

# CATL ESG 2025 vs 2024: What Changed

Carbon neutrality achieved, emissions intensity halved, workforce up 41% — a year-on-year breakdown of CATL's fifth ESG report.

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## CATL — ESG Report Overview (SZSE: 300750 / HKEX: 3750)

MSCI ESG rating	AA <span>MAINTAINED</span>
EcoVadis	Silver Medal <span>NEW</span>
S&P Global Yearbook 2026	Included <span>NEW</span>
FTSE4Good Index	Included <span>NEW</span>
Carbon neutrality (core ops)	Achieved 2025
Next target	Value chain by 2035
Reporting period	Jan 1 – Dec 31, 2025
Frameworks	GRI, IFRS S1/S2, SZSE, HKEX

## 1. Headline Changes

CARBON INTENSITY <b>2.34</b> ↓ 48.7 % tCO <sub>2</sub> e/MWh	ZERO-CARBON ELEC. <b>100 %</b> ↑ from 74.5 %	WIND ENERGY <b>4,423 GWh</b> ↑ 1,673 %	EMPLOYEES <b>185,839</b> ↑ 40.8 %
PATENTS GRANTED <b>23,308</b> ↑ 44.3 %	BATTERIES RECYCLED <b>210,000 t</b> ↑ 63.2 %	SCOPE 2 (BASES) <b>587,454 t</b> ↓ 58.7 %	CORRUPTION AUDITS <b>52</b> ↑ from 5

## 2. Climate and Carbon

CATL achieved carbon neutrality in core operations in 2025, hitting the target it set in 2023. The company reached 100% zero-carbon electricity across its battery production bases, up from 74.51% in 2024. This was the single largest driver of the 48.7% reduction in greenhouse gas emission intensity.

Total Scope 1+2 emissions from battery production bases fell from 2,353,799 to 1,751,600 tCO<sub>2</sub>e, a 25.6% reduction — despite a 28.8% increase in total energy consumption driven by capacity expansion. Scope 2 emissions collapsed 58.7% as grid electricity was replaced with zero-carbon sources, more than offsetting a 25.1% increase in Scope 1.

### Battery production base emissions

METRIC	2024	2025	CHANGE
Total GHG (Scope 1+2), tCO <sub>2</sub> e	2,353,799	1,751,600	-25.6 %
Scope 1, tCO <sub>2</sub> e	930,440	1,164,146	+25.1 %
Scope 2, tCO <sub>2</sub> e	1,423,359	587,454	-58.7 %
GHG intensity, tCO <sub>2</sub> e/MWh	4.56	2.34	-48.7 %

### Group-level emissions

METRIC	2024	2025	CHANGE
Total GHG (Group), tCO <sub>2</sub> e	118,302,850	117,026,506	-1.1 %
Scope 1, tCO <sub>2</sub> e	2,401,702	2,854,671	+18.9 %
Scope 2 (market), tCO <sub>2</sub> e	3,550,151	3,020,476	-14.9 %
Scope 3, tCO <sub>2</sub> e	112,350,997	111,151,358	-1.1 %

### Energy mix transformation

Total energy consumption rose 28.8% to 24,768 GWh. Wind energy increased from 249 GWh to 4,423 GWh (+1,673%), moving from 2.7% to 28.3% of clean energy. Solar more than doubled from 793 GWh to 2,071 GWh. Clean energy consumption grew 71.9% to 15,640 GWh.

CLEAN ENERGY SOURCE	2024 (MWH)	SHARE	2025 (MWH)	SHARE
Natural gas	4,643,143	51.0 %	6,404,703	41.0 %
Wind	249,486	2.7 %	4,422,872	28.3 %
Hydropower	3,415,603	37.5 %	2,240,259	14.3 %
Solar	792,712	8.7 %	2,070,938	13.2 %
Other	—	—	501,022	3.2 %
<b>Total</b>	<b>9,100,943</b>		<b>15,639,793</b>	

### Carbon neutrality pathway

Six task forces: Zero Carbon Design, Zero Carbon Factories, Zero Carbon Supply, Zero Carbon Manufacturing, Zero Carbon Power, and Circular Ecosystem. Since 2023: 1,000+ energy-saving

renovation projects. In 2025: 272 projects avoided ~172,074 tCO<sub>2</sub>e. Energy intensity per unit product down 28% vs 2022; carbon intensity down ~77% vs 2022. 1.55 million tonnes of carbon credits purchased (VCS, Gold Standard) to offset residual emissions.

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### 3. Circular Economy and Resources

#### Battery recycling

Guangdong Brunp Recycling processed 210,000 tonnes of waste batteries and materials in 2025, +63.2% YoY. Regenerated 24,000 tonnes of lithium salts, +40.4%. Recovery rates: Ni/Co/Mn  $\geq 99.6\%$ , Li  $\geq 96.5\%$ . Recycled material in key raw materials: Ni 10%, Co 10%, Li 6%, Al 35%. Carbon footprint of anode/cathode materials down 18% YoY; mechanical components down 35%.

#### Waste management

METRIC	2024	2025	CHANGE
NOx, t	2,842	1,530	-46.1 %
SO2, t	12,067	5,857	-51.5 %
VOCs, t	1,094	1,162	+6.2 %
General solid waste, t	18,401,937	19,853,035	+7.9 %
General waste intensity, t/MWh	35.66	26.54	-25.6 %
General waste recycled, t	909,226	2,163,401	+137.9 %
Hazardous waste, t	17,120	31,711	+85.3 %
Hazardous waste recycled, t	1,454	2,777	+91.0 %

#### Water

Total water withdrawal up 40.4% to 49.2 million m<sup>3</sup>. Water consumption reported for the first time: 32.1 million m<sup>3</sup> (intensity: 42.88 m<sup>3</sup>/MWh).

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### 4. Workforce and Safety

Workforce grew 40.8% from 131,988 to 185,839 employees. 97.47% based in Chinese mainland. Age profile shifted younger: under-30 cohort grew from 44.95% to 49.54%.

CATEGORY	2024	2025
<b>Total employees</b>	<b>131,988</b>	<b>185,839</b>
Female	22.22 %	21.76 %
Male	76.61 %	77.05 %
Under 30	44.95 %	49.54 %

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30–50	53.44 %	49.90 %
Bachelor's degree+	26.46 %	26.83 %
Female in management	19.55 %	20.31 %
Female in STEM	18.80 %	19.37 %

## Safety

METRIC	2023	2024	2025
Major safety accidents	0	0	0
Work-related fatalities	0	0	0
Lost-time incident rate (/M hrs)	0.072	0.124	0.102
Safety drill activities	8,293	15,462	28,667
Lost workdays (illness)	1,734	1,513	1,207

Employee turnover rate (first time reported): 25.66%. Female: 20.14%, Male: 27.23%, Under 30: 32.03%. Training coverage: 99.24% (vs 100% in 2024). Avg training hours: 55.89 (vs 57.57).

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## 5. Innovation and Supply Chain

### R&D

METRIC	2023	2024	2025
R&D investment, RMB B	18.4	18.6	22.1
R&D as % of revenue	4.58 %	5.14 %	5.23 %
R&D personnel	20,604	20,346	22,901
Doctoral degree holders	361	573	745
Patents granted (cumulative)	9,987	16,145	23,308
Patents in application	19,500	27,209	31,230

### Supply chain

Total suppliers: 769 (vs 799). 62 eliminated for non-compliance. 32 new suppliers admitted, all screened on sustainability. 120 sustainability training sessions held (vs 92). Customer satisfaction: 95% (vs 94%). Complaints: 571 (vs 575), 100% settlement rate.

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## 6. Governance

Corruption risk assessments expanded from 5 to 52 companies (ISO 37001 reference). Zero major corruption risk found. Anti-corruption training: 100% across all levels. Monthly phishing simulation tests company-wide. GDPR training at German subsidiary. 30+ supplier security audits on high-confidentiality suppliers.

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## 7. New in 2025

- **Carbon neutrality achieved** in core operations. Zero-carbon electricity reached 100%.
- **Climate scenario analysis** — detailed IPCC, NGFS, and IEA scenario modelling with financial impact. Core operations on a 1.4°C pathway.
- **Ellen MacArthur Foundation** — joined Strategic Partners Network, launched GECC.
- **EU carbon compliance** flagged as significant risk in transition analysis.
- **IFRS S1/S2 alignment** — first time referenced alongside GRI and exchange guidelines.
- **S&P Global Sustainability Yearbook 2026** and **FTSE4Good Index** inclusion (both new).
- **Water consumption** and **employee turnover** reported for the first time.
- **Contemporary Green Energy** — 5,368 MW renewable quota, 893 MW grid-connected.

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## 8. Sources

CATL 2025 ESG Report (259 pages, English) — HKEX filing, March 2026

CATL 2024 ESG Report — [catl.com](https://catl.com)

CATL manufacturer profile — [bessmanufacturers.com/manufacturer/catl/](https://bessmanufacturers.com/manufacturer/catl/)

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[bessmanufacturers.com](https://bessmanufacturers.com) — Independent BESS equipment manufacturer directory

Data sourced from publicly filed ESG reports. This document presents factual comparisons only.