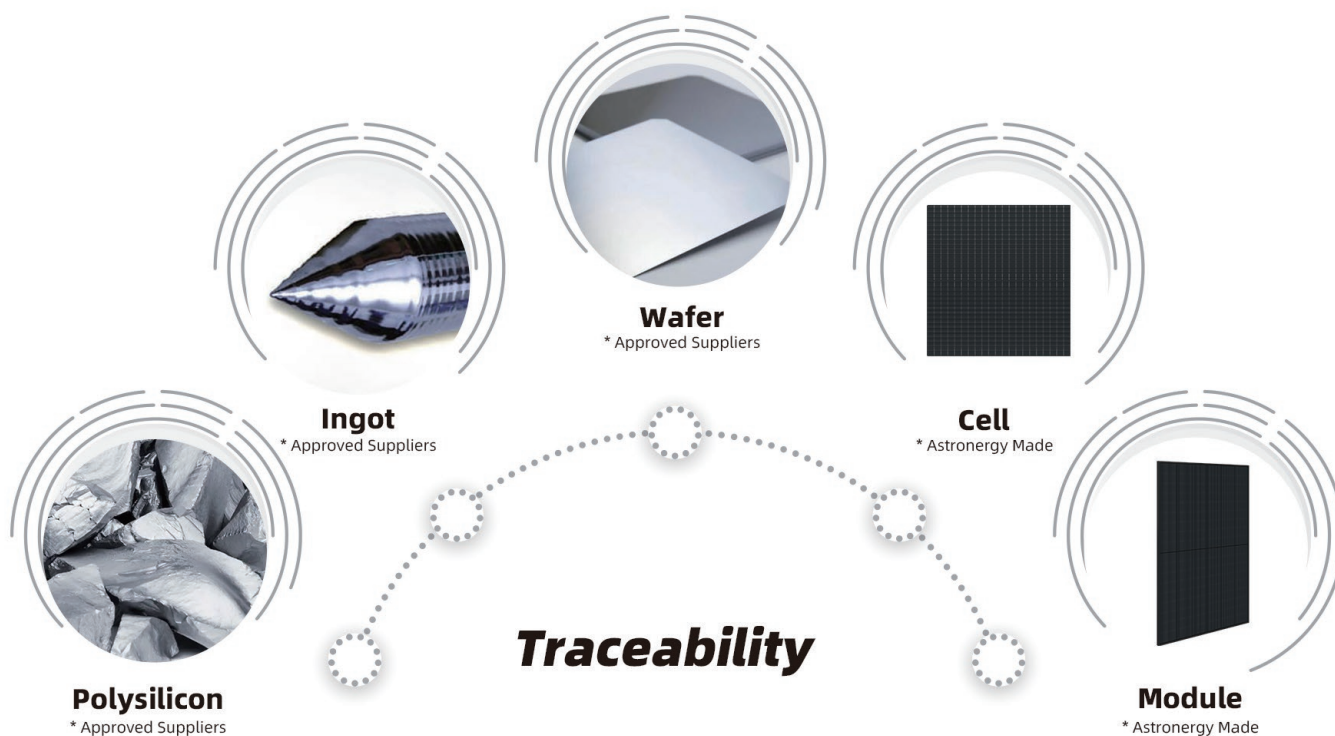
ASTRONERGY

## Building A Green Supply Chain

We shoulder our responsibility to outline a green supply chain management system, to minimize the environmental impact of every step of our manufacturing.



Astronergy has developed a comprehensive traceability system to ensure product quality, which covers all aspects of the supply chain from upstream suppliers to finished products, showing our superior product reliability and corporate responsibility as an industrial benchmark.



### Third-Party Audits





## Green Supplier

Astronergy emphasizes the responsible sourcing of raw materials and partnerships with environmentally responsible suppliers.



First Company Enabling Automatic  
'AI Detection of EL Defects'

## Green Manufacturing

Astronergy enables the intelligent monitoring and traceability in the production process from raw materials to finished products.



Automated Guided Vehicle (AGV)  
95% Automation Rate

## Green Recycling

Astronergy believes that green recycling plays a vital role in promoting a circular economy, in which resources are used effectively.

100%

Recyclability rates of aluminum frames, glass, and junction boxes

95%

Recyclability rate of PV cell

80%

Recyclability rate of PV ribbons



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## Addressing Climate Changes

We take addressing climate change as an important issue and practice actions to promote green transformation through our daily operations.

### Rooftop

**26,590**  
PV Modules Installed

**80,000 m<sup>2</sup>**  
Coverage

**11.18 million kWh**  
Electricity Annually

**6,376 tons**  
Carbon Emission Reduced

### Lighting System

**200+**  
Streetlights Installed

**31,080 kWh**  
Electricity Annually

**17.7 tons**  
Carbon Emission Reduced

Astronergy finished the upgrade of its first zero-carbon factory - Yancheng Zero-Carbon Factory.

### Carport

**4,614 m<sup>2</sup>**  
Coverage

**220**  
Motor Vehicles Parked

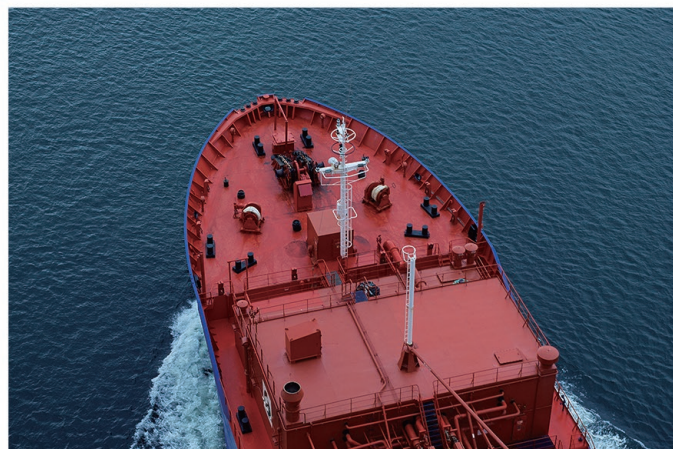
**920,000 kWh**  
Electricity Annually

**400**  
Non-motorized Vehicles Parked

Astronergy improved transport mechanism by increasing the water transport and reducing the transportation of container trucks.

### Water Transportation

**571.84 tons**  
Carbon Emission Reduced (Haining MFG. To Ningbo Port)







## Protecting Environments

We endeavour to reduce waste, conserve water and contribute to a biodiverse environment through our operations.



Astronergy, NIO and OPF hand for the world's first EV PV Self-consumption System with V2G Chargers at Qilian Mountain National Park.

### Clean Park

**75**

ASTRO N PV Modules Installed

**53 tons**

Carbon Emission Reduced

**670,000 kWh**

Electricity Annually

Astronergy focuses on the management of water resources in the production and operation process, and is committed to improving the efficiency of water use.

### Cooling Tower

**69,000 cubic meters**

Water Consumption Saved



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## Creating A Harmonious Community

We not only pursue harmony and peace within the enterprise, but also hope to influence the society with more innovative PV+ concepts to accelerate green development.



### 'PV+' Public Education

Astronergy has initiated a public education center for promoting eco-friendliness, which has attracted hundreds of kids and their families come to manufacturing bases to get inspirations for a sustainable and eco-friendly future.

### Homing Program

Astronergy fully protects the rights and interests of employees, creates a culturally-integrated working environment like 'Homing' event, and provides employees with broad career development opportunities.

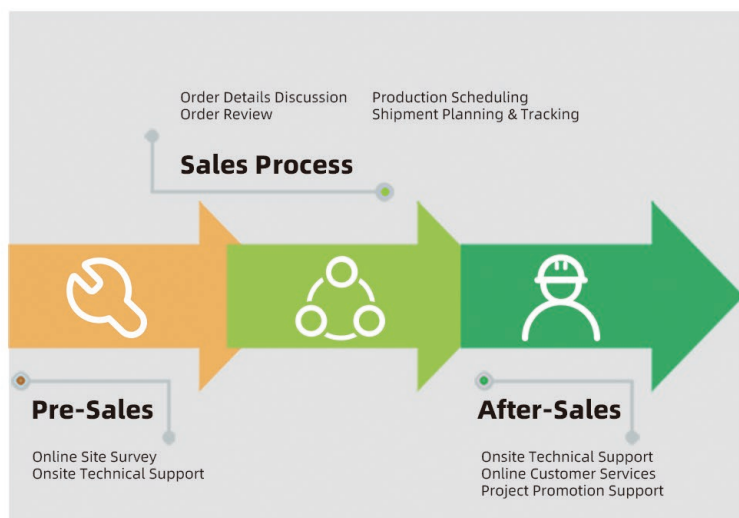






## Advancing Products And Services

We keep innovating and striving for technological advancements in a rapidly evolving industry landscape, delivering products & services that help our customers with their sustainable development.



### One-Stop Service

Astronergy is constantly improving its customer service and establishing a one-stop shop to ensure flexibility, credibility and quick action.

### Leading Technology

Astronergy is in the leading position in the n-type TOPCon, and its main series of products, the ASTRO N7 and N7s, utilize TOPCon 5.0 solar cell technology and more environmentally friendly materials.



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