高景太阳能
Gokin Solar

广州高景太阳能科技有限公司

Guangzhou Gokin Solar Technology Co., Ltd.

2025 年度温室气体减排报告

2025 Annual Greenhouse Gas Emissions Reduction Report

以能源效率提升和清洁能源应用推动低碳运营

Advancing Low-Carbon Operations Through Energy Efficiency Improvements and Clean Energy Adoption

报告期：2025 年 1 月 1 日至 2025 年 12 月 31 日

Reporting Period: January 1, 2025 to December 31, 2025

一、报告概述

I. Report Overview

广州高景太阳能科技有限公司（以下简称“广州高景”或“公司”）积极应对气候变化，将温室气体管理纳入广州基地生产运营管理体系。公司通过设定排放强度目标、按月跟踪绩效、识别节能减排机会并推进改善措施，持续提升组件生产运营的低碳水平。

Guangzhou Gokin Solar Technology Co., Ltd. (hereinafter referred to as “Guangzhou Gokin” or the “Company”) actively addresses climate change and has incorporated greenhouse gas management into the production and operational management system of the Guangzhou site. By setting emissions intensity targets, tracking performance monthly, identifying energy-saving and emissions-reduction opportunities, and implementing improvement measures, the Company continuously enhances the low-carbon performance of module production and operations.

本报告披露广州基地 2025 年度范围一和范围二温室气体排放、减排目标及达成情况，并说明年度主要减排措施与后续行动计划。报告数据边界以《广州基地年度碳排放管理目标监控表》纳入范围为准。

This report discloses the Guangzhou site’s Scope 1 and Scope 2 greenhouse gas emissions, emissions-reduction targets, and target achievement for 2025, together with the principal measures implemented during the year and subsequent action plans. The reporting boundary corresponds to the scope covered by the Guangzhou Site Annual Carbon Emissions Management Target Monitoring Form.

二、管理边界与核算口径

II. Management Boundary and Accounting Approach

2.1 排放类别

2.1 Emission Categories

- 范围一：广州基地拥有或控制的排放源产生的直接温室气体排放。

  Scope 1: Direct greenhouse gas emissions from sources owned or controlled by the Guangzhou site.
- 范围二：广州基地购入电力等能源产生的间接温室气体排放，分别按市场法和位置法披露。

  Scope 2: Indirect greenhouse gas emissions from purchased electricity and other energy, disclosed using both the market-based and location-based methods.

2.2 核心管理指标

2.2 Core Management Indicator

考虑组件产量变化对排放总量的影响，公司以单位产品温室气体排放强度作为年度减排目标的核心考核指标，同时持续监测绝对排放量。排放强度的计算方式为相应范围温室气体排放量除以同期组件产量，单位为 tCO_2e/MW。

Considering the impact of changes in module output on total emissions, the Company uses greenhouse gas emissions intensity per unit of product as the core indicator for assessing annual emissions-reduction targets, while continuing to monitor absolute emissions. Emissions intensity is calculated by dividing greenhouse gas emissions for the relevant scope by module output during the same period and is expressed in tCO_2e/MW.

三、目标设定

III. Target Setting

公司以 2024 年为基准年，建立至 2030 年的温室气体排放强度目标，并依据逐年改善路径设置年度目标。2025 年度目标如下：

Using 2024 as the base year, the Company established greenhouse gas emissions intensity targets through 2030 and set annual targets based on a year-on-year improvement pathway. The targets for 2025 were as follows:

管理指标 Management Indicator	2024 年基准 2024 Baseline	2025 年目标 2025 Target	2030 年目标 2030 Target
单位产品范围一排放强度 Scope 1 Emissions Intensity per Unit of Product	0.2873	≤0.2845	≤0.2745
单位产品范围二排放强度（市场法） Scope 2 Emissions Intensity per Unit of Product (Market-Based)	7.6524	≤7.4924	≤6.8524
单位产品范围二排放强度（位置法） Scope 2 Emissions Intensity per Unit of Product (Location-Based)	7.0120	≤6.8520	≤6.2120

单位：tCO_2e/MW。数据来源：《广州基地年度碳排放管理目标监控表》。

Unit: tCO_2e/MW. Source: Guangzhou Site Annual Carbon Emissions Management Target Monitoring Form.

四、2025 年度目标达成情况

IV. Achievement of 2025 Targets

管理指标 Management Indicator	2025 年目标 2025 Target	2025 年实际 2025 Actual	较 2024 年变化 Change vs. 2024	结论 Result
单位产品范围一排放强度 Scope 1 Emissions Intensity per Unit of Product	≤0.2845	0.2250	下降 21.7% Down 21.7%	**已达成** **Achieved**
单位产品范围二排放强度（市场法） Scope 2 Emissions Intensity per Unit of Product (Market-Based)	≤7.4924	5.7975	下降 24.2% Down 24.2%	**已达成** **Achieved**
单位产品范围二排放强度（位置法） Scope 2 Emissions Intensity per Unit of Product (Location-Based)	≤6.8520	5.0462	下降 28.0% Down 28.0%	**已达成** **Achieved**

注：2025 年实际强度根据全年排放量与同期组件产量计算，数值按四位小数展示。

Note: Actual 2025 intensity was calculated using full-year emissions and module output for the same period. Values are shown to four decimal places.

4.1 排放总量

4.1 Total Emissions

排放类别 Emission Category	2024 年基准排放量 2024 Baseline Emissions	2025 年排放量 2025 Emissions	变化 Change
范围一 Scope 1	682.33	855.84	上升 25.4% Up 25.4%
范围二（市场法） Scope 2 (Market-Based)	18,174.44	22,049.42	上升 21.3% Up 21.3%
范围二（位置法） Scope 2 (Location-Based)	16,653.69	19,191.96	上升 15.2% Up 15.2%

单位：tCO_2e。范围二两种方法为替代性披露，不进行合计。

Unit: tCO_2e. The two Scope 2 methods are alternative disclosures and are not aggregated.

4.2 绩效分析

4.2 Performance Analysis

2025 年，广州基地单位产品范围一排放强度为 0.2250 tCO_2e/MW，较年度目标低约 20.9%；单位产品范围二市场法和位置法排放强度分别为 5.7975 tCO_2e/MW 和 5.0462 tCO_2e/MW，较相应年度目标低约 22.6%和 26.4%。三项指标均优于年度目标，年度减排强度目标顺利达成。

In 2025, the Guangzhou site's Scope 1 emissions intensity per unit of product was 0.2250 tCO_2e/MW, approximately 20.9% below the annual target. Scope 2 emissions intensity under the market-based and location-based methods was 5.7975 tCO_2e/MW and 5.0462 tCO_2e/MW, approximately 22.6% and 26.4% below the respective annual targets. All three indicators outperformed their annual targets, and the annual emissions intensity targets were achieved.

2025 年组件产量由 2024 年的 2,375.01 MW 增至 3,803.25 MW，增幅约 60.1%。受产量增长影响，范围一及范围二绝对排放量同比上升；但三项单位产品排放强度分别较 2024 年下降 21.7%、24.2%和 28.0%，表明生产效率、能源效率及能源结构的综合表现得到改善。公司将继续同步监测排放强度与绝对排放量。

Module output increased from 2,375.01 MW in 2024 to 3,803.25 MW in 2025, an increase of approximately 60.1%. As a result of higher output, absolute Scope 1 and Scope 2 emissions increased year on year; however, the three emissions intensity indicators per unit of product decreased by 21.7%, 24.2%, and 28.0%, respectively, from 2024, indicating improved combined performance in production efficiency, energy efficiency, and the energy mix. The Company will continue to monitor both emissions intensity and absolute emissions.

五、主要减排措施与后续计划

V. Principal Emissions-Reduction Measures and Subsequent Plans

5.1 2025 年度主要减排措施

5.1 Principal Emissions-Reduction Measures in 2025

1. 强化能源与碳排放管理。持续完善广州基地能源和碳排放数据台账，按月跟踪范围一、范围二排放及单位产品强度，分析异常波动并推动改善闭环。

   Strengthen energy and carbon emissions management. The Guangzhou site continued to improve energy and carbon emissions data records, track Scope 1 and Scope 2 emissions and emissions intensity per unit of product each month, analyze abnormal fluctuations, and ensure that improvement actions were followed through to completion.

2. 推进组件生产系统节能。围绕层压、焊接、测试、包装等主要生产环节及关键用能设备，优化运行参数、负荷匹配、待机能耗控制和预防性维护，提升设备运行效率。

   Advance energy conservation in module production systems. The Company optimized operating parameters, load matching, standby energy controls, and preventive maintenance for major production processes, including lamination, welding, testing, and packaging, as well as key energy-consuming equipment, to improve operating efficiency.

3. 优化公用工程运行。关注空压、冷却、供配电、泵组、照明及暖通等系统的运行效率，通过分区控制、泄漏管理、合理启停和设备维护降低能源损耗。

   Optimize utility system operations. The Company focused on the operating efficiency of compressed air, cooling, power supply and distribution, pump, lighting, and HVAC systems, reducing energy losses through zoned control, leak management, appropriate start-stop practices, and equipment maintenance.

4. 提升清洁能源使用。结合广州基地条件和电力市场政策，持续评估绿色电力采购、绿色电力证书及分布式光伏等清洁能源方案，提高低碳电力使用水平。

   Increase clean energy use. Based on conditions at the Guangzhou site and electricity market policies, the Company continued to assess clean energy solutions, including green electricity procurement, green electricity certificates, and distributed photovoltaic generation, thereby increasing the use of low-carbon electricity.

5. 加强直接排放源管理。持续关注燃料使用、车辆运行、制冷剂和其他直接排放源，通过设备维护、泄漏检查、替代评估及操作规范降低排放风险。

   Strengthen management of direct emissions sources. The Company continued to manage fuel use, vehicle operation, refrigerants, and other direct emissions sources, reducing emissions risks through equipment maintenance, leak inspections, substitution assessments, and operating procedures.

6. 促进工艺效率和资源利用。通过良率改善、材料损耗控制、生产计划优化和数字化管理，减少单位产品能源消耗和资源投入。

   Improve process efficiency and resource utilization. The Company reduced energy consumption and resource inputs per unit of product through yield improvement, material loss control, optimized production planning, and digital management.

7. 开展员工低碳行动。通过节能宣传、岗位培训和日常检查，提升员工节能意识，将低碳要求融入办公与组件生产运营。

   Promote low-carbon action among employees. Through energy-saving communication, job-specific training, and routine inspections, the Company strengthened employee awareness and embedded low-carbon requirements into office and module production operations.

5.2 2026 年度及中长期减排计划

5.2 Emissions-Reduction Plans for 2026 and the Medium to Long Term

- 将年度强度目标分解至相关职能和运营环节，保持月度监测、季度复盘和年度评价。

  Cascade annual intensity targets to relevant functions and operational processes, supported by monthly monitoring, quarterly reviews, and annual evaluation.

- 持续识别高耗能设备和重点工序的节能机会，建立项目清单并跟踪节能效益。

  Continue identifying energy-saving opportunities for energy-intensive equipment and key processes, establish a project register, and track energy-saving benefits.

- 稳步提升低碳电力使用比例，结合可获得性、成本和合规要求优化绿色电力组合。

  Steadily increase the proportion of low-carbon electricity and optimize the green electricity portfolio based on availability, cost, and compliance requirements.

- 完善排放因子、活动数据和计算底稿管理，提升碳数据的可追溯性、一致性和准确性。

  Improve the management of emission factors, activity data, and calculation workpapers to enhance the traceability, consistency, and accuracy of carbon data.

- 逐步加强供应链碳数据收集与能力建设，为范围三排放识别、产品碳足迹管理和价值链协同减排奠定基础。

  Gradually strengthen supply chain carbon data collection and capacity building to support Scope 3 emissions identification, product carbon footprint management, and collaborative emissions reduction across the value chain.
- 根据技术发展、政策变化和经营实际，定期评估 2030 年目标路径及重点减排项目。

  Periodically assess the pathway toward the 2030 targets and priority emissions-reduction projects in light of technological developments, policy changes, and operating conditions.

六、结语

VI. Conclusion

2025 年，广州基地三项单位产品温室气体排放强度指标均优于年度目标，年度减排强度目标顺利达成。尽管组件产量增长带动绝对排放量上升，单位产品排放绩效仍较基准年显著改善。面向未来，广州高景将持续推进节能减排项目识别与实施，强化目标分解、过程跟踪和绩效复盘，稳步向 2030 年目标迈进，并不断提升气候信息披露的完整性与透明度。

In 2025, all three greenhouse gas emissions intensity indicators per unit of product at the Guangzhou site outperformed their annual targets, and the annual emissions intensity targets were achieved. Although higher module output increased absolute emissions, emissions performance per unit of product improved significantly from the base year. Looking ahead, Guangzhou Gokin will continue to identify and implement energy-saving and emissions-reduction projects, strengthen target cascading, process tracking, and performance reviews, steadily advance toward the 2030 targets, and further improve the completeness and transparency of climate-related disclosures.