

JA SOLAR GREENHOUSE GAS EMISSIONS REPORT

2023

www.jasolar.com



About This Report

This report is a greenhouse gas (GHG) emissions report published by JA Solar and its domestic and overseas subsidiaries (hereinafter referred to as "JA Solar" or "the Company"). It discloses the greenhouse gas emissions from the operations and value chain of the Company.

Accounting Boundary

The accounting boundary of this report is the domestic and overseas subsidiaries over which JA Solar has operational control. The subsidiaries are divided into 12 bases^① and others^② based on business type and geographical location.

List of JA Solar Bases



① The 12 bases include all the domestic and overseas subsidiaries that JA Solar has operational control over the production of photovoltaic products and auxiliary materials in the corresponding regions.

② Others include all photovoltaic power plant project companies and sales companies that JA Solar has operational control in the current year.

Accounting Period

The accounting period for this report is from January 1, 2023 to December 31, 2023.

Accounting Methods and Verification Standards

The Greenhouse Gas Protocol - A Corporate Accounting and Reporting Standard and Greenhouse Gases - Part 1: Specification with guidance at the organizational level for quantification and reporting of greenhouse gas emissions and removals (ISO 14064-1:2018) are used as references for greenhouse gas emissions accounting. To enhance the credibility of the reported data, the Company has commissioned a third-party organization to conduct independent verification based on the *Greenhouse Gases - Part 3: Specification with guidance for the verification and validation of greenhouse gas statements (ISO 14064-3:2019)*. The Greenhouse Gas Emissions Verification Statement obtained by the Company is attached in the Appendix of this report.



Greenhouse Gas Emissions Accounting Categories

GHG Scopes	GHG Emissions Categorization (ISO14064)	GHG Emissions Categorization (GHG Protocol)
Scope 1	Direct GHG emissions and removals	Direct GHG emissions
Scope 2	Indirect GHG emissions from imported energy	Electricity and heat indirect GHG emissions
Scope 3	Indirect GHG emissions from transportation	Upstream transportation and distribution Downstream transportation and distribution Business travel Employee commuting
	Indirect GHG emissions from products used by an organization	Purchased goods and services Capital goods Fuel- and energy-related activities not included in Scope 1 or Scope 2 Waste generated in operations Upstream leased assets
	Indirect GHG emissions associated with the use of products from the organization	Use of sold products Processing of sold products End-of-life treatment of sold products Downstream leased assets Franchises Investments
	Indirect GHG emissions from other sources	N/A



Greenhouse Gas Emissions Accounting Results

In 2023, JA Solar conducted greenhouse gas emissions data accounting for the domestic and overseas subsidiaries under operational control to fully understand the impact of its operations and value chains, and it commissioned a third-party organization to carry out independent verification of Scope 1, Scope 2 and Scope 3 emissions in accordance with the *Greenhouse Gas Part 3: Specification with guidance for the verification and validation of greenhouse gas statements* (ISO 14064-3:2019). The greenhouse gas emissions of JA Solar within the scope of this report from the year 2021 to 2023 are shown in the following chart:

Total GHG Emissions (Scope 1 + Scope 2)
Unit: tCO₂e

2,871,963

Other Indirect GHG Emissions (Scope 3)
Unit: tCO₂e

24,351,855

GHG Emissions (Scope 1 + Scope 2) Intensity
Unit: tCO₂e/RMB 100 million

3,521.45

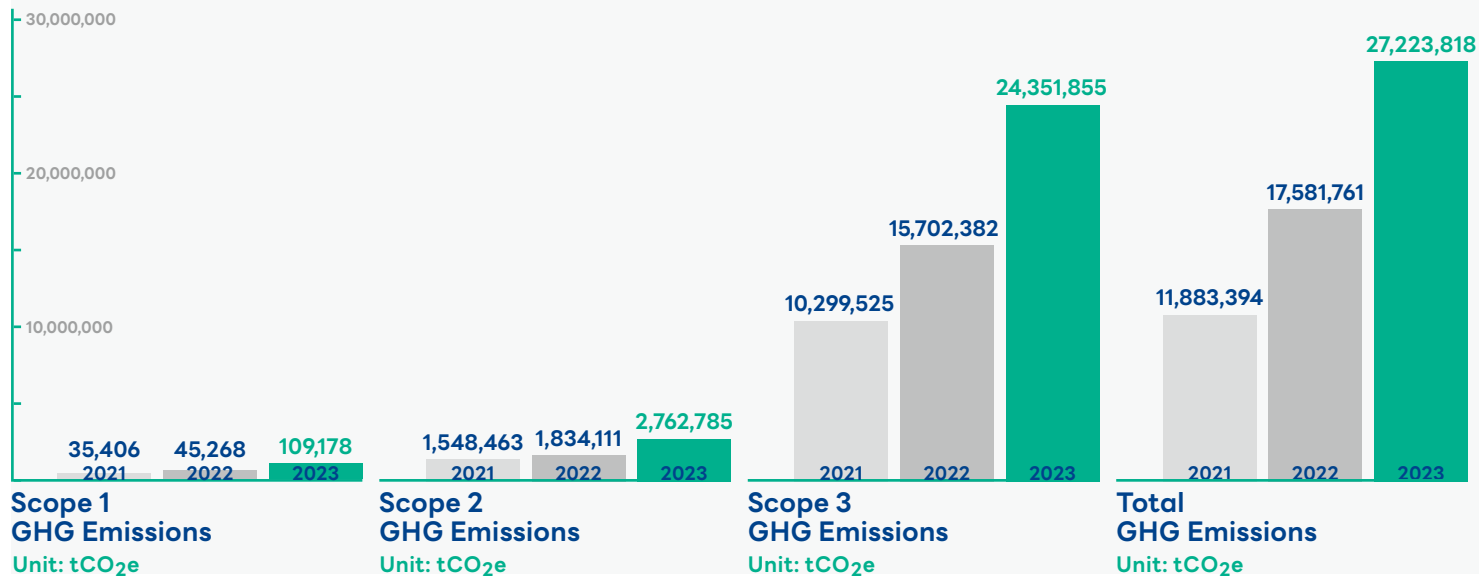
Proportion of Green Electricity Use
28%

Avoided Emissions
Unit: million tCO₂e

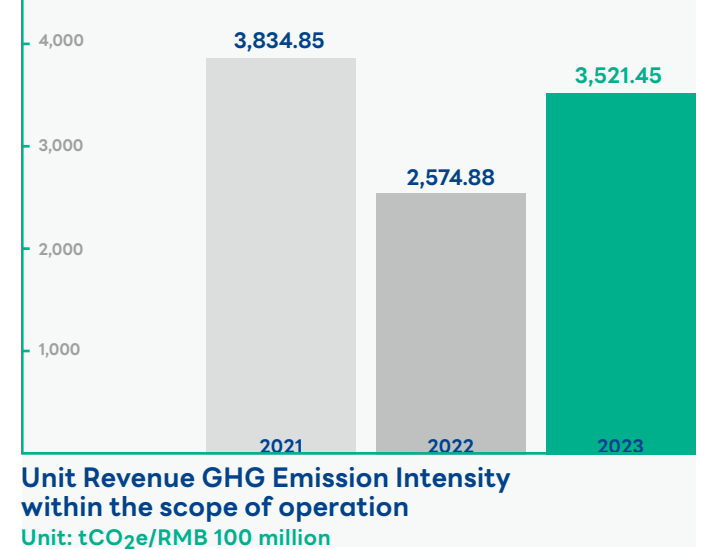
37+^①

① In the calculation of carbon emissions avoidance, it is assumed that the power generation hour of JA Solar's PV modules is 1,300 hours per year. We adopted the emission factors released by the European Commission and the US Environmental Protection Agency (US EPA) in January 2024 for power grids in major overseas sales regions. As for other sales regions, we used the emission factors released by the Ministry of Ecology and Environment of the People's Republic of China in April 2024.

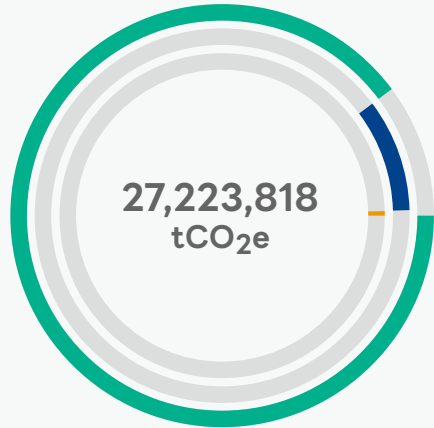
JA Solar's Greenhouse Gas Emissions in the Past Three Years



JA Solar's Greenhouse Gas Emissions (Scope 1 + Scope 2) Intensity in the Past Three Years



Share of Emissions by Scope in 2023



0.40%

Scope 1 GHG Emissions
109,178 tCO₂e

10.15%

Scope 2 GHG Emissions
2,762,785 tCO₂e

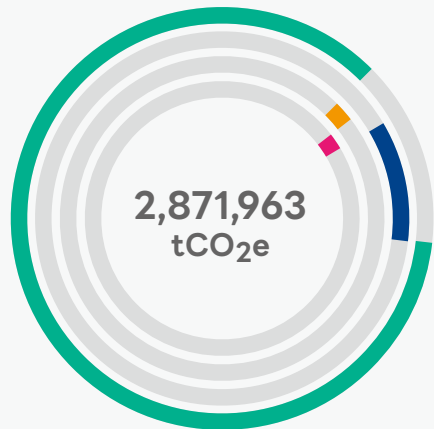
89.45%

Scope 3 GHG Emissions
24,351,855 tCO₂e

Scope 3 Greenhouse Gas Emissions for the Year 2023¹

Category 1-Purchased Goods and Services	19,142,262
Main purchased raw material categories: Silicon, glass, cells, aluminium profiles, frames, etc.	
Category 2-Capital Goods	3,159,340
Category 3-Fuel- and Energy-Related Activities	489,806
Not Included in Scope 1 or Scope 2	
Category 4-Upstream Transportation and Distribution	717,898
Category 5-Waste Generated in Operations	73,677
Category 6-Business Travel	8,269
Category 7-Employee Commuting	38,436
Category 8-Upstream Leased Assets	30,609
Category 9-Downstream Transportation and Distribution	6,474
Category 10-Processing of Sold Products	247,934
Category 11-Use of sold products	0
Category 12-End-of-Life Treatment of Sold Products	47,813
Category 13-Downstream Leased Assets	2
Category 14-Franchises	0
Category 15-Investments	389,335

Operational Scope GHG Emissions in 2023



2.22%

Stationary Combustion
Emission Sources
Scope 1 GHG Emissions

1.67%

Mobile Emissions
Sources
Scope 1 GHG Emissions

10.80%

Process Emissions
Sources
Scope 1 GHG Emissions

85.31%

Fugitive Emissions
Sources
Scope 1 GHG Emissions

¹ There are no emissions from the use of products sold by JA Solar and no franchising is involved, so the emissions from the use of sold products and the emissions from franchises are zero.

GREEN AND LOW-CARBON INITIATIVE

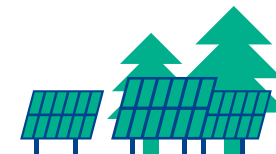
Tackling climate change has become a global consensus.

Acknowledging the importance of climate change to the sustainability of enterprises, JA Solar actively identifies climate-related risks and opportunities, integrating climate change strategies into business development and ESG goals. We continuously promote green transformation, raise the proportion of green power usage, improve supply chain emission reduction performance, create benchmark examples of zero-carbon practices, and enhance the company's green and low-carbon influence. JA Solar is also developing the smart energy business in many regions. By 2023, the Company possesses 2,165MW of photovoltaic power plants with an annual green power generation of over 2 billion kWh. While increasing self-generated and self-consumed PV power, JA Solar is integrating with various industries through the "photovoltaic plus" model to help clients achieve low-carbon transformation.

We regularly monitor and manage our carbon emissions, and actively participate in external climate change-related activities in China and abroad. We exchange innovative and practical experiences in climate action, serving as trendsetters and advocates for climate action. We will continue to move forward on the path of combating climate change and join forces with more stakeholders to contribute to the global climate governance goals while accelerating our journey towards a zero-carbon and better future as a collective.

2,165MW

JA Solar's self-held power stations scale

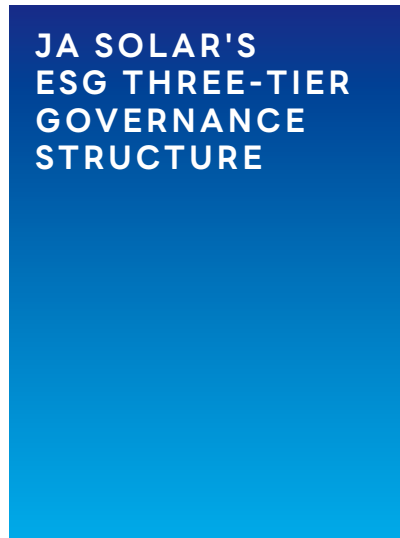


IMPROVED ORGANIZATIONAL STRUCTURE

To cater to the Company's strategy and sustainability needs as well as strengthen our sustainability governance capacity, JA Solar has established a three-tier sustainability governance framework covering the decision-making, management, and executive layer. We continue to optimize the team structure and boost the development of professional capacity. The Company established ESG Management and Sustainability Department to promote coordination, communication, and implementation of the work in ESG, climate change and other areas. At the same time, we continued to enhance the engagement and understanding of Board members and senior executives in ESG topics, incorporated sustainability indicators and climate goals as a core component of KPIs for senior executives and linked them to remuneration and incentive schemes.

We actively engage external experts like Dr. Mohan Munasinghe, former Vice Chair of the UN Intergovernmental Panel on Climate Change (IPCC), co-recipient of the Nobel Peace Prize in 2007, and winner of the 2021 "Blue Planet Prize",¹ whom we have appointed as our inaugural sustainability advisor. Dr. Munasinghe's addition to our team brings invaluable expertise and experience that will greatly enhance our efforts in driving sustainability and strengthening international collaborations.

¹ The Blue Planet Prize, an internationally authoritative award in the field of environmental protection, is known as the "Nobel Prize in Environmental Industry".



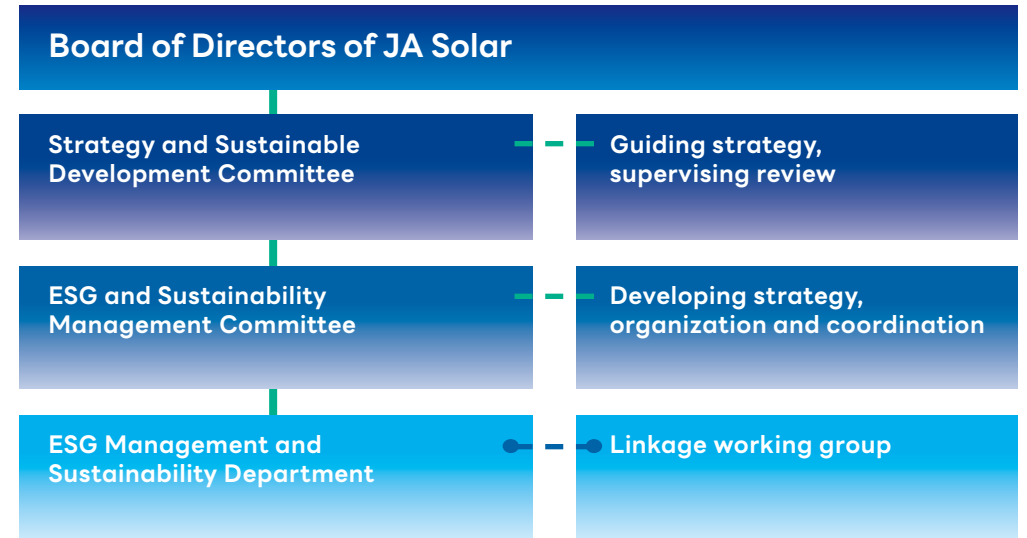
Decision-making Level



Management Leadership



Executive Leadership



The Board of Directors has set up a "Strategy and Sustainable Development Committee" responsible for leading and supervising the Company's sustainability work. The Board of Directors has formulated the *Working Rules of Strategy and Sustainable Development Committee of Board of Directors*. The Board of Directors provides guidelines and issues approval for the Company's climate and ESG strategies and goals, with regular monitoring and reviews of the progress of the goals.

The management has established an "ESG and Sustainability Management Committee", which is responsible for formulating the Company's sustainability strategies and goals as well as implementing strategic deployments from the decision-making level. The management has formulated the *Regulations of procedure for ESG and Sustainability Management Committee* to facilitate ESG matters and conduct regular reviews of the progress of ESG goals.

The Executive Leadership includes an "ESG Management and Sustainability Department", which has formed a linked working group with the main relevant departments. It undertakes all decisions related to ESG/climate/sustainability and promotes the implementation of relevant measures. The Department also liaises with the relevant personnel of various departments and bases to form a coordinated and united mechanism in work.

PROGRESS ON CARBON REDUCTION ACTIONS

Establishing Science-Based Targets

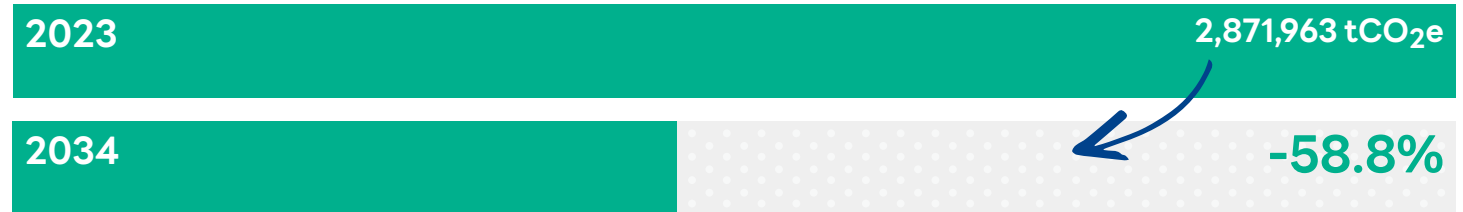
Actively responding to the national strategy of carbon peaking and carbon neutrality while taking the initiative to respond to climate change, JA Solar contributes to the achievement of the long-term goal under the Paris Agreement to "limit the temperature increase to 1.5° C above pre-industrial levels". The Company officially joined the Science Based Targets initiative (SBTi) in 2022, continuously advancing the formulation of greenhouse gas emission reduction targets and action plans, and has currently submitted emission reduction targets to SBTi for review.

We are committed: by 2034, reducing scope 1 and scope 2 GHG emissions by 58.8% compared to 2023, and reducing scope 3 greenhouse gas emissions from purchased goods and services by 63.8% per MW of solar related product produced compared to 2023; by 2050, reducing scope 1 and scope 2 greenhouse gas emissions by 90% compared to 2023, reducing Scope 3 greenhouse gas emissions from purchased goods and services, capital goods, fuel and energy-related activities and upstream transportation and distribution 97% per MW solar related product produced compared to 2023.

SBTi Climate Targets Have Been Submitted

By 2034, reducing scope 1 and scope 2 GHG emissions by 58.8% compared to 2023, and reducing scope 3 greenhouse gas emissions from purchased goods and services by 63.8% per MW of solar related product produced compared to 2023.

Total GHG Emissions (Scope 1 + Scope 2)



Achieving **net-zero** GHG emissions across the value chain by 2050.



Building the Zero-Carbon Factory

In 2023, JA Solar and the World Wildlife Fund (WWF) jointly developed the *Zero-Carbon Factory Construction Guidance for PV Cell and Module Manufacturers*, providing zero-carbon guidance for the industry. We also actively create benchmark cases for Qujing JA Solar Phase III Zero-carbon Factory and Yangzhou Jingshan Park Zero-carbon Factory, continuously driving carbon neutrality.



Yangzhou Jingshan Park Obtained the First Zero-Carbon Factory Certification

The Yangzhou Jingshan Park has fully integrated the concept of carbon neutrality into planning, construction, management, and operation, and obtained the Zero-Carbon Factory Certification issued by TÜV SÜD in August 2024. On this basis, the Jingshan Park will further optimize energy use through energy-saving transformation, intelligent control systems, and renewable energy replacements to significantly reduce carbon emissions in manufacturing.

Qujing JA Solar Phase III Obtained Operational Carbon Neutrality Certification

In May 2024, Qujing JA Solar Phase III obtained the operational carbon neutrality certification issued by the Beijing Green Exchange, marking its achievement of factory-level carbon neutrality in 2023, and is now actively applying for zero-carbon factory. Since its full-scale production in 2023, Qujing JA Solar Phase III has utilized Industrial Robots, the Internet of Things (IoT), Artificial Intelligence (AI), and other innovative methods to create a digital and smart factory. It employs advanced production technologies and equipment to improve energy efficiency, reduce energy consumption and carbon emissions in the production process, and enhance the recycling of waste and water resources, practicing green and intelligent manufacturing.

Beijing Headquarters Achieves Carbon Neutrality of Operational Emissions

JA Solar has achieved operational carbon neutrality in 2021 and 2022 by conducting verification of Scope 1 and Scope 2 GHG emissions for its global management headquarters in Beijing for 2021 and 2022, and by purchasing and offsetting China's Green Electricity Certificates (GECs) and Verified Carbon Units (VCUs) under the Voluntary Carbon Standard (VCS) mechanism.



Carrying out Pollution and Carbon Reduction Practices

JA Solar continues to improve the energy efficiency of production and operational systems such as building, air conditioning, ventilation, motors, and lighting, and enhance production and testing technologies and processes to further support the production and operation end to directly reduce carbon. At the same time, the Company purchases high-quality renewable electricity such as hydropower, wind power and PV power according to local conditions, and combine supplementary measures like purchasing green certificates to achieve the renewable energy switching in the operation process.

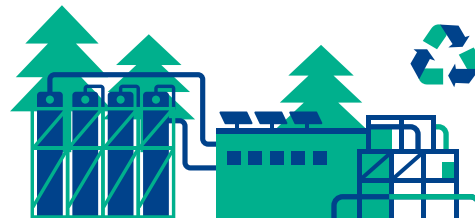
Air Compressor Renovation Project at the Ningjin Base

Beijing JH Eco-Energy Co., Ltd., a wholly-owned subsidiary of JA Solar, has updated its air compressor system to automatically adjust the operation mode based on production needs, reduce unit's operating time under high load and significantly cut operating energy consumption. The project achieved a 15% reduction in maximum daily power consumption of air compressors, a 5% annual reduction in system electricity consumption, and a decrease of 235 tons in annual carbon emissions. The project also improved the air compressor's operation conditions through air filter enhancements and cooling system optimization, saving 1.15 million yuan annually. The core energy-saving solution for the air compressor has achieved good environmental, social, and economic benefits.



PECVD Ammonia-containing Tail Gas Efficient Treatment Project at the Ningjin Base

The PECVD ammonia-containing tail gas efficient treatment project in Ningjin involves processes and procedures that replace the existing ammonia gas treatment methods at the production base. It is specifically designed to meet the requirements of PECVD ammonia tail gas discharge and ammonia recovery. In terms of environmental protection, the treatment of ammonia-containing tail gas generated during the production process ensures compliance with standards, reduces atmospheric pollution and environmental impact caused by exhaust gas emissions, and reduces GHG emissions produced by biochemical systems for treating high-ammonia wastewater. In terms of socio-economic benefit, the use of efficient and energy-saving treatment technology recovers usable by-products, achieving the resource utilization of waste gas and generating a certain concentration of valuable ammonia, which can create an annual income of 18.75 million yuan.



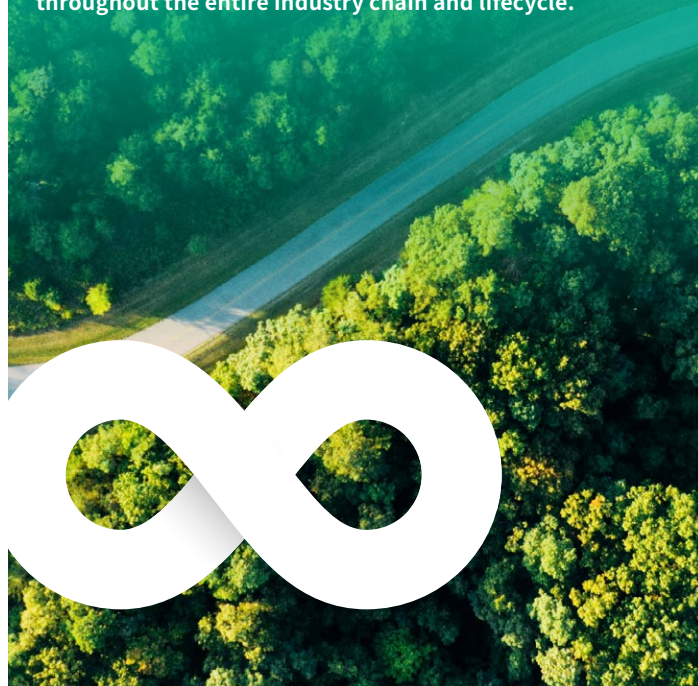
Qujing Base Actively Uses Clean Electricity

In June 2023, JA Solar's Qujing Phase II 30MW Rooftop Distributed Power Station Project was successfully connected to the grid for power generation and subsequently put into operation. The Project is designed to adopt the mode of "self-generated power for self-use and surplus electricity connected to the grid". Through block power generation, decentralized inverting and centralized grid connection as well as other measures, the average annual utilization of the Project can exceed 1,300 hours while the average annual power generation will exceed 39 million kWh, equivalent to savings of about 4,700 tce every year. The clean electricity generated by the Project can basically be consumed locally, thus effectively reducing the cost of electricity consumption and decreasing pollutant emissions. Moreover, the JA Qujing Base is located in Yunnan, where it is rich in water resources and the proportion of clean energy (chiefly hydropower) used in the operation process exceeds 85%. By adopting hydropower and PV power generation, the Project can greatly reduce the Qujing Base's dependence on conventional electricity and GHG emissions.



Green Transformation of the Value Chain

JA Solar adheres to the sustainability philosophy of "Green to Green", guided by green and low-carbon principles to drive the green transition of critical components ranging from product design, supplier management, raw material procurement, and manufacturing, to warehousing and logistics. We explore the path of green cycling and sustainability throughout the entire industry chain and lifecycle.



UPSTREAM



1-Supplier Management

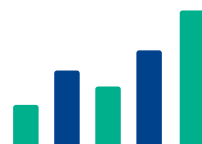
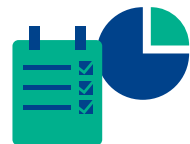
The company has established a Supplier Social Responsibility and Sustainability Evaluation system that covers multiple aspects including product quality and safety, community communication, environmental management, and business ethics. We incorporate carbon disclosure, carbon footprint, and green power utilization into our supplier evaluation and scoring rubrics. This approach helps our value chain partners enhance their awareness of sustainability, unleash greater potential, explore pathways for sustainability, and empower them to improve their sustainability management capacity.

18 / 105

Contents of evaluation system:
18 topics and 105 indicators

100%

Percentage of suppliers committed to improvement after evaluation



2-Raw Material Procurement

The company has formulated the JA Solar Responsible Procurement Policy, implemented carbon footprint certification for raw materials, and strictly monitored the sustainability of raw materials. We vigorously drive localization and low-carbon procurement to minimize the negative impact on the environment during the procurement process. In 2023, the proportion of locally sourced silicon material suppliers increased to 8%, and the procurement volume of low-carbon granular silicon increased by 244% year-on-year.

2022 5.6% → 2023 8%

Increase in procurement proportion of local silicon material suppliers

244% ↑

Year-on-year growth in procurement of low-carbon particulate silicon



R&D, PRODUCTION, AND LOGISTICS

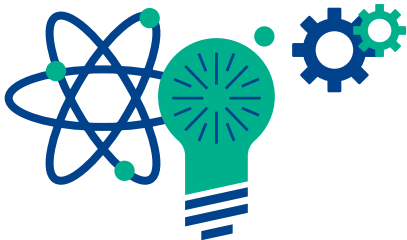


1-Research and Development

In terms of product design, the company takes into account green and low-carbon concepts, as well as their impact on the environment. In addition to introducing low-carbon new materials during the design phase, we continuously strengthen our innovation and R&D capacity, improve product conversion efficiency and module power, and reduce carbon emissions per unit of power generation. Several of the Company's factories have undergone a full lifecycle assessment. The mainstream products, p-type and n-type DeepBlue 4.0 Pro, have both passed the carbon footprint certification by France Certisolis and the EPD assessment in Norway and Italy. Up to now, the n-type Bycium+ mass production cells have achieved a maximum conversion efficiency of up to 26.5%, ranking at the global leading level.

26.5% ↑

The n-type Bycium+ mass production cells have achieved a maximum conversion efficiency of up to 26.5%



2-Production

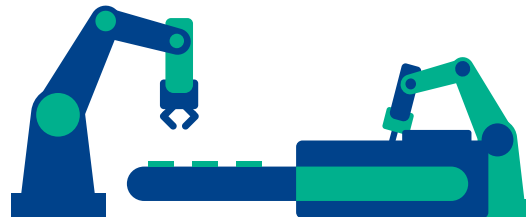
The Company quantifies and systematizes energy management, continuously enhances energy-saving awareness, and carries out continuous energy-saving transformations to optimize the efficiency of energy use. Additionally, the Company actively promotes the construction of distributed photovoltaic projects in production bases around the world to increase the proportion of self-generated and self-used green electricity. In 2023, a total of 6 production bases of the company were listed as "National Green Factories," and 2 bases were included in the Jiangsu Province Green Factory list, with the proportion of green electricity usage reaching as high as 28%.

28% ↑

Proportion of Green Electricity Use

6

Six manufacturing bases under JA Solar have been listed as "National Green Factories"



3-Packaging

The company follows a circular packaging scheme, optimizes cross-packing, reduces unnecessary packaging, and continuously improves packaging and loading efficiency. We also carry out verifications on the removal of wooden frames from domestic shipping packaging and actively explore carbon reduction solutions throughout the full life cycle. The Company has developed management standards for the recycling of used packaging materials and implemented specialized recycling at our bases, thereby minimizing the use of packaging materials and reducing energy consumption during packaging production. In 2023, the Yangzhou Base recycled nearly 400,000 sets of cell carton and approximately 160,000 pallets and 170,000 junction box totes; the Ningjin Base recycled nearly 930,000 sets of packaging materials and over 45,000 pallets.

400,000

The Yangzhou Base recycled nearly 400,000 sets of cell carton

930,000

The Ningjin Base recycled nearly 930,000 sets of packaging materials



R&D, PRODUCTION, AND LOGISTICS



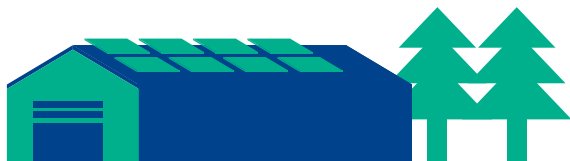
4-Storage

The green and intelligent stereoscopic warehouses the company has created enable real-time analysis and intelligent management of inbound and outbound inventory, storage, and inventory information, thus creating a highly automated, digitalized, and intelligent warehousing center.

Our intelligent stereoscopic warehouse project in the Yangzhou Base provides over 3,400 cargo spaces, an increase of about 2.55 times compared to ordinary warehouses, which is equivalent to a reduction of land use by 10,850m².

3,400⁺

Our intelligent stereoscopic warehouse project in the Yangzhou Base provides over 3,400 cargo spaces



5-Logistics

During on-site transportation, the company actively promotes the forklift "oil to electricity" project to reduce carbon footprint, thus helping build zero-carbon green factories. 96% of forklifts, pallet trucks, and stackers used in on-site transportation have been electrified in 2023, effectively reducing diesel consumption and GHG emissions. In off-site transportation, the company adopts more green and low-carbon transportation modes such as road-railway combined transportation and water-land combined transportation, and explores the use of clean energy like biomass fuels and methanol.

In addition, the Company actively builds a local supply chain and promotes local procurement to further reduce carbon emissions generated in the transportation process.

377MW

In 2023, the company arranged for a total of about 377MW of shipments via road-railway combined transportation



DOWNSTREAM



1-Recycling and Utilization

Recycling and Utilization: The company has jointly established the "Photovoltaic Recycling Industry Development Cooperation Center" with industry partners to actively explore the recycling and utilization solutions for disassembling product components. The Company is committed to establishing a comprehensive product recycling and processing system to ensure that photovoltaic products are properly handled after the end of their service life, providing innovative solutions for the "last mile" of the photovoltaic green chain. Now the company adopts a method of classified treatment and resource utilization for its products, effectively recycling and reusing recyclable materials such as metals and glass to reduce the negative impact on the environment. In terms of recycling and processing of discarded photovoltaic modules, JA Solar strictly complies with the EU's "Waste Electrical and Electronic Equipment Directive" (WEEE Directive)



and "Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment" (RoHS Directive), operating the photovoltaic module recycling and recycling mechanism in accordance with the law in Europe. The company has established a long-term strategic partnership with the globally renowned photovoltaic module recycling organization PV CYCLE. As a global member of PV CYCLE, the company actively fulfills its responsibilities through the "Compliance and Take Back Scheme" ensuring that all module products exported to the EU comply with the WEEE Directive and the electronic waste treatment standards and requirements of the corresponding countries. The Company also actively provides end-of-life solutions for customers outside the EU, supporting the global sales and recycling of JA Solar photovoltaic modules.



Empowerment and Training

As a global and industry-leading company, JA Solar actively builds its capacity to promote talent cultivation to address climate change. At the same time, JA Solar also attaches great importance to enhancing suppliers' capacities to address climate change, and carries out continuous communication and regular empowerment with suppliers to enhance the synergistic development across the entire supply chain.

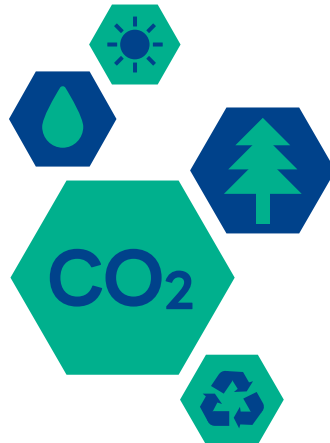


Strengthen Self-capacity Building

JA Solar has been actively built its carbon emission-related capacity. The company has appointed more than 50 internal carbon administrators to enhance its advanced concepts and knowledge in the field of climate change. The establishment of a carbon management system cannot be separated from education, training and supervision. The Company carried out various kinds of carbon management and sustainability knowledge training and thematic activities to convey the company's concept of sustainability and enhance employees' awareness of environmental protection.

50+

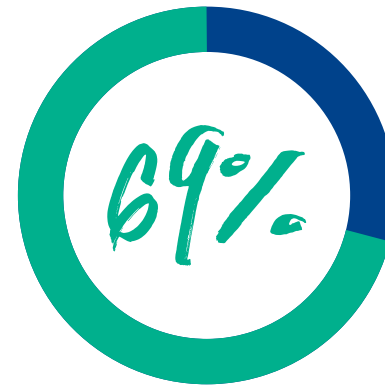
Carbon administrators



CDP Supply Chain Decarbonization Project

In June 2023, JA Solar conducted online training for its raw material suppliers in the supply chain decarbonization project of the Carbon Disclosure Project (CDP), covering 69% of the procurement cost.

JA Solar will assume the chain-master driven role, take the lead in the international industry, and work with supply chain partners to address the challenges brought by climate change.



ENHANCING THE INFLUENCE OF GREEN AND LOW-CARBON

June 2023

JA Solar joined China's "Green Electricity 100%" (GE100%) Initiative as one of its first initiative supporters.



September 2023

JA Solar officially became the first private enterprise member of the World Business Council for Sustainable Development (WBCSD) in China and the world's first member enterprise in the PV industry.



July 2023

The n-type product was awarded one of the PPE 2 carbon footprint certificates among the first batch issued by Certisolis in France.



September 2023

JA Solar joined the 2023 Climate Ambition Accelerator (CAA) program of the United Nations Global Compact (UNGC).





October 2023

JA Solar, as one of the first global enterprises to join the "Forward Faster" initiative, was invited to the closed-door meeting for CEOs organized by the United Nations Global Compact (UNGC) for "Forward Faster".



December 2023

JA Solar participated in multiple events at the 28th United Nations Climate Change Conference (COP28) and held a press conference as part of the "Pathway to Net Zero and JA Solar Sustainability Development Project Launch Event".



December 2023

JA Solar participated in the thematic side event "From Ambition to Action: RE Power the Future" at COP 28's WWF Pavilion, and released the Zero-Carbon Factory Construction Guidance for PV Cell and Module Manufacturers with the Beijing Representative Office of the World Wildlife Fund (WWF).



December 2023

JA Solar's Ningjin Base "PECVD Ammonia-containing Tail Gas Efficient Treatment Project" and "Air Compressor Rebuild Project" have been selected as typical cases in the "China's Typical Cases of Synergy and Efficiency in Reducing Pollution and Carbon Emissions in 2023" by the Ministry of Ecology and Environment, PRC.



APPENDIX: THIRD-PARTY VERIFICATION INFORMATION FOR 2023

Verification Statement of GHG emissions



Verification Statement of GHG emissions

Certificate No. : CGC-CC&SS-CN20240013

Company Name : JA Solar Technology Co., Ltd.

Address : Ningjin County, Xingtai City, Hebei Province

Reporting Period : 01/01/2023- 31/12/2023

Applied Standards : ISO 14064-1:2018 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

Reporting Boundary : GHG emissions from global operations

GHG Included : CO₂ CH₄ N₂O HFCs PFCs SF₆ NF₃

GHG Emissions : Direct GHG emissions (Category 1) : 109,178 tCO₂e
Indirect GHG emissions from imported energy (Category 2) : 2,762,785 tCO₂e
Total GHG emissions quantified above: 2,871,963 tCO₂e

The organization verifies in accordance with ISO 14064-3 that the above organization-level GHG accounting complies with the selected standards and that the results are accurate, conservative and credible.






Verification Statement of GHG emissions

Certificate No. : CGC-CC&SS-CN20240014

Company Name : JA Solar Technology Co., Ltd.

Address : Ningjin County, Xingtai City, Hebei Province

Reporting Period : 01/01/2023- 31/12/2023

Applied Standards : ISO 14064-1:2018 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

Reporting Boundary : Other indirect GHG emissions from global business activities

GHG Included : CO₂ CH₄ N₂O HFCs PFCs SF₆ NF₃

GHG Emissions : Indirect GHG emissions from transportation (Category 3) : 771,076 tCO₂e
Indirect GHG emissions from products used by an organization (Category 4) : 22,895,695 tCO₂e
Indirect GHG emissions associated with the use of products from the organization (Category 5) : 685,084 tCO₂e
Indirect GHG emissions from other sources (Category 6) : Not quantified
Total GHG emissions quantified above: 24,351,855 tCO₂e




The organization verifies in accordance with ISO 14064-3 that the above organization-level GHG accounting complies with the selected standards and that the results are accurate, conservative and credible.




APPENDIX: THIRD-PARTY VERIFICATION INFORMATION FOR 2023

Zero-Carbon Factory Certification of Yangzhou Jingshan Park

ATTESTATION ◆ ATTESTATO ◆ ATTESTACIÓN ◆ BESCHEINIGUNG ◆ ATTESTATION

**Zero Carbon Factory
Verification Certificate**
No. C3GHG 114922 0003 Rev. 00

Client: JA Solar New Energy Yangzhou Co., Ltd. (Jingshan Park)
No. 123, Jinshan Road, Economic Development Zone
225131 Yangzhou City, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Responsible Party (Factory): JA Solar New Energy Yangzhou Co., Ltd. (Jingshan Park)
No. 123, Jinshan Road, Economic Development Zone, 225131
Yangzhou City, Jiangsu Province,
PEOPLE'S REPUBLIC OF CHINA

Time Boundary : 2023.1.1-2023.12.31

Verified Boundary : Operational Control Method

Total GHG Emissions : 75,323 tCO₂e

GHG Offsetting Percentage : 100%

Operation Rule : CCB_GHG_GR_006CS V00


Verification Criteria : TICECA-G 0171-2022

Verification Conclusion: The operation and management of the plant operated by the responsible party in 2023, in terms of basic compliance requirements, basic management requirements, infrastructure, energy and carbon emission intelligent information management systems, energy and resource use, products, greenhouse gas emission reduction implementation, carbon offsetting implementation, have been evaluated as meeting the standards specified in "TICECA-G 0171-2022 Zero Carbon Factory Evaluation Specifications".

Rating: Type I Zero Carbon Factory
Star rating: Star 4

The objective of zero carbon factory verification is to confirm the accuracy and conformity of the claim declared by responsible party according to verification criteria. The zero carbon factory verification certificate is issued by TÜV SÜD, acting as the third-party validation and verification body, based upon the claim from the responsible party. The data and information supporting the claim were historical in nature. The responsible party is responsible for the claim and its conformity with the applicable specified requirements. This certificate does not relieve client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on TÜV SÜD and TÜV SÜD shall have no responsibility vis-à-vis parties other than responsible party.

Verification Report No.: 7482502868
Issue Date: 2024-08-28


(Olina Li)

CECA 中国节能协会
CHINA ENERGY CONSERVATION ASSOCIATION

TUV®

Page 1 of 1
TUV SUD Certification and Testing (China) Co., Ltd. Floor 1-4, Building B, No.37, Tuanjie Road(Middle), Xishan Economic and Technological Development Zone, Wuxi, Jiangsu, P.R. China

Operational Carbon Neutrality Certification of Qujing JA Phase III

证书编号: cbgex-cn-2024031



Carbon Neutrality Certificate

“零碳工厂”运营碳中和证书

兹证明, 曲靖晶澳太阳能科技有限公司在2023年度运营过程中, 范围一产生的12211.65吨温室气体排放量(已扣除采购绿色电力和绿色电力证书对应的范围二排放), 通过注销自愿碳标准(VCS)机制下的验证碳单位(VCUs), 实现2023年度运营碳中和。

Qujing JA Solar Technology Co., Ltd. emitted 12211.65 tons of CO₂e directly from 01/01/2023 to 31/12/2023 (zero emission from scope 2 due to purchasing equivalent volume of renewable energy and Green Electricity Certificate). We hereby certify that Qujing JA Solar Technology Co., Ltd. has operational carbon neutrality by cancelling equivalent volume of Verified Carbon Units (VCUs) to offset emissions from other source.



北京绿色交易所有限公司
2024年5月30日

APPENDIX: THIRD-PARTY VERIFICATION INFORMATION FOR 2023

Beijing Headquarters Carbon Neutrality Certificate



JA SOLAR GREENHOUSE GAS EMISSIONS REPORT *2023*

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