2025

TCL Industries Holdings Co., Ltd.

Annual Report on Carbon Neutrality

TCL Industries Holdings Co., Ltd.

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Message from the CEO

Climate change is fundamentally reshaping how the world operates, and the shift towards a green, low-carbon economy has become an irreversible consensus of our times. Since its establishment, TCL Industries has consistently upheld its corporate mission of "Building A Sustainable and Connected Future with Advanced Technology", integrating ESG principles into its strategic decisions and daily operations. We firmly believe that as a global smart-terminal company, only by closely linking our own development with society and the environment can we navigate the tides of our era and achieve sustainable progress.

In 2025, TCL Industries successfully achieved the phased milestones of its established carbon targets. This is the inevitable result of the long-standing "Inspire Greatness" spirit of all TCL employees and our systematic push for green transformation. Guided by an "inner-middle-outer ring" action framework focused on our own operations, product supply chain, and ecosystem, we are building a zero-carbon practice system that covers the entire value chain.

Du Juan
CEO
TCL Industries Holdings Co., Ltd.

Setting the benchmark for zero-carbon manufacturing and strengthening our operational foundation.

We are committed to building an industry-leading green manufacturing system, driven by clean energy structures and intelligent energy efficiency, to systematically reduce carbon emissions in our operations. By deploying an AI-powered energy and carbon management platform, we achieve dynamic energy optimization and precise carbon control, ensuring every plant meets the zero-carbon benchmark. At the same time, we deeply embed circular economy principles into production and operations, from source reduction to resource reuse, advancing waste management toward "zero landfill". Multiple factories have been certified as "Zero-Waste Factories", reflecting our stringent operational standards and a solid step toward net-zero emissions.

Leading full-cycle green products to reshape the value chain.

We firmly believe that truly green products are not just about energy savings in a single stage but involve low-carbon practices across the entire lifecycle, from design and procurement to manufacturing, packaging, logistics, and recycling. We start with green design as the foundation of product development, adopting principles of lightweighting, modularity, and easy disassembly. We continually expand the use of eco-friendly materials and green packaging to reduce environmental footprints from the source. Additionally, we fully integrate ESG requirements into supplier management, driving carbon reduction across the entire industrial chain.

Empowering society-wide carbon reduction to build a net-zero ecosystem.

With photovoltaic technology and environmental technology as our twin engines, we transform corporate carbon reduction capabilities into green solutions that empower society. Our photovoltaic business provides clean electricity to households and commercial & industrial clients, supporting rural revitalization and energy transition. Our environmental technology platform promotes standardized recycling and high-value utilization of electronic waste, making resource circulation the new norm in the industry. We actively collaborate with partners, research institutions, and international organizations to participate in global climate governance, sharing Chinese companies' carbon reduction insights with the world.

Over the past year, TCL Industries' revenue has maintained steady growth, its global footprint has continued to deepen. We firmly believe that true corporate responsibility lies not only in our own green transformation but also in leading the entire ecosystem toward net-zero. TCL Industries will remain an explorer of green technology, a co-builder of the industrial ecosystem, and a contributor to global climate governance, with "leading technology, green products, excellent governance, and shared value" as its core pillars.

About TCL Industries

About TCL Industries

Introduction to TCL Industries

TCL – "The Creative Life".

TCL Industries Holdings Co., Ltd. was established in 2018 and formally adopted its current name following a major asset restructuring in April 2019. The Company is focused on smart devices and services, encompassing all categories of smart consumer electronic products and services, including smart displays, smart home appliances, innovative businesses, and home Internet solutions. In parallel, TCL Industries actively develops other businesses such as ecotechnology, industrial park management, smart manufacturing, and industrial financing. Guided by the mission of "Building a Sustainable & Connected Future with Advanced Technology", the Company centres the efforts on the strategic themes of "AI-powered Future, Ecological Smart Experience, Integration of Global and Local Operations, and a Greener Tomorrow". With the user at the centre and innovation as the driver, the Company delivers high-value smart living experiences across all scenarios, committed to becoming a world leading intelligent technology enterprise.

TCL Industries pursues a globalisation strategy rooted in the integration of global and local operations, making it one of the pioneers of Chinese enterprise globalisation. By integrating brand enhancement, technological innovation, talent training, environmental protection responsibility, and people-oriented values, we drive high-quality growth. We are dedicated to providing users with smart and healthy living experiences across all scenarios and strive to become a leading global smart device enterprise. By the end of 2025, we had established sales branches in more than 80 countries and regions worldwide, with operations spanning more than 160 countries and regions. We have 25 R&D centres and 22 manufacturing bases, which reinforce our long-term commitment to deepening international market penetration.

By the end of 2025

established sales branches in **80+** countries and regions worldwide

operations spanning countries and regions **160+**

We have **25** R&D centres and **22** manufacturing bases

TCL Industries ESG Strategy

Mission: Building a Sustainable & Connected Future with Advanced Technology"

Vision: Becoming a globally operated leading smart device enterprise, powering a sustainable future through high-quality development

TCL Industries' global ESG strategy is anchored in four core pillars: "Leading Technology, Green Products, Governance Excellence, Shared Value". Together, they form a systematic and measurable blueprint for our future actions. This strategy represents more than just a plan. It puts into practice our ESG vision of "Becoming a globally operated leading smart device enterprise, powering a sustainable future through high-quality development". It also serves as a solid response to "Building a Sustainable & Connected Future with Advanced Technology"

We are dedicated to managing risks through robust governance, advancing green transformation through technological innovation, and fostering unity through a people-centric approach. By collaborating harmoniously with all stakeholders, we create lasting value and contribute as a responsible Chinese enterprise to global sustainable development.

TCL Industries Business Matrix

Smart Device Business Group

Large-sized Display	Large Sized Display	TCL Electronics 01070.HK
	Small-and-Medium-sized Display	
	Smart Commercial Display	
	Home Internet	
	Smart Connection	
	Smart Security	
PV	Photovoltaic Technology	
Large-Scale Home Appliances	TCL Air Conditioner	TCL Air-Conditioners
	Homa Refrigerator	TCL Smart Home 002668.SZ
	TCL Washing Machine & Refrigerator	

Others

- Tonly Technology
- TCL Environmental Technology
- TCL Financial Service
- TCL Industrial Park
- Getech

TCL Electronics

TCL Electronics Holdings Limited (incorporated in the Cayman Islands, stock code: 01070.HK) was listed on the Main Board of the Stock Exchange of Hong Kong Limited (the "HKEX") in November 1999. Its business covers Display, Innovative and Internet Businesses. TCL Electronics takes "Lead with Brand Value, Excel in Global Operation, Drive with Technology, and Thrive on Global Vitality" as its overall strategic direction, actively promotes reform and innovation, focuses on breaking through the global mid-to-high-end market, strives to consolidate the full-category layout of "AIoT Ecology", and is committed to providing users with full-scenario smart and healthy lives and building a leading global smart device enterprise.

In 2025, with outstanding product strength and global channel advantages, TCL Electronics' TV business achieved growth exceeding the industry average. TCL TV ranked second globally with a 14.7% global shipment share and top three globally with a 13.1% global sales share. TCL Electronics ranked among the top three in TV market share in more than 20 countries worldwide, with continuously improving regional competitiveness and brand influence. Meanwhile, product structure optimisation achieved remarkable results. The global average size of TCL TVs increased by 1.6 inches to 54.2 inches. Global shipments of TCL Mini LED TVs surged 118.0% year-on-year, ranking first worldwide, fully demonstrating TCL Electronics' technological leadership and strong market competitiveness in high-end display.

TCL Photovoltaic Technology

Founded in 2021, TCL Photovoltaic Technology builds differentiated competitiveness through its "full-chain capability + innovative solutions", and is committed to establishing an end-to-end asset development, construction, and operation platform, aiming to become a user-centric global leader in smart energy services. As the only enterprise in the photovoltaic industry with a fully self-built, integrated layout across production, manufacturing, logistics, procurement, construction, and O&M, the company focuses on five core businesses: household distributed photovoltaic, industrial and commercial distributed power stations, overseas integrated PV-storage-pump-charge systems, O&M management, and electricity-carbon trading. This enables it to deliver comprehensive service capabilities covering multiple scenarios including households, enterprises, and overseas markets, and the full cycle from energy production and operation to value conversion.

TCL Air Conditioner

TCL Air-Conditioners was established in 1999. It has set up 11 major production bases and 5 R&D centres across locations such as Zhongshan (Guangdong), Wuhan (Hubei), Jiujiang (Jiangxi), Nansha (Guangzhou), Indonesia, and Brazil. As a large-scale, comprehensive, and professional refrigeration enterprise, it integrates the development, manufacturing, and sales of household air conditioners, commercial air conditioners, specialised air conditioners, portable air conditioners, dehumidifiers, and air conditioning compressors. Driven by 11 internationally leading technologies and centered on the value proposition of smart and healthy living, TCL Air-Conditioners has built a full-chain AI capability covering "perception-cognition-decision-service". By 2025, its annual production capacity has exceeded 38 million units, with products sold in over 160 countries and regions. The division ranks among the top two in export volume within the industry and has entered the top three globally in sales.

Guided by its mission to "make healthy, eco-friendly living brought about by air accessible to more people", TCL Air-Conditioners continues to deepen and expand its mature businesses in household and commercial air conditioning, while actively developing upstream extension businesses and providing green energy solutions. With this dual-growth engine of "core air conditioning business + emerging industries", TCL Air-Conditioners aims to double its scale within five years, effectively building a new TCL Air-Conditioners for the future.

TCL Smart Home

Established in 2002, TCL Smart Home was listed on the Shenzhen Stock Exchange in April 2012 (Stock Code: 002688. SZ). In May 2021, the company entered a new phase of development as TCL Home Appliance Group Co., Ltd. became its controlling shareholder. TCL Smart Home is committed to becoming a global leader in smart home appliances and is firmly advancing its globalisation strategy. Focusing on AI-powered home appliances, the company leverages technological innovation to enable seamless connectivity, coordinated operation, and autonomous learning and optimisation across its product ecosystem. In doing so, it delivers forward-looking technological experiences and smart, healthy living to users, while actively contributing to the further advancement of the industry.

TCL Smart Home's operations are driven by two core production and operation entities: Hefei Home Appliance BU and Homa Appliances. Its key product categories include refrigerators (including freezers) and washing machines. As of 2025, TCL Smart Home had held the top position in China's refrigerator export rankings for 17 consecutive years and had led Chinese refrigerator exports to Europe for 18 consecutive years. Both TCL-branded refrigerators and washing machines had been featured for 9 consecutive years on China Central Television's Great Brands programme, establishing the company as a benchmark for high-quality development in China's home appliance sector.

Tonly Technology

Founded in 2000 and headquartered in Huizhou City, Guangdong Province, Tonly Technology is a leading ODM platform enterprise specialising in the design, R&D, production, manufacturing, and sales of acoustic and smart products. Leveraging expertise in acoustics, wireless connection, and intelligent interaction technologies, the company serves many of the world's most prominent consumer electronics and Internet brands. Tonly Technology has built strong competitiveness in independent product development, vertical integration of key upstream components, supply chain management, precision manufacturing, and quality management, and has established a portfolio of core technologies in production simulation, software, algorithms, and radio frequency.

Tonly Technology has established manufacturing bases in locations including Huizhou (Guangdong Province), Beihai (Guangxi), Quang Ninh Province (Vietnam), and Mexico, enabling globalised production and enhancing both capacity and delivery capabilities. The company also operates R&D centres in Huizhou, Shenzhen, Xi'an, and Malaysia, alongside two overseas offices in the United States and South Korea.

TCL Environmental Technology

Established in 2009, TCL Environmental Technology is an enterprise group specialising in the recycling and reuse of waste resources and providing comprehensive environmental services. The company operates six production bases in Huizhou, Tianjin, Shantou, Huanggang, and Sichuan. It holds the necessary licences for the recycling and dismantling of waste electrical and electronic equipment (WEEE) and for the operation of hazardous waste. The company has an annual processing capacity of 10 million WEEE units and 0.38 million tonnes of industrial hazardous waste. In addition, its wastewater treatment capacity is over 60 million cubic metres per year. Guided by its vision and mission of "facilitating technology-enabled resource recycling and fostering a harmonious coexistence between humans and nature", TCL Environmental Technology adheres to an operational philosophy of "customer-oriented and innovation-driven development". It delivers comprehensive hazardous waste treatment and disposal services for enterprises engaged in manufacturing and sales of semiconductor display panels, chips, PCB integrated circuits, new energy batteries, high-end pharmaceuticals, chemicals and automobiles. Through industry-leading processes and technologies, equipment, and integrated environmental solutions, the company enables the effective integration of resource utilisation with harmless treatment and disposal.

TCL Financial Service

Established in September 2015, TCL Financial Service comprises two main business segments. The supply chain fintech business partners with leading financial institutions, including banks, to provide supply-chain financial technology services for ecosystem partners of core enterprises, helping micro, small, and medium-sized enterprises (MSMEs) access convenient, low-cost financing. Its financial business focuses on selected industrial scenarios and small and micro-sized enterprise customers, advancing inclusive finance and promoting industry-finance synergy.

TCL Industrial Park

Founded in 2017, TCL Industrial Park is a professional integrated service provider specialising in investment, development, operation, and management of industrial parks. With the vision of "becoming an industry-leading industrial park investor and management service provider", it is committed to providing professional services for customers. Its projects are located in cities including Beijing, Shanghai, Guangzhou, Shenzhen, Tianjin, Wuhan, Hefei and Huizhou, reaching the three major metropolitan clusters of the Guangdong-Hong Kong-Macao Greater Bay Area, the Yangtze River Delta, and the Beijing-Tianjin-Hebei region. The industrial spaces developed by the company encompass technology headquarters, integrated industry city communities, business R&D parks, high standard warehousing and logistics parks, and specialised smart manufacturing parks. Its service portfolio includes the development and management of industrial parks and office buildings, investment attraction and operational management, full cycle asset services, and turnkey construction of large-scale hard tech industrial plants.

GETECH

Getech is a leading industrial AI enterprise in China. Built on its proprietary smart factory decision making platform and a full scenario industrial AI portfolio covering production, equipment, quality management, intelligent facility management, and smart logistics, the company provides intelligent digital infrastructure and end-to-end industrial AI solutions for the pan-semiconductor industry, accelerating the shift toward AI driven autonomous operations in advanced manufacturing. Getech is driven by continuous R&D and technological innovation. It has invested over RMB 1 billion in R&D, with more than 80% of its staff dedicated to research and technical roles. AI is embedded in over 80% of its solutions. The company has successfully implemented more than 300 AI projects, serving over 30,000 enterprises. With a global team of over 1,000 top-tier professionals, Getech has established R&D, operations, and delivery centres across Wuhan, Shenzhen, Shanghai, Beijing, Tianjin, Shenyang, Guangzhou, Yixing, and Huizhou. Its business footprint extends across China, the Middle East, Southeast Asia, and other regions worldwide.

Awards and Honors

TCL Industries, as a leading enterprise in the home appliance and electronics sector, consistently focuses on industry trends and steadfastly advances strategic implementation. We are committed to creating sustainable value for our shareholders and users and actively fulfilling our social responsibilities, earning widespread recognition and trust.

Major Awards and Honors Received by TCL Industries in 2025

Award winning	Award Title	Award granting Organisation
TCL Electronics Holdings Limited	ESG Environmental Excellence Award	Gelonghui
	Best ESG Company	Zhitong Caijing
TCL King Electrical Appliances (Huizhou) Co., Ltd.	Ministry of Industry and Information Technology 2025 National Manufacturing Digital Transformation Model Cases	Ministry of Industry and Information Technology
	2025 Guangdong Provincial Green Manufacturing Publicity List (Green Supply Chain Management Enterprise)	Guangdong Provincial Department of Industry and Information Technology
TCL King Electrical Appliances (Huizhou) Co., Ltd. and Huizhou TCL Mobile Communication Co., Ltd.	"Zero-Waste Factory"	Huizhou Zhongkai High-tech Industrial Development Zone
Smart Mobile Display (SMD) BU	IEEE 1680.1 - 2018 & IEEE Std 1680.1a 2020 Silver	UL-CCIC Co., Ltd.
Getech Technology Co., Ltd.	2025 Hubei Provincial Manufacturing Digital Transformation Promotion Center	Hubei Provincial Department of Economy and Information Technology
	2025 Manufacturing Digital Transformation Promotion Center	Ministry of Industry and Information Technology of the (MIIT) People's Republic of China
TCL Air Conditioner (Wuhan) Co., Ltd.	Excellence-Level Smart Factory	Ministry of Industry and Information Technology
	Green Cup" ICT Industry Empowerment – National Finals, 3rd "New for Carbon Peaking and Carbon Neutrality Innovation Competition	Organizing Committee of the "New Green Cup (Xinlvbei)" Competition for Information and Communications Industry
TCL Air Conditioner (Zhongshan) Co., Ltd.	2025 iF Design Award (R290 Tri-Generation)	IF Organization Committee
	CES 2025 Fresh Air Air Conditioner Technology Innovation Award (TCL FreshIN series air-conditioner)	CES Organization Committee
TCL Air Conditioner (Zhongshan) Co., Ltd.	Catalog of Recommended Energy-Saving and Carbon-Reducing Technologies in Refrigeration and Air Conditioner Applications (Second Batch): Multi-split Air Conditioner AI Energy-Saving Key Technology	China Refrigeration and Air-Conditioning Industry Association
TCL Air Conditioner (Zhongshan) Co., Ltd., EAGLE LAB, Unisound AI Technology Co., Ltd., and TCL Air Conditioner (Wuhan) Co., Ltd.	Internationally Advanced Scientific and Technological Achievement Appraisal Certificate (Multi-split Air Conditioner AI Energy-Saving Key Technology)	China National Light Industry Council
Guangdong TCL Intelligent Heating & Ventilating Equipment Co., Ltd.	Leading Brand in China's Heat Pump Industry	Organizing Committee of the China Heat Pump Forum
Hefei Household Appliances	2024-2025 Global Top Brands - Clean Technology Innovation Gold Award TCL Super Drum Series Front Load Washing Machine	Consumer Technology Association (CTA)
TCL Photovoltaic Technology	Model Case of Technological Innovation for "Dual Carbon" Goals	China Energy News
	Best Zero-Carbon Park Design Gold Award	China Southern Power Grid
	"2025 Influential Brand - Distributed Photovoltaic Project Developer", "2025 Influential Brand - Residential Unit", and "2025 Outstanding Enterprise"	Guangdong Solar Energy Association
	7th "Tan Suo" Entrepreneurs' Year-End Sharing Conference & 13th "Solarbe Awards" Photovoltaic Industry - "2025 Most Influential Distributed Photovoltaic Enterprise", "2025 Most Influential Photovoltaic Investment and Development Enterprise"	Tan Suo · PV, Suo Bi · PV Jointly
	Power Market and Digital-Intelligent Energy Storage Enterprise Innovation Practice Summit - 2025 Influential Digital-Intelligent Energy Storage Enterprise	Hangjianet Energy Storage, Hangjianet Research
TCL Environmental Technology	"Specialized, Refined, Distinctive, and Innovative" (SRDI) Small and Medium-sized Enterprise Title	Guangdong Provincial Department of Industry and Information Technology

TCL Industries Sustainability Performance Highlights for 2025

The 8th consecutive year for a Hang Seng ESG (TCL Electronics) rating **A**

CDP Climate Change (TCL Electronics, TCL Communications) rating **B**

CITI (TCL Industries) rating **32.53** points

CATI (TCL Industries) rating **29.00** points

EcoVadis (TCL Communications) rating **Gold**

Wind ESG (TCL Electronics) rating **AA** (5th out of 121 peers in industry)

Wind ESG (TCL Smart Home) rating **AA** (20th out of 121 peers in industry)

Cumulative Green Electricity Generated by Photovoltaic Business **14** billion kWh

PV business promoted a carbon reduction of **10** million tonnes across the society

Quantity of Industrial Hazardous Waste Processed by TCL **240,000** tons

Quantity of Waste Household Appliances Recycled by TCL **5.5** million units

Cumulative Number of Products Obtaining Energy-Saving/Green Product Certifications **8,316**

Number of National-Level Green Factories **8**

A New Chapter in the Dual-Carbon Strategy

A New Chapter in the Dual-Carbon Strategy

Global climate governance is entering an unprecedented critical period. In 2025, worldwide consensus on addressing climate change has continued to solidify, and the green, low-carbon transition has become an irreversible trend of our era. Concurrently, the comprehensive green transformation of China's economy and society has also stepped into a new stage of development. The proposals for the 15th Five-Year Plan explicitly call for "accelerating the comprehensive green transformation of economic and social development and building a beautiful China". The Central Economic Work Conference included "adhering to the 'Dual Carbon' goals as the lead and promoting comprehensive green transformation" as one of its eight key tasks. In 2026, with the formal implementation of the 15th Five-Year Plan outline, China will embark on a new round of systematic and profound green transformation in the first year of fully shifting from dual control of energy consumption to dual control of carbon emissions.

As a global leader in smart technology, TCL Industries has integrated sustainable development as a core strategic priority since its establishment in 2018 and has consistently upheld this commitment.In July 2023, TCL Industries officially released its Carbon Neutrality White Paper, publicly committing to achieve carbon peak no later than 2030 and achieve operational carbon neutrality no later than 2050. The establishment of this "3050" target marked a milestone step for the company in the field of climate action. From 2023 to 2025, in the first phase of building capabilities and implementing reductions, TCL Industries embarked on systematic exploration and practice centered on governance structure, technological pathways, industrial layout, and ecosystem collaboration.

Governance Structure: From Top-Level Design to Implementation

Governance is the foundation of the green transformation. TCL Industries places high importance on the implementation of the "3050" dual carbon targets. To this end, the company has established a climate-related governance structure covering the ESG Committee and the ESG Committee Office. This structure clearly defines climate-related management functions, building a solid organizational guarantee for fulfilling its climate commitments.

TCL Industries Climate Governance Framework

ESG Committee

- As the primary responsible party, the Chair of the ESG Committee is responsible for formulating and supervising the climate strategy and target achievement.
- Oversees and manages the resource allocation and implementation of climate change-related matters across functions, regions, and industries.
- Regularly receives reports from the ESG Committee Office on the progress and outcomes of climate-related matters.
- Reviews climate-related information for external disclosure.

ESG Committee Office

- Establishes the climate management systems, mechanisms, and frameworks within its respective domain/unit, and promotes the implementation of measures, reasonably planning necessary resources and organizational capabilities.
- Researches climate-related policies and developments to ensure the compliance and effectiveness of climate actions.
- Regularly reports progress and outcomes to the ESG Committee.
- Supports climate information disclosure, ratings, branding activities, capacity building, and other related matters.

BU and BG ESG Committee

- Translates the strategy, targets, and key initiatives of the TCL Industries ESG Committee into long- and medium-term climate-related strategic plans, targets, implementation pathways, and annual action plans for their respective units, ensuring alignment with TCL Industries' strategy and high-level goal guidance.
- Coordinates resources to manage and advance climate capacity building within their units, promotes, reviews, and reports on the achievement of climate-related key performance indicators (KPIs), and ensures the smooth progress and continuous improvement of various climate-related projects.

TCL Industries has established a clear three-step plan: the carbon peak stage (2023-2030) focuses on capacity building and implementing reductions, and the carbon neutrality stage (2031-2050) focuses on comprehensive capacity building and deepening continuous carbon reduction. This plan not only sets a timeline but also clarifies the key focus areas for action at each stage, reflecting TCL Industries' systematic thinking and long-term commitment to implementing the dual carbon goals.

Phase III: Post-2050

Zero-Carbon Products

- Achieving continuous operational carbon neutrality for the TCL Industries organization.
- Realizing zero carbon emissions across the entire lifecycle of all products.

Phase II: 2031 to 2050

Carbon Neutrality

Comprehensive Capacity Building, Deepening Continuous Reduction

- Setting continuous carbon reduction targets under the carbon neutrality scenario.
- Planning carbon reduction strategies and action plans under the carbon neutrality scenario.
- Implementing various carbon reduction tasks according to the plan.

Phase I: 2023 to 2030

Carbon Peak:

Capacity Building, Implementing Reductions

- Benchmarking against national dual carbon planning and other companies' reduction targets to formulate and commit to carbon reduction goals and vision.
- Planning carbon reduction strategies and action plans under the carbon peak scenario, such as efficiency improvements for key products across industries, green supply chain emission reductions, energy management center construction, etc.
- Implementing various emission reduction tasks according to the plan.

Digital-Intelligent Carbon Exploration: TCL Industries' New AI+ Energy and Carbon Paradigm

In an era where digitalization and carbon neutrality converge, TCL Industries is pioneering a new "digital-intelligent carbon exploration" paradigm, deeply embedding artificial intelligence throughout the energy and carbon management chain, and building a closed-loop carbon reduction system from lean operations to ecosystem empowerment.

At the manufacturing level, we focus on clean energy substitution and green electricity procurement, continuously increasing the proportion of renewable electricity used. Multiple manufacturing bases have implemented distributed photovoltaic and energy storage projects. We deploy AI energy and carbon management platforms, carry out source-level energy-saving upgrades such as waste heat and cooling recovery, primary intelligent air compressor retrofits, and short U-bend ring chipless cutting, driving intelligent energy efficiency improvements. We systematically build reclaimed water reuse systems and closed-loop plastic pallet cycles, turn waste ceramics into ECORA eco-materials, and establish reverse logistics and standardized disassembly mechanisms for end-of-life products. Several factories have been certified as "Zero-Waste Factories" due to significant reductions in hazardous waste, industrial solid waste, and kitchen waste per unit of output value, reinforcing our operational carbon reduction foundation.

TCL Home Appliance (Hefei) 10MW/20MWh Energy Storage Project

At the product level, we promote modular and easy-to-disassemble green designs, apply AI energy-saving algorithms for efficient power consumption, achieving energy efficiency indexes of level 2 or above and keeping standby power consumption low. We use eco-friendly alternative materials such as ECORA recycled ceramics, low-carbon refrigerants, high percentages of post-consumer recycled plastics, paint-free metallic-textured materials, and foaming agents with near-zero global warming potential (GWP). In packaging, we implement plastic-free and weight-reduction designs, significantly reducing the volume of phone and TV packaging, and collaborate with suppliers to recycle cardboard boxes and blister trays. In logistics, we promote electric equipment and optimize sea freight. On the supply chain side, we establish a green product management system to track carbon footprints, complete full lifecycle carbon audits for multiple products, organize energy-saving and carbon-reduction training for suppliers, and coordinate the recycling of scrap copper pipes and other renewable resources, forming a closed-loop carbon reduction from design to recycling.

TCL FreshIN P7 Ultra AI Healthy Sleep Air Conditioner

At the ecosystem level, TCL Industries builds a green ecosystem closed-loop covering the supply side, consumer side, and recycling side, driven in parallel by the physical layout of "photovoltaic-environmental dual engines" and the digital foundation of GETECH.

On the physical side, the "photovoltaic-environmental dual engines" solidify the foundation of the green industry. One engine is TCL Photovoltaic Technology, deeply engaged in commercial & industrial and residential photovoltaic scenarios as well as overseas energy storage, benefiting hundreds of thousands of rural households. It has established a comprehensive strategic partnership with CGN New Energy and made a joint appearance with SunPower at the IFA 2025 international stage. The other engine is TCL Environmental Technology which has built a full-chain closed-loop of "hazardous waste resource utilization - waste home appliance recycling - high-value use of recycled materials". In the field of hazardous waste resource utilization, we have achieved multiple core technological breakthroughs: converting waste etching solution into high-purity basic copper chloride, capturing 80% of key customers' procurement share; efficiently converting fluorine-containing CVD dust into fluoride salts; and purifying waste acid into etching sub-liquid for resale to PCB manufacturers, enabling on-site hazardous waste recycling and value regeneration. In the new materials sector, we use waste quartz crucibles to produce electronic-grade spherical silica powder with high value-added application potential. In the field of electronic waste treatment, waste plastics from home appliance disassembly have undergone modification and obtained PCR certification, successfully entering the supply chains of internationally renowned brands. At the same time, we are proactively advancing recycling technologies for emerging solid waste such as retired photovoltaic panels and wind turbine blades, continuously strengthening our technological reserves for a low-carbon future.

On the digital and intelligence side, GETECH empowers smart carbon reduction across the entire chain. Relying on its energy and carbon AI vertical model, GETECH provides energy-saving and carbon-reduction solutions for TCL's internal manufacturing bases and over 30 external clients. In a project for a globally leading 3C company's Shenzhen base, by deploying digital twins and deep reinforcement learning algorithms and connecting over 40,000 energy data points, HVAC system energy consumption was reduced by 20%, achieving annual cost savings exceeding RMB 3 million and a 90% improvement in carbon accounting efficiency. This strongly demonstrates the digital value of AI-driven data flow optimizing carbon flow, elevating energy efficiency management from post-event remediation to proactive decision-making.

Smart energy management solution

Anchored by twin engines and woven together with digital intelligence, these forces resonate in parallel and synergize, jointly propelling TCL Industries' continuous leap from a practitioner of green manufacturing to an enabler of the industrial ecosystem.

At the critical juncture of 2026, China's dual-carbon policy has fully shifted from "dual control of energy consumption" to "dual control of carbon emissions". TCL Industries keeps pace with this change, encapsulating the core essence of its strategic deepening phase as "Three Upgrades", specifically:

Target Upgrade

From "capacity building and implementing reductions" to "comprehensive capacity building and deepening continuous carbon reduction". The first stage focused on establishing the framework, taking stock of the baseline, and building capabilities. The second stage focuses on systematic advancement, refined operations, and continuous carbon reduction and efficiency gains. The 2030 carbon peak target is not only a peak in emissions but, more importantly, a comprehensive leap in carbon management capabilities.

Scope Upgrade

"From 'own operations' to the 'entire value chain.'" From focusing on Scope 1 and 2 carbon emission management to gradually exploring the coverage of Scope 3 (upstream and downstream of the value chain). This involves building a full lifecycle carbon management system spanning raw material procurement, product design, manufacturing, packaging and logistics, use and service, and recycling and disposal.

Model Upgrade

From "individual efforts" to "systematic advancement".From business units individually promoting carbon reduction projects to being guided by the integrated strategic framework of the "inner-middle-outer ring". This aims to form a coordinated, synergistic, and systematically integrated advancement pattern with vertical linkage and internal-external collaboration, avoiding fragmentation and redundant development.

Inner-Middle-Outer Circle Collaborative Carbon Reduction Pathway

In the Inner Circle

We fully leverage our technological innovation advantages. Relying on innovative technologies and focusing on energy-saving retrofits, we rationally utilize resources to drive energy conservation and carbon reduction at our own manufacturing bases and operational sites.

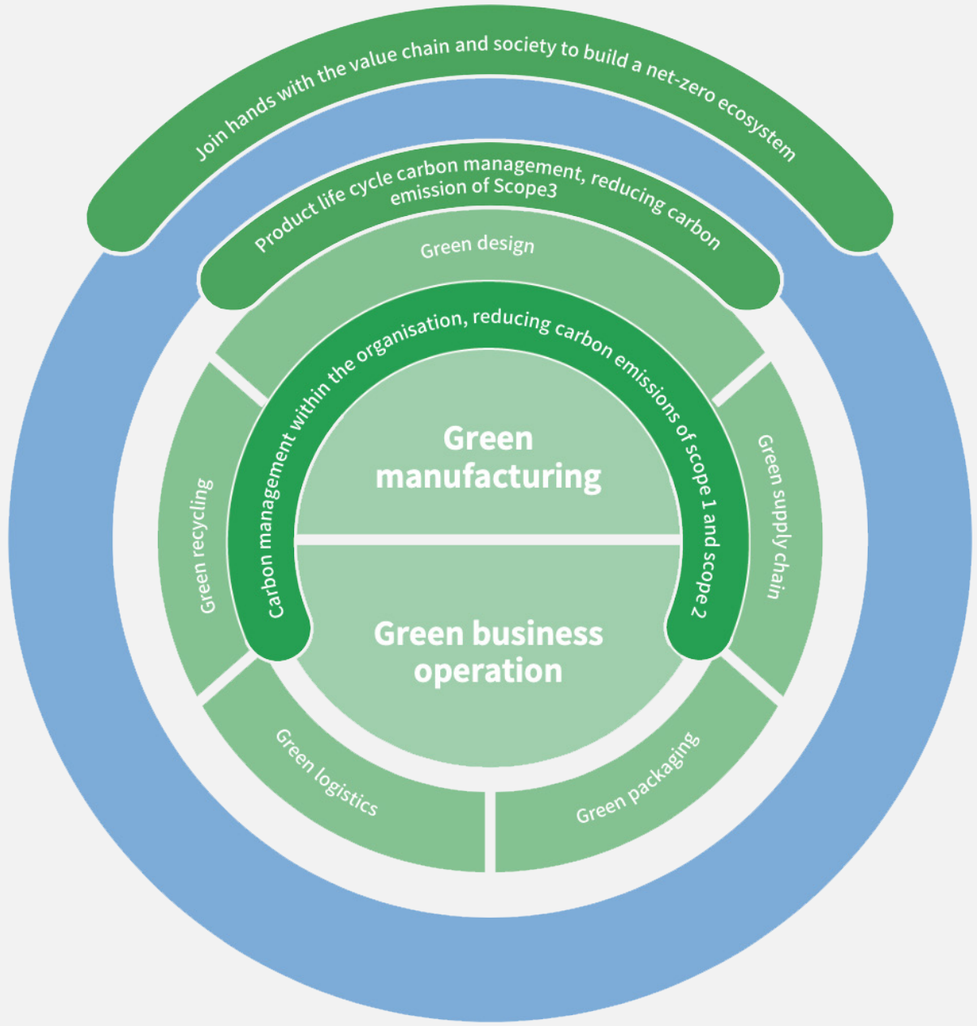
In the Middle Circle

From the perspective of the entire product lifecycle, and centered on the long-term strategy of "Lead with Brand Value, Deepen Global Operation, Drive with Technology, Thrive on Global Vitality", we deliver "full-scenario, full-category, fully connected" green, low-carbon products and services to global users.

In the Outer Circle

Following the strategic response to climate change, we leverage our role as an "industry chain leader" to drive the initiative and actively collaborate with society to promote the construction of a net-zero ecosystem. In summary, with "building a healthy, sustainable green cooperation ecosystem" as a key goal of our own ecosystem strategy, we join hands with various partners to accelerate climate transition development and contribute to a zero-carbon future for China and the world.

Over the past four years, TCL Industries has adopted the "Inner-Middle-Outer Circle" framework, completing the initial setup of carbon management capabilities and the systematic layout of emission reduction practices, laying a solid foundation for green transformation. Looking ahead, we will take "leading technology, green products, excellent governance, and shared value" as our core strategic guidelines, continuously deepening the integrated zero-carbon practice system of "Inner-Middle-Outer Circle", advancing all efforts from "initial setup" to "deep implementation", achieving low-carbon transformation and sustainable development across the entire value chain.



Progress on TCL Industries' Dual-Carbon Goals

Progress on TCL Industries' Dual -Carbon Goals

TCL Industries Carbon Emissions Status

In 2025, TCL Industries continued to deepen the construction of its carbon management system, establishing a scientific carbon inventory mechanism. It conducted a systematic analysis of the achievement status of carbon emission intensity targets for Scope 1, Scope 2, and Scope 3, providing a reliable basis for factories to identify emission reduction potential and formulate carbon reduction pathways.

- Built a "1+N" carbon inventory personnel network: Covering factories and platform departments.
- Strengthened personnel capacity building: Independently developed the "Carbon Inventory for Everyone" course and launched it on T-Learning.
- Promoted the normalization of quarterly carbon inventory and analysis: Quarterly carbon inventory now covers core factories both domestic and international.

In 2025, adhering to standards including the 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 published by the International Organization for Standardization (ISO) and the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), and based on the operational control approach, we conducted an annual carbon inventory for TCL Industries' emissions (Scope 1, Scope 2, and Scope 3). Concurrently, carbon verification was carried out for 10 key factories, resulting in the issuance of carbon verification statements from the international authoritative certification body Bureau Veritas.

2025 TCL Industries Carbon Emissions Analysis — GHG Standard — Operational Level

GHG	2025
Scope 1 (tCO_2e)	312,648
Scope 2, location-based (tCO_2e)	417,647
Total Emissions, location-based (Scope 1 & 2, tCO_2e)	730,295
Revenue (Hundred Million CNY)	1,706.9
Emission Intensity (tCO_2e/ Hundred Million CNY Revenue)	428

TCL Industries 3050 Dual-Carbon Goals

Based on the carbon targets outlined in the 2023 TCL Industries Dual Carbon White Paper: Using 2021 as the base year, the emission reduction target plan was set with the carbon intensity per ten thousand yuan of revenue for Scope 1 & 2 decreasing annually by an equal proportion of 2.6%.

2030 Goals

23.4 % ↓
Reduction in carbon intensity compared to the base year

23 %
With the proportion of non-fossil energy usage required to total energy consumption

In 2025, this achievement meets the 2025 phase target set by TCL Industries.

41 % ↓
TCL Industries' carbon intensity per ten thousand yuan of revenue for Scope 1 & 2 has already decreased compared to that of 2021.

Although TCL Industries has accomplished its phased carbon targets, as the national dual carbon strategy enters a more challenging phase, policy trends are gradually becoming stricter. During the "14th Five-Year Plan" period, the focus of dual carbon work was primarily on target setting and capacity building. However, in the "15th Five-Year Plan" period, the combined effects of policy tools such as the full transition to dual control of carbon emissions, the expansion of the carbon market, and the implementation of product carbon footprint systems will make carbon emission management a rigid constraint on corporate operations. Therefore, we will update TCL Industries' near-term carbon reduction targets.

TCL Industries' Near-Term Carbon Emissions Targets 2.0

To formulate the next phase of near-term carbon reduction targets for TCL Industries in a more scientific and systematic manner, we systematically advanced the following work in 2025, guided by four principles, that is, "clarifying the current status, benchmarking internationally, implementing targeted measures, and integrated coordination".

On-site diagnosis and potential identification

We selected key factories from core industry segments to conduct individual on-site visits and detailed energy-saving diagnostics. This involved a systematic review of production processes, energy consumption, and emission hotspots to identify feasible, large-scale carbon reduction potential points, providing primary data support for subsequent target setting.

Dual-track benchmarking and gap analysis

Leveraging both our internal carbon management team and third-party professional institutions, we conducted carbon emission trend simulations and target gap analyses for core factories across various business units (BUs). This was done based on both TCL Industries' own business development scenarios and the target-setting models of the Science Based Targets initiative (SBTi). By comparing the emission reduction requirements under these two pathways, we quantified the gap between TCL Industries' current carbon reduction performance and the SBTi baseline, providing a reference for ensuring the scientific rigor and ambitiousness of our targets.

Targeted measures and precise control

Considering the distinct business growth characteristics, carbon emission structures, and technological reduction potential of different industrial clusters, we conducted a granular analysis of Scope 1 and Scope 2 emission sources for 15 key factories. We set differentiated specialized targets (e.g., GWP reduction rate per unit product, clean energy substitution ratio) for each key emission segment and established monthly tracking and quarterly assessment mechanisms. This represents an upgrade from "extensive management" to "factor-level control".

Group coordination and target convergence

Building upon the layered analysis and factory-specific targets, a consolidated summary and cross-verification were performed at the group level. Taking into comprehensive consideration business growth projections, technology maturity, investment return cycles, and policy compliance requirements, these were ultimately integrated to form a cohesive near-term (2026–2030) carbon reduction target system covering TCL Industries as a whole.

Through the series of systematic efforts described above, TCL Industries has steadily achieved the original phased carbon reduction target for 2030, demonstrating the effectiveness of the earlier "capacity building and implementing reductions" phase. Looking towards the "15th Five-Year Plan" period, we will proactively benchmark ourselves against national strategy, enhance our own commitments, and drive a transition in our carbon intensity target from "meeting compliance" to "leading the way". Relying on continuously deepening measures such as energy efficiency retrofits, green electricity substitution, and process structure optimization, we are following the national during the "15th Five-Year Plan" period—raising the annual carbon intensity reduction target from the previous 2.6% to align with the national level of 3.8%. We strive to achieve a higher level of emission reduction performance within this new target cycle. This proactive enhancement is both TCL Industries' firm response to the national "dual carbon" goals and the strategic execution of extending our green competitiveness from operations to products and the ecosystem.

Raising the annual carbon intensity reduction target from **2.6%** to **3.8%**.

Through a comprehensive analysis of the systemic relationship between the company's business development, operational strategy, and carbon emissions, we have also fully assessed the impact of the business development pathways of different industrial segments on TCL Industries' overall carbon emissions. This provides data support and strategic guidance for formulating and updating TCL Industries' near-term carbon emissions targets 2.0. Based on three key areas (i.e., its own operations, products and supply chain, and the ecosystem), TCL Industries has defined three core strategies for its dual carbon strategy — green operations, green and low-carbon products, and ecosystem co-creation. Through comprehensive strategic deployment, we will fully promote the company's green transformation, addressing the next five-year targets with firm determination and concrete actions, steadily advancing towards a net-zero future.

	Operational level (inner circle)	Products and supply chain (middle circle)	Ecosystem (outer circle)
Progress on current target	In 2025, TCL Industries' Scope 1 & 2 carbon intensity per ten thousand yuan of revenue decreased by 41% compared to the baseline year 2021, achieving the 2025 phase target set by TCL Industries.	In 2025, TCL Industries has driven 36.89% of its core suppliers to set their own carbon reduction targets.	In 2025, TCL Industries has driven a cumulative social carbon reduction of 10 million tCO_2e through its photovoltaic business.
TCL Industries' near-term carbon emissions targets 2.0	Using 2021 as the baseline year, carbon reduction targets are set with an annual decrease of 3.8% in Scope 1 & 2 carbon intensity per ten thousand yuan of revenue. The goal is to achieve the carbon peak by 2030 with a 29.44% reduction in Scope 1 & 2 carbon intensity per ten thousand yuan of revenue, and achieve carbon neutrality in Scope 1 & 2 operations by 2050.	Using 2021 as the baseline year, carbon reduction targets are set with an annual decrease of 3.8% in Scope 1 & 2 carbon intensity per ten thousand yuan of revenue. The goal is to achieve the carbon peak by 2030 with a 29.44% reduction in Scope 1 & 2 carbon intensity per ten thousand yuan of revenue, and achieve carbon neutrality in Scope 1 & 2 operations by 2050.	Using 2021 as the baseline year, carbon reduction targets are set with an annual decrease of 3.8% in Scope 1 & 2 carbon intensity per ten thousand yuan of revenue. The goal is to achieve the carbon peak by 2030 with a 29.44% reduction in Scope 1 & 2 carbon intensity per ten thousand yuan of revenue, and achieve carbon neutrality in Scope 1 & 2 operations by 2050.
Three core strategies	Green and low-carbon operations TCL Industries is committed to building an efficient and clean operational system. We reduce operational carbon emissions by optimizing energy management, improving resource efficiency, and accelerating the transition to renewable energy.	Green and low-carbon products We integrate environmental principles throughout the entire product lifecycle. From product design and technology R&D to raw materials and packaging choices, we are consistently committed to reducing environmental impact and providing consumers with more eco-friendly and sustainable product choices.	Ecosystem co-creation Dual-driven by photovoltaic technology and environmental technology, through strategic layout in industries like green energy and resource recycling, we aim to lead green and low-carbon consumption, collaborate with upstream and downstream partners to establish industry green standards, and promote carbon reduction across the entire industrial chain and society.
Key Actions	• Demonstration of Zero-Carbon/Waste-Free Benchmark Factories • Clean Energy Transition • Energy Efficiency Transformation and Digital Intelligence • Resource Recycling and Waste Reduction	• Lightweighting and Modular Design • High-Efficiency Green Product Design • Substitution of Eco-Friendly Materials • Green Packaging • Green Logistics • Collaboration for a Sustainable Supply Chain	• Empowering Social Carbon Reduction with Technology • Waste Recycling and Resource Recovery • Green Consumption and Inclusive Technology • Green Public Welfare and Community Co-construction

Capacity Building

As a core pathway to achieving TCL Industries' "3050" dual carbon goals, green and low-carbon operations are consistently integrated into the company's development strategy. We are committed to building an efficient, clean, low-carbon, and circular green manufacturing system, actively promoting green management throughout the product lifecycle, strengthening employee carbon awareness, continuously improving energy-saving production processes, promoting resource recycling, and striving to reduce the environmental impact of product manufacturing and use.

To solidify the talent foundation for the dual carbon strategy, TCL Industries systematically advances company-wide carbon awareness cultivation and carbon management capacity building. Leveraging the internal learning platform T-LEARNING, we have launched the mandatory "Carbon Inventory for Everyone" course series, popularizing core knowledge such as carbon emission identification, data collection standards, and inventory report compilation for all employees, driving carbon management from specialized departments to full participation.

T-Learning Carbon Inventory Training Course

In course design, TCL Industries' carbon inventory course development team deconstructed the accounting methods for Scope 1, 2, and all Scope 3 categories (Categories 1 to 15) into modular video tutorials. These covered key areas including organizational carbon accounting, supply chain carbon emissions, and emissions from the use of sold products. The training has reached over 190 employees, steadily building an internal professional team capable of carbon management and reduction.

Simultaneously, several of TCL Industries' manufacturing and operational bases have earned numerous environmental honors for their outstanding performance in energy conservation, green circularity, and ecological design, establishing industry benchmarks for sustainability. Among TCL Industries' current manufacturing bases, 8 have been awarded the title of in China.

In 2025,

190+
Cumulative trainees of carbon inventory training courses

8
Manufacturing bases awarded the title of the National-Level Green Factory

MP BU	Huizhou TCL Mobile Communication Co., Ltd.
Air Conditioner BU	TCL Air Conditioner (Zhongshan) Co., Ltd.
Air Conditioner BU	Guangdong TCL Intelligent Heating & Ventilating Equipment Co., Ltd.
Air Conditioner BU	TCL Air Conditioner (Wuhan) Co., Ltd.
Hefei Household Appliances	TCL Household Electric Appliance (Hefei) Co., Ltd.
Pan-Smart Screen BU	TCL King Electrical Appliances (Huizhou) Co., Ltd.
TCL Environmental Technology	TCL Aobo Environmental Protection and Development Co., Ltd.
Tonly Technology	Tonly Technology Co., Ltd.

Zero-Carbon Manufacturing and Energy Efficiency Benchmarking in Operations

Zero-Carbon Manufacturing and Energy Efficiency Benchmarking in Operations

Demonstration of Zero-Carbon/Waste-Free Benchmark Factories

TCL Industries strictly adheres to regulations such as the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste and the Standard for Pollution Control on Hazardous Waste Storage across all its global operational locations. We have formulated internal management documents including the Solid and Liquid Waste Pollution Control Management Regulations, Waste Pollution Prevention and Control Management Regulations, Hazardous Waste Management Plan, and Hazardous Chemical Management Regulations. These documents detail methods for waste classification, recycling, and reuse, ensuring waste treatment complies with national and local standards.

We uphold the principle of "reduction at source, process control, and resource recycling". By focusing on the classified management, compliant disposal, and resource recycling of various wastes such as electronic waste, hazardous waste, and general solid waste, we have established a globally-covered, internally and externally coordinated waste resource utilization management system, transforming waste products into sustainable resources.

In 2025, TCL King (Huizhou) and Huizhou TCL Mobile Communication were honoured with the title of "Zero-Waste Factory" in the Zhongkai High-Tech Industrial Development Zone

Waste reduction at source

We promote waste reduction at source through improvements in product design and production processes, such as adopting high-gloss injection moulding, utilising recyclable packaging materials, and optimising battery wrapping film design.

Process control

We have established a regular inspection mechanism and engage professional organisations to conduct comprehensive inspections and assessments of workplace environments, solid waste, and hazardous chemical management, ensuring standardisation and effectiveness in waste management operations.

A dedicated waste collection area has been established, equipped with segregated collection containers to ensure that all categories of waste are properly collected, recorded, and transferred. Furthermore, in compliance with local environmental governance requirements, all branches of TCL Industries manage disposal through qualified third-party recyclers or government-designated agencies in their respective locations.

Resource recycling

We have established an electronic waste recycling and recovery programme covering all our operations, promoting the refurbishment and reuse of viable products and the regulated disassembly and material recovery of non-viable products, thereby effectively increasing the resource recovery rate.

Waste management measures

Type	Management measures
Management of general solid and non-hazardous waste	**Management of non-hazardous waste:** We have established a management ledger for non-hazardous waste to ensure data traceability and process visibility. Disposal is entrusted to qualified third-party organisations to ensure compliance with environmental protection requirements.
	Management of general solid waste: We have developed specific management requirements and selected qualified suppliers to conduct compliant recycling and treatment.
Hazardous waste management	**Establish hazardous waste management procedures:** We manage the entire lifecycle of hazardous waste, including generation, warehousing, and transfer, thereby standardising its storage and transportation processes.
	Construct dedicated hazardous waste storage facilities: Hazardous waste is transferred to third-party organisations with professional certifications for harmless disposal.
Electronic waste management	**Recycling principles:** A comprehensive electronic waste recycling and recovery programme has been established. The recycling, reuse, refurbishment, disassembly, and material recovery of electronic products are carried out in accordance with laws and regulations to enhance the efficiency of resource circulation.
	Recycling channels: A diverse recycling network has been established, including off-line retail stores and mailing/door-to-door pick-up services, to support consumers in returning end-of-life electronic products to the company or its authorised recycling organisations.
	Collaborative recycling: Through systematic disassembly of whole products and spare parts, along with the recovery and warehousing of usable components, we achieve resource regeneration. We collaborate with professional recycling organisations holding international certifications such as R2 and e-Stewards, strictly adhering to compliant recycling procedures. This ensures environmentally friendly sorting, processing, and final disposal of electronic waste, effectively preventing and controlling pollution while reducing our environmental footprint.

Case **TCL King (Huizhou) Rated as "Waste-Free Factory" through Systematic Waste Management**

To practice green development concepts, the Pan-Smart Screen BU has systematically established a waste management system. It has formulated and implemented regulations such as the Pan-Smart Screen BU Objectives, Targets, and Management Scheme Control Specifications, Solid and Liquid Waste Pollution Control Management Regulations, and the Smart Display Product Manufacturing Center Environmental Management System. These define reduction targets for hazardous waste, general industrial solid waste, and kitchen waste, and integrate the relevant indicators into daily operational management.

Building upon this foundation, TCL King (Huizhou) further innovated its management mechanisms by establishing a closed-loop "identification-cooperation-evaluation" process and setting the core principles of "source control, low emissions, low pollution, zero landfill". This has achieved refined, full-lifecycle management of waste. By strengthening classification, recycling, and resource utilization, the factory has not only effectively reduced its environmental footprint but also promoted synergistic growth in economic and environmental benefits.

Effective management has led to significant performance improvements: In 2025, the generation of hazardous waste, general industrial solid waste, and kitchen waste per unit of output value at TCL King (Huizhou) decreased by 7.06%, 12.83%, and 44.85% year-on-year, respectively. These notable achievements also received authoritative recognition, with the factory successfully earning the title of "Waste-Free Factory" in the same year.

In 2025, TCL King (Huizhou)

7.06 % ↓
The generation of hazardous waste decreased respectively

12.83 % ↓
The general industrial solid waste decreased respectively

44.85 % ↓
The kitchen waste decreased respectively

Case **TCL Air-Conditioner (Zhongshan) Co., Ltd. Adds RTO Combustion-Type Exhaust Gas Environmental Treatment Facility**

In December 2025, TCL Air-Conditioner (Zhongshan) Co., Ltd. installed a new RTO environmental protection facility to treat exhaust gases generated by heat exchanger processing, welding, and degreasing. The entire equipment has an electrical power rating of 108.5 KW and a natural gas consumption rate: maximum installed capacity of 166 m^3/h, with an average natural gas usage of 30 m^3/h. It replaces the previous three sets of filtration/adsorption-type exhaust gas environmental treatment equipment (with a total electrical power of 292 KW). The RTO facility decomposes VOCs into CO_2 and H_2O through high-temperature oxidation, achieving more thorough purification, generating no hazardous waste, and being more environmentally friendly and energy-efficient.

RTO Combustion-Type Exhaust Gas Facility

Case **Mobile Phone BU's Cutting-Edge Research on Electronic Waste Resource Utilization**

Addressing the challenges of electronic waste recycling efficiency and resource reuse, the Mobile Phone BU's integrates green concepts throughout the entire process of product design and technology R&D. Batteries in all projects uniformly adopt a wrap-film design, enhancing disassemblability and repairability to facilitate subsequent recycling and reuse.

In terms of optimizing recycling pathways, the Mobile Phone BU's published a paper in the journal Environment, Development and Sustainability in 2025 titled Optimization method for E-waste recycling scheme considering ecological efficiency. This paper proposes a decision-making method that incorporates ecological efficiency into the optimization of electronic waste recycling schemes. Concurrently, the BU participated in formulating group standards such as T/QGCML 1631-2023 and T/QGCML 3057-2024. These standards aim to achieve the recovery and reuse of key materials like graphite anodes and lithium cobalt oxide cathodes from end-of-life lithium-ion batteries through standardized refurbishment and regeneration processes, promoting the resource recovery and green disposal of electronic waste.

Optimization method for E-waste recycling scheme considering ecological efficiency

Journal Paper Publication

Case **Hefei Home Appliance BU Optimizes Exhaust Gas Treatment Processes for Synergistic Improvements in Emissions Reduction, Safety, and Energy Efficiency**

In 2025, the Hefei Household Appliances optimized the exhaust gas treatment process for its refrigerator production lines by upgrading the original five sets of "UV photolysis plus activated carbon" units to a "Two-Stage Activated Carbon Adsorption" system. This process improvement ensures continuous compliant emissions while further reducing the generation of pollutants and hazardous waste (such as spent fluorescent tubes). It also effectively decreases equipment failure rates and electricity consumption, achieving synergistic enhancements in environmental performance, operational safety, and energy efficiency levels.

New Exhaust Gas Treatment Equipment

Clean Energy Transition

TCL Industries continues to advance the development and utilization of renewable energy, employing various approaches to increase its proportion in our energy mix. We are committed to achieving 80% renewable electricity usage by 2050. On one hand, we persistently promote the construction of distributed photovoltaic facilities at our manufacturing bases and strengthen direct procurement of green electricity to prioritize raising the share of renewable electricity in our production and operations. On the other hand, we actively participate in the green power market, reducing carbon emissions from electricity consumption by means such as purchasing unbundled green electricity certificates.

New TCL Photovoltaic Projects

Energy Efficiency Transformation and Digital Intelligence

TCL Industries continuously optimizes its energy management system. We conduct regular energy supervision and inspections, routinely organize energy-saving diagnostics, and rely on professional technical analysis and comprehensive evaluations to ensure the compliance and efficiency of energy usage. We implement various energy-saving and consumption-reduction measures in our production and operations, taking active actions across four areas (e.g., management-based energy saving, technical energy saving, energy structure optimization, and energy-saving awareness enhancement) to drive a comprehensive upgrade in energy management. In 2025, TCL Industries had 9 manufacturing bases certified under the ISO 50001 Energy Management System standard.

Key Measures for Energy Management

Management-led energy saving

- Establish and improve the energy management system: Deploy advanced energy resource management systems for real-time tracking and monitoring of resource usage, thereby strengthening our energy management efforts.
- Perform self-assessments of energy metering: Enhance energy measurement management and reinforce conservation efforts by evaluating energy utilisation performance and the allocation of related personnel and equipment.
- Develop an energy utilisation plan: Ensure rational allocation and optimal utilisation efficiency of these resources.
- Enhance energy conservation measures in daily operations: Rigorously enforcing scheduled shutdowns of lighting, air conditioning, computers, and other appliances to prevent energy waste, ensuring efficient utilisation of energy resources.

Technology-based energy saving

- Advance equipment iteration and upgrade: Promptly phase out and upgrade outdated equipment to more energy-efficient and environmentally friendly alternatives. This includes replacing variable-frequency air compressors, refrigerated dryers and other production equipment, as well as promoting the adoption of energy-saving technologies and equipment such as variable-frequency motors, air conditioners, and high-gloss injection moulding machines.
- Enhancement for energy-saving transformations: Implement energy-efficient technical upgrades for systems including air compressor systems, LED lighting upgrades, servo-driven injection moulding machines, and central air conditioning systems, as well as waste heat recovery projects, thereby reducing energy consumption through technological advancements.

Optimisation of energy structure

- Increase renewable energy usage: Vigorously advance the construction of photovoltaic power stations to develop renewable energy resources.
- ntensify efforts to procure green electricity: Proactively purchase clean energy to reduce reliance on traditional fossil fuels and lower the proportion of high-carbon-emitting energy consumption.

Raising awareness of energy conservation

- Conduct training to enhance employee awareness of energy conservation: Through specialised training and TLink platform, we seek to strengthen awareness-raising efforts, encouraging employees to participate in energy-saving and emission-reduction activities to foster a positive atmosphere of collective involvement.

Case **TCL International E City Integrated Photovoltaic, Storage, Pump, and Charging Project**

To accelerate the green energy transition of industrial and commercial parks, TCL Photovoltaic Technology has developed China's first integrated smart green energy station at the Nanshan TCL International E City in Shenzhen. This station directly powers DC charging piles through a combined system of photovoltaic generation, energy storage, water pumping, and charging. The project utilises an Energy Management Contract (EMC) model and operates under a "self-generation for self-consumption, rooftop photovoltaic surplus power electricity station to the and grid" an energy scheme storage . It maximises system space with a utilisation total installed on park capacity rooftops of and 717.1 carports kW, along to construct with solar a carports.

Specifically, the rooftop photovoltaic system employs 550Wp and 710Wp high-efficiency monocrystalline silicon modules. The energy storage system utilizes a "two-charge, two-discharge" strategy to precisely leverage peak and off-peak electricity price differentials. The carport roofs are equipped with 46 high-efficiency modules. This creates an application scenario for integrated photovoltaic generation, storage, pumping, charging, distribution, and power supply with "100% photovoltaic self-consumption, surplus to the grid". Photovoltaic power is prioritized for park operations, including office and property management, AC/DC charging piles, carport lighting, and advertising light boxes, and is also connected to emergency backup power, ensuring uninterrupted operation during grid outages.

Upon grid connection, the project is expected to achieve annual electricity cost savings of approximately RMB 1,078,700 (RMB 678,700 from photovoltaics plus RMB 400,000 from energy storage) and reduce annual carbon emissions by 757.28 tons. It effectively enhances the park's energy self-sufficiency and resilience, providing a replicable model for energy transition for surrounding enterprises and communities, contributing to TCL Industries' "3050" dual carbon goals.

Case **TCL Air Conditioner Intelligent Manufacturing Base in Wuhan Innovates Digital Production Model**

As an industrial technology retrofit demonstration project in Wuhan, the TCL Air Conditioner intelligent manufacturing base benchmarks itself against national digital leadership standards and shoulders the responsibility of exploring new manufacturing models. By integrating powerful digital twin technology through its smart park system and "6+1" industrial internet platform, it has achieved a 73% improvement in quality and a 32% increase in efficiency, fully committed to building a "high-end, intelligent, and green" intelligent manufacturing base.

The base integrates intelligent manufacturing, technology R&D, smart logistics, smart parks, and digital applications. It has established ten classic digital management scenarios, including AI large model plus smart factory, smart supply chain, smart warehouse, lights-out factory, and 5G+ smart park. It houses the world's first dedicated production line for dust-free fresh air conditioners. The base has earned over ten honors, including National Green Factory, Hubei Province Intelligent Manufacturing Pilot Demonstration Factory, and Hubei Province Green Supply Chain Management Enterprise, fully leveraging its role as a benchmark in intelligent manufacturing.

Wuhan Intelligent Manufacturing Base

Digital Empowerment of Workshop Operations

Integrated Command and Dispatch Center

Case **TCL King (Huizhou) Focuses on Enhancing Energy Management Efficiency to Advance Energy Conservation and Emission Reduction**

TCL King (Huizhou) has established a systematic energy management system and formulated several specialised energy target management documents including the Energy Targets, Indicators and Control Scheme Management Procedure, Energy Monitoring and Measurement Control Procedure, and Energy Design and Introduction Control Procedure, which clarify full-process management of energy targets and indicators. The factory has also conducted comprehensive self-inspections of energy metering to enhance metering management and energy conservation control capabilities. TCL King (Huizhou) has institutionalised a routine mechanism for energy-saving transformations and implemented targeted projects. In 2025, four energy-saving transformation projects were completed, including the transformation of air conditioning cooling towers and the restoration of the MAU fresh air cabinet automatic control system. These projects have reduced annual carbon emissions by 111.87 tCO_2e and generated annual savings of RMB 518,900.

Energy-Saving Retrofit Project Site Photo

Case **Homa Refrigerators Deploys a Digital Intelligent Energy Management System to Drive Precision Energy Management**

Homa Refrigerators has introduced a smart energy management monitoring platform and a real time energy consumption display screen, replacing the traditional manual meter reading approach. This enables automated data collection, digital management, and visual monitoring of energy usage. The upgrade significantly improves the precision of energy oversight and supplies data support for continuous energy efficiency analysis and optimisation.

Homa Refrigerators Energy Management System

Case **TCL Zhongshan Base Demonstrates Effectiveness of Multiple Energy-Saving and Carbon-Reduction Measures**

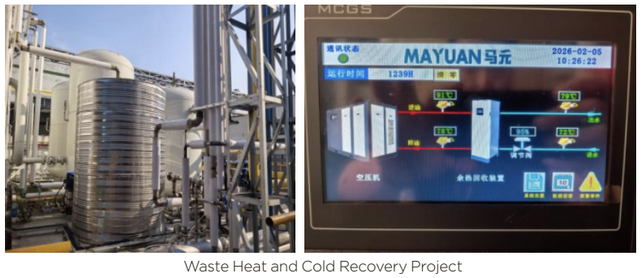
TCL Zhongshan Base implements various energy-saving and carbon-reduction measures, covering four key areas (i.e., waste heat/cold recovery, power system efficiency improvement, energy structure optimization, and process quantity reduction). This reflects a shift from end-of-pipe treatment to source reduction and from point-based energy saving to system integration, delivering significant dual value in both economic benefits and environmental emission reduction, thereby constructing a multi-dimensional, closed-loop green manufacturing system.

Waste Heat and Cold Recovery and Utilization: Recovers and utilizes compression heat, welding heat, and vaporization cold from liquid oxygen (thermal energy previously dissipated during production) for domestic hot water and Air Conditioner cooling. This transforms "waste energy" into "usable energy", reducing conventional energy consumption in dormitories and office areas.

First-Class Intelligent Air Compressor Room: Combines 100% first-class energy efficiency equipment with an intelligent linkage control system, proactively lowering operating discharge pressure. This keeps the power system in a state of high-efficiency matching, reducing no-load and over-pressure losses, demonstrating deep energy savings through refined management.

Photovoltaic Clean Energy Construction: Leverages rooftop photovoltaic installations across multiple base factory buildings, converting idle space into green power generation resources. This increases the proportion of renewable energy in total electricity consumption, reduces reliance on fossil fuels at the source, and helps build a benchmark for zero-carbon intelligent manufacturing.

Integrated Short-U Sleeve Ring Cutting without Chips: Integrates three discrete processes into one continuous operation. This not only significantly reduces power consumption but also eliminates wastewater discharge from the original cleaning process, achieving synergistic benefits of electricity savings and pollution reduction.



Waste Heat and Cold Recovery Project

First-Class Intelligent Air Compressor Room Retrofit

Integrated Short-U Sleeve Ring Cutting without Chips Processing Retrofit

Resource Recycling and Waste Reduction

In our production and operational activities, including water resource recycling, packaging materials, and raw materials, we actively implement resource conservation and circular economy measures.

Reuse of water resources

Through technological upgrades, we have achieved the reuse of water resources. For example, intelligent drinking water control system has been configured at the Mobile Phone BU, utilising reverse osmosis technology to filter and reuse tap water. Besides, recirculating water-cooling stems are widely applied to improve the utilisation efficiency of water resources.

Reuse of packaging materials

We promote green and circular packaging across the supply chain by comprehensively promoting plastic pallet reuse projects and replacing disposable wooden pallets. On this basis, a closed- loop management mechanism of "recycling - cleaning - reusing" has been established.

Reuse of raw materials

We utilise waste ceramics from the ceramic industry as raw materials to produce ceramic powder, which partially replaces virgin plastics and mineral fillers for components such as television back panels. Upon reaching the end of its service life, this material can be regenerated through plastic recycling systems, forming a complete closed loop of "using - recycling - regenerating - reusing".

Furthermore, we have established an internal reverse logistics closed-loop system to standardize the disassembly of end-of-life products. Reusable components are strictly inspected and then used for repairs and refurbishments, promoting a green model of "refurbishment over disposal". Non-recyclable and hazardous waste is handed over to qualified third parties for harmless treatment.

Case **Pan-Smart Screen BU Resource Recycling**

The Pan-Smart Screen BU actively implements circular economy principles, systematically promoting the application of renewable materials and efficient resource recycling from material selection and product structural design to the resource utilization of production waste. Materials are chosen to comply with EU RoHS directives, using renewable, eco-friendly engineering plastics and metals. Product designs all meet EU WEEE recyclability criteria; key components adopt snap-fit structures instead of screws to facilitate disassembly and recycling at end-of-life. During the production stage, processed production waste is refined into renewable plastics and supplied to partners for producing modified plastics. Approximately 20,000 tons are produced annually, which are then supplied internally for home appliance housing production. This forms a green closed-loop, achieving resource circulation and waste reduction.

Case **Hefei Household Appliances Establishes Water Resource Management System to Drive Water Efficiency and Recycling Innovation**

The Hefei Household Appliances systematically enhances water efficiency and promotes recycling. Within its own operations, the factory has constructed a water reuse system that purifies and reuses process wastewater for purposes such as cooling and cleaning, with a reuse rate target exceeding 50%, effectively reducing freshwater consumption. At the product level, certain high-end washing machines are equipped with water circulation modules that filter and reuse wash water, assisting users in saving water during the use phase. Simultaneously, the Hefei Household Appliances collaborates with supply chain partners to promote the construction of water recovery facilities, jointly building an industrial water conservation closed-loop and extending water-saving responsibility throughout the upstream and downstream value chain.

Dedicated Recycling Storage Tank

Case **Hefei Household Appliances Utilizes Recycled Material in Refrigerator Liner Panel Production**

The Hefei Household Appliances actively promotes circular economy principles by incorporating varying proportions of recycled material to reduce reliance on virgin plastics. Taking the liner panels for French door refrigerators as an example, the material composition includes 30% recycled PS material, prepared together with 62% virgin PS material and 8% toughening masterbatch. This approach effectively enhances material recycling rates while ensuring product performance and quality, thereby reducing the carbon footprint and resource consumption during the production process.

Case **TCL Integrated Photovoltaic, Storage, and Heat Pump Home Energy Solution**

TCL integrates photovoltaic power generation, energy storage batteries, and R290 tri-generation heat pumps at its core to achieve efficient, green energy conversion, creating an energy-saving and environmentally friendly home environment for users.

The R290 Tri-Generation Heat Pump Unit integrates heating, cooling, and domestic hot water supply, boasting A+++ ultra-high energy efficiency. With a capacity range from 4KW to 16KW and tri-zone control, it can simultaneously meet the temperature needs of different areas. The R290 Tri-Generation solution won the iF Design Award in 2025.

TCL Integrated Photovoltaic, Storage, and Heat Pump Home Energy Solution

Product & Supply Chain Lifecycle Decarbonization

Product & Supply Chain Lifecycle Decarbonization

TCL Industries systematically advances the green ecological design and long-life durability design of its products. We conduct systematic planning from the initial stages of product design, establishing clear green design strategies, targets, and implementation roadmaps to ensure environmental impact is reduced and resource efficiency is enhanced from the source.

Lightweighting and Modular Design

Our product design adheres to the principle of easy disassembly, widely adopting snap-fit structures to replace screw fastenings. This facilitates efficient disassembly and material recovery at the product's end-of-life, meeting requirements such as the EU WEEE Directive. Additionally, we promote lightweight, modular design and employ eco-friendly processes like paint-free finishing to reduce environmental impact from the source.

Case **Application of Glass Fibre Back Covers, Practising Sustainability Through Durable Design**

The Mobile Phone BU has adopted glass fibre as an innovative material for back covers of mobile phones. The lightweight material endows products with excellent structural strength This reduces and impact resource resistance, consumption effectively and enhancing electronic waste product from durability repairs and or service premature life. replacement, contributing to resource conservation.

Mobile Phone Durable Design (Glass Fiber Board Back Cover)

High-Efficiency Green Product Design

We deeply integrate energy-saving, emission-reduction, and green development concepts into the entire product lifecycle, systematically building green product competitiveness from material selection and structural design to energy performance and recycling.

Case **Hefei Household Appliances Optimizes " High-Efficiency Dryer" Inner Tub Texture Design, Achieving Dual Breakthroughs in Performance and Environmental Friendliness**

The Hefei Household Appliances consistently integrates energy-saving, emission-reduction, and sustainable development principles into product innovation, driving design optimization. By refining the inner tub texture and drain hole layout of the "Super Drum", it has effectively enhanced water flow exchange efficiency. This core design innovation has not only elevated the product's wash ratio[Wash ratio is a metric that measures a washing machine's cleaning effectiveness, indicating how well clothes are cleaned, also known as cleaning efficiency or the performance index.] to an excellent level of 1.25, ensuring superior cleaning performance, but has also directly reduced water and electricity consumption per wash cycle, lowering the product's environmental footprint during the use phase from the source.

TCL High-Efficiency Dryer

Case **Pan-Smart Screen BU Advances Product Green Design and Energy Efficiency Improvement**

The Pan-Smart Screen BU comprehensively integrates energy-saving, emission-reduction, and green development concepts into product design and manufacturing processes, enhancing resource efficiency from multiple dimensions including structural optimization, process upgrades, and management collaboration. In manufacturing, it actively promotes lightweight and integrated design, employing solutions like BMS all-in-one machines and plastic-for-metal substitution, effectively simplifying the overall product structure and reducing material and assembly consumption. Through green packaging and structural optimization, the usage of EPS packaging materials has achieved a year-on-year decrease. On the product side, energy efficiency indices generally reach above Level 2, with passive standby power controlled within 0.5W. Multiple products have obtained Energy-Saving Product Certification issued by the China Quality Certification Center. At the management level, a green design database and specialized design tools have been established. Supported by a comprehensive PLM and GPM (Green Product Management) system, it strengthens resource efficiency control throughout the product lifecycle, continuously improving green manufacturing performance.

Energy-Saving Product Certification Certificate (Example)

Case **TCL Air-Conditioners Advances High Energy Efficiency Through Green Design**

To tackle long-standing challenges in self-built rural homes in North China such as high heating energy consumption, large fluctuations in room temperature, poor equipment stability in extreme cold, and complex operation, TCL Air-Conditioners has introduced the Ultra Savings Series AI Inverter Heating System, designed specifically for rural heating scenarios. Built on in-house developed and authoritative certified technologies including AI Inverter and Heat Pump Energy-Saving Technology, the system operates reliably across an ultra-wide temperature range from -35°C to 48°C. It incorporates 12 safety protection mechanisms such as anti-freeze and overload protection, and integrates smart strategies like building insulation analysis, user habit learning, cloud-based weather synchronisation, and time-of-use electricity price optimisation to deliver precise energy savings and reliable all-weather heating. The system also supports both local and remote smart control and employs multi-layer noise reduction technology, improving energy utilisation efficiency while enhancing user experience and living comfort. This product series has passed rigorous testing by the Hefei General Machinery & Electrical Products Inspection Institute and has been awarded the international "Four Tier-1" Energy Efficiency Certification as well as low-temperature and low-noise certification. Through technological innovation, it helps rural households meet their clean, economical, and stable heating needs.

AI Inverter Heater

International Energy Efficiency Certification

Case **Smart Connected Devices (SCD) BU Builds a Full-Cycle Green Chain for Design, Production and Recycling**

The SCD BU systematically advances green management across the entire product lifecycle, integrating environmentally friendly concepts into design, transportation, and recycling stages. During the product design phase, the fiber-optic gateway's grille structure is optimized to enhance heat dissipation efficiency, achieving approximately 15% reduction in energy consumption. In the transportation stage, a stackable packaging design is adopted, improving logistics space utilization by over 30%, and sea freight is prioritized to effectively lower the transportation carbon footprint. At the end-of-life stage, clear material classification labels guide consumers in proper disposal. Combined with the back-end recycling system, this achieves an overall 85% recycling rate, forming a closed-loop resource path from design to regeneration.

Case **TCL Air Conditioner Drives Household Energy Transformation Through Green Design**

TCL Air Conditioner integrates sustainable development into its design philosophy, launching an integrated smart home solution that combines energy management, efficient energy storage, and healthy water consumption. This system integrates a Home Energy Management System (HEMS), the BlueArk-X1 residential integrated storage unit, and a new water dispenser, aiming to enhance household energy efficiency and sustainability through systematic design. The BlueArk-X1 series residential storage unit embodies green design principles such as long cycle life, high energy conversion efficiency, and modular configuration. It not only increases the proportion of self-generated and self-consumed clean energy, reducing household reliance on the traditional power grid, but also lowers resource and environmental burdens across the entire lifecycle by extending product lifespan and optimizing resource allocation.

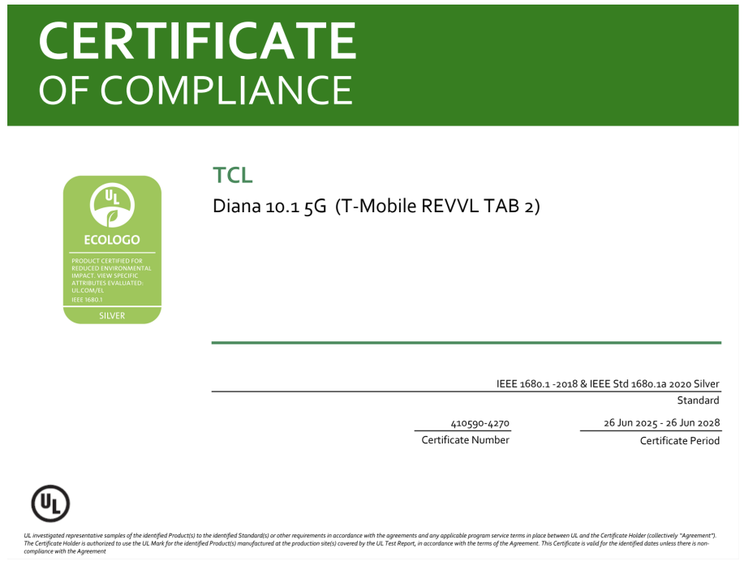
TCL One-Stop Smart Home Solution

Case **Exploring Green Product Design through Smart Mobile Display (SMD), and Obtaining ECOLOGO Silver Certification**

In 2025, the SMD BU piloted the Diana series tablet to strengthen the environmental performance across the full lifecycle of products, creating an industry benchmark product with high performance and low carbon footprint.

The design of Diana 10.1 5G tablet strictly complies with green design principles, systematically optimising multiple dimensions including material selection, energy efficiency, product durability, and recyclability, thereby significantly reducing the environmental impact of the product during manufacturing, use, and disposal. By integrating green engineering technologies with traceable supply chain management, the product delivers comprehensive excellent environmental performance.

Consequently, it has fully complied with the Silver-Level requirements of IEEE 1680.1-2018 and IEEE Std 1680.1a-2020 standards, and has successfully passed the audit by the third-party eco-label certification institution UL Solutions, obtaining the ECOLOGO Silver Certification.



CERTIFICATE
OF COMPLIANCE

ECOLOGO
PRODUCT CERTIFIED FOR REDUCED ENVIRONMENTAL IMPACT. VIEW SPECIFIC ATTRIBUTES EVALUATED: UL.COM/EL
IEEE 1680.1
SILVER

TCL
Diana 10.1 5G (T-Mobile REVVL TAB 2)

IEEE 1680.1 -2018 & IEEE Std 1680.1a 2020 Silver
Standard

410590-4270
Certificate Number

26 Jun 2025 - 26 Jun 2028
Certificate Period

UL investigated representative samples of the identified Product(s) to the identified Standard(s) or other requirements in accordance with the agreements and any applicable program service terms in place between UL and the Certificate Holder (collectively "Agreement"). The Certificate Holder is authorized to use the UL Mark for the identified Product(s) manufactured at the production site(s) covered by the UL Test Report, in accordance with the terms of the Agreement. This Certificate is valid for the identified dates unless there is non-compliance with the Agreement

ECOLOGO Silver Certification

Substitution of Eco-Friendly Materials

TCL Industries continuously increases the proportion of renewable and highly durable eco-friendly materials in procurement and application to promote efficient resource recycling and systematically reduce resource consumption throughout the product lifecycle. The company consistently drives innovation by incorporating various environmentally friendly materials into its products, providing material support for the development of green, low-carbon products. In product design and R&D, we prioritize the selection of eco-friendly materials and conduct recyclability assessments for new product designs at the outset, promoting product recyclability and circular potential from the source. Furthermore, we collaborate with key component suppliers (e.g., injection molding manufacturers) to promote the use of recycled secondary materials in production.

Case **Integrating Diversified Materials to Make Sustainable Remote Controls**

We have explored and applied diversified green material solutions for different components of remote controls. The front panel is made from recycled aluminium, which maintains structural strength and metallic texture whilst effectively promoting aluminium recycling to reduce energy consumption and carbon emissions from aluminium ore mining and smelting.

Three innovative solutions are adopted for back shells: Bioplastics, sourced from renewable resources, help reduce dependence on petroleum-based raw materials and lower the product carbon footprint; Spray-free plastics, upon injection moulding, directly present the colour and gloss required by design, thus eliminating traditional spraying processes, reducing volatile organic compound emissions at source, and contributing to better production environment and employee health; and post-consumer recycled plastics, applied with special surface treatment processes, present a delicate suede-like texture, achieving high-value regeneration of waste plastics whilst enhancing users' visual and tactile experience.

Multi-Eco-Material Solutions for Remote Control

Case **Exploring Multi-Scenario Applications of Application of TCL ECORA Recycled Ceramic Materials**

Unlocking aesthetic possibilities, the TCL ECORA project utilises ceramic waste as the raw material, which is screened and ground into fine powder of controllable particle sizes, and reintegrated into a polymer base as a high-performance filler. Without altering existing injection moulding processes, this material successfully substitutes a portion of virgin plastics and mineral fillers, enhancing material utilisation efficiency. Recyclability is considered at the initial design stage of ECORA materials. Upon product retirement, the material can be processed through existing plastic recycling systems for shredding and granulation, then reformed into composite particles and reintroduced into production, achieving a closed-loop cycle of "use— recycle-regenerate-reuse".

Recyclable Process Flow of ECORA Materials

This material is suitable for the injection moulding of large-scale components such as television back panels, and can be extended to 3D printing, small-batch manufacturing, and a variety of surface and flexible material applications. Furthermore, based on the same circular economy principles, the ECORA process has been successfully extended to sectors including textiles, powder coatings and water-based PU materials, thereby significantly advancing the cross-sectoral implementation of circular design principles.

Cross-Industry Practice of ECORA Material Circular Design

Case » TCL Air-Conditioners Promotes Low-Carbon Refrigerant Applications to Reduce Products'

TCL Air-Conditioners is committed to advancing the transition toward low-carbon refrigerants, actively adopting alternatives with lower Global Warming Potential (GWP). The company is systematically replacing the conventional refrigerant R410a with the more environmentally preferable R32, which has a GWP value approximately one-third that of R410a. R32 offers additional benefits, including lower refrigerant charge requirements and higher energy efficiency ratios. Building on this progress, TCL Air-Conditioners continues to monitor and assess next-generation solutions, including the ultra-low GWP technology pathway represented by the fourth-generation refrigerant R290. The company is advancing pilot applications with rigorous safety safeguards, aiming to systematically reduce the carbon emissions associated with air conditioning products throughout their entire lifecycle. By 2025, the application ratio of new, low-carbon refrigerants in Air-Conditioners' products exceeded 60%.

Air Conditioner Production Line Using Low-Carbon,E-co-Friendly Refrigerant

Case » Application of Recycled Materials in Multiple Products by Smart Mobile Display (SMD) BU

The SMD BU actively promotes the application of recycled materials to drive the green transformation of products:

- The back cover of the T-Mobile REVL TAB 2 tablet contains 65% post-consumer recycled (PCR) materials, significantly increasing the proportion of recycled materials used.
- The TCL Note A1 NXTPAPER protective case utilises 100% naturally sourced eco-friendly organic silicone material, achieving material sustainability whilst possessing excellent stain resistance properties.
- The TCL PlayCube projector innovatively employs recyclable yarn-woven fabric for exterior wrapping, further diversifying applications of renewable materials in product design.

Diversified Application of Recyclable Materials in Product Design

Case » Application of Recycled Materials in Router Products by SCD BU

To practice green design concepts, the Smart Connected Devices BU promotes extensive use of recycled materials in router products:

- **Hardware Design:** All hardware adopts a halogen-free design, with recycled plastics extensively used for shell materials. Recycled materials account for 65% in standard use, which can be further increased to 95%. Meanwhile, recycled aluminium has been verified to be used as a heat dissipation material and implemented in specific projects.
- **Packaging Design:** Plastic-free solutions are adopted, with green ink printing, systematically reducing environmental footprint in the packaging segment.

Router Eco-Friendly Design

Case » Spray-Free Metallic Texture Material Replacing Original Plastic Spraying Solution

After years of R&D in spray-free metallic texture materials, TCL Industries took the lead in 2025 in applying this material to multiple structural and appearance components such as TV shells and bases, replacing the traditional plastic spraying processes. Whilst maintaining its premium visual appeal, this phases out the spraying process, lowers production costs and carbon emissions, practising green product concepts fundamentally from design.

Television with Paint-Free Front Bezel and Stand

Case **Hefei Home Appliance BU Reduces Production Carbon Emissions and Enhances Product Energy Efficiency Through Foaming Agent Substitution**

Hefei Home Appliance BU has fully phased out high-GWP foaming agent systems, transitioning to the environmentally friendly foaming agent R600a (isobutane). With a GWP value close to zero and no ozone-depleting potential, R600a is currently one of the most sustainable foaming solutions for refrigerator insulation layers. Combined with cyclopentane co-foaming technology, the solution reduces material usage and carbon emissions while maintaining insulation performance. By 2025, all TCL refrigerators had achieved a 100% transition to R600a foaming agents, resulting in an approximately 70% reduction in carbon emissions during the foaming stage per unit compared to traditional solutions. This initiative also contributes to improved energy efficiency ratings for TCL refrigerators, supporting end-user energy savings and lower carbon footprints.

Application of Green and Low-Carbon Foaming Agent

Green Packaging

Green packaging is a key aspect of TCL Industries' practice of sustainable product lifecycle management. To this end, we promote the use of packaging materials that are plastic-free, reduced in volume, lightweight, and recyclable within the supply chain, partnering with suppliers to jointly create a resource-saving and environmentally friendly product delivery system.

We have implemented a series of measures tailored to different product lines and markets:

Plastic-free practices

For all mobile phone products shipped to the EU, we have achieved completely plastic-free packaging. All materials are recyclable and degradable, effectively reducing the environmental impact of plastic pollution and non-degradable waste.

Lightweighting design

By actively adopting the "no charger solution" for mobile phone products, the volume of packaging boxes is reduced by approximately 40%. For TV products, we implement a packaging "slimming" programme, achieving an average annual reduction of approximately 8% in TV product packaging volume through innovative cushioning structures. This initiative significantly reduces packaging material consumption and carbon footprint from logistics, whilst effectively reducing packaging waste at source.We adopt a minimalist design for packaging boxes, optimising the packaging structure with only the red TCL logo, black product model, and "Mini LED" technology label clearly printed, without redundant decoration.

Minimalist Packaging Design

Application of eco-friendly materials

We collect plastic waste that may enter the oceans and utilise it in QLED TV eco-friendly packaging, reducing total packaging weight by 5%. TCL router products prioritise eco-friendly papers certified by the Forest Stewardship Council (FSC), and employ natural, eco-friendly soy-based inks in packaging printing to reduce volatile organic compound (VOC) emissions and enhance the environmental friendliness of packaging. In addition, router products adopt up to 95% PCR plastic.

Application of Eco-friendly Packaging Materials

Building a Recycling System

We sign Packaging Material Recycling Agreements with suppliers to uniformly recover and recycle packaging materials including cartons, blister packing trays, and material trays, reducing procurement costs whilst promoting closed-loop resource flows.

Technological Innovation and Application

We apply eco-friendly cushioning materials such as air column bags and recycled honeycomb panels in packaging for TV and other products, replacing traditional foam plastics to reduce environmental footprint whilst ensuring transportation safety.

Green Logistics

TCL Industries integrates green and low-carbon concepts into logistics transportation and warehousing management, continuously reducing carbon footprint in operations through route optimisation, green warehousing, packaging reduction and technological empowerment.

Transportation

We actively advance logistics network optimisation and low-carbon transformation. This year, we launched the Direct-to-Consumer Warehouse Network Project, integrating and optimising warehouse layouts and distribution routes of overseas branches. Using professional software to calculate optimal solutions based on order, cost and distance data, we expect to achieve a 20% reduction in transportation distance, resulting in a decrease of 103.39 tonnes of carbon dioxide emissions. Meanwhile, we have introduced sea freight services with carbon offsetting capabilities, exploring carbon offsetting in logistics segments.

Ocean Freight Emission Reduction Certificate

Warehousing Operations

We continuously optimise our green warehousing standards. We have issued the Technical Access Directory for Warehousing Service Providers, giving priority to warehouses utilising new energy equipment and featuring photovoltaic coverage. Clean energy equipment such as electric forklifts and electric trailers is promoted at various industrial bases to drive the clean transformation of warehouse operations. Concurrently, we ramp up efforts to build intelligent and energy-efficient warehousing systems. We have introduced intelligent equipment such as automatic palletising robots and AGVs in product warehousing, improving operational efficiency and safety, whilst optimising energy use for lighting and air conditioning.

Collaboration for a Sustainable Supply Chain

TCL Industries systematically advances sustainable supply chain collaborative management. We have established a regular energy-saving and carbon-reduction cooperation mechanism with supply chain partners, encouraging them to set clear carbon management targets, implementation pathways, and division of responsibilities. We promote collaborative actions such as closed-loop waste recycling and resource reuse, reducing environmental impact across the entire chain and improving resource efficiency.

To actively respond to global climate change, thoroughly implement TCL Industries' "3050" dual carbon strategy, and empower supply chain partners to enhance their carbon management capabilities, the ESG and Operations Management Department within TCL Industries' Supply Chain and Quality & Safety Center successfully held the fifth event of the TCL Industries ESG Lecture Hall—the Annual Supplier Energy-Saving and Carbon Reduction Empowerment Training—on December 26, 2025. This training attracted over 120 online participants, including colleagues from the supply chain department and supplier partners. It facilitated in-depth exchanges and learning on topics such as dual carbon policies, carbon management system construction, and energy-saving technology practices.

Supplier Energy-Saving & Carbon Reduction Training

Case » **Air Conditioner BU Collaborates with Supply Chain to Recycle Discarded Copper Tubes**

TCL Air Conditioner has incorporated the reduction and control of copper tube scrap rates into its routine operational goals and established a closed-loop recycling system spanning from internal recovery to supply chain collaboration. Discarded copper tubes generated during production are uniformly transferred by workshops to a centralized warehouse for temporary storage. The purchasing department then coordinates with partner suppliers for professional recycling. Through processes like direct smelting or electrolytic purification, suppliers regenerate the scrap copper tubes into standard-compliant copper materials, which are reintroduced into the production cycle. In 2025, the Air Conditioner BU, through this mechanism, collaborated with suppliers to recycle and reuse a cumulative total of 1,490 tons of discarded copper tubes.

Case **TCL Industries Promotes Carbon Management across the Product Lifecycle, Using Scientific Approaches to Quantify Environmental Footprints.**

Pan-Smart Screen BU, Mobile Phone BU, SMD BU, and SCD BU have all established GPM digital systems, continuously improving their capabilities for product carbon footprint management. In 2025, TCL Industries carried out the quantification and verification of full-lifecycle product carbon footprints for the T951K smartphone and the 55P8K LCD television in accordance with ISO 14067:2018. The results were verified by independent third-party institutions with product carbon footprint verification statements. Verification data indicates that the carbon footprint of a T951K smartphone is 49.463 kg COze, while that of a 55P8K LCD television is 1,203.53 kg COze, covering full-lifecycle stages including raw material acquisition, production, product distribution, product use and end-of-life stages. The verification results indicate that the product's carbon emissions are mainly concentrated in the stages of raw material acquisition and product use.

Product Carbon Footprint Verification Statement

By analysing and tracking carbon footprint data, the GPM system provides data support and a basis for decision-making regarding TCL Industries' green product design and the collaborative carbon reduction across the supply chain. At the same time, the carbon footprint verification further enhances the credibility and transparency of environmental information disclosure. In the future, TCL Industries plans to expand carbon footprint management to more product lines and optimise product design and operation based on quantitative analysis results, thereby continuously developing environmentally friendly products.

TCL GPM System Interface

Ecosystem-based Social Empowerment and Industrial Co-creation

Ecosystem-based Social Empowerment and Industrial Co-creation

Empowering Social Carbon Reduction with Technology

Against the backdrop of the deepening global "dual carbon" goals, energy structure transformation and green, low-carbon development have become a focal point for both enterprises and society. TCL Industries' subsidiaries, TCL Photovoltaic Technology and GETECH, leverage leading photovoltaic technology and industrial AI solutions to create a dual-drive model of "clean energy supply and smart energy management". While reducing carbon emissions in their own operations, they empower various industries to jointly build a sustainable low-carbon ecosystem. In 2025, TCL Photovoltaic Technology's cumulative total photovoltaic installed capacity surpassed 14 GW, generating over 14 billion kWh of green electricity and driving a reduction of more than 10 million tons of carbon emissions across society. Meanwhile, GETECH uses AI to drive energy conservation and carbon reduction in the manufacturing sector, having served over 100 factories.

In 2025, TCL Photovoltaic Technology

14 GW
Cumulative total photovoltaic installed capacity surpassed

14 billion kWh
Generating reen electricity over

1,000 million tons
Driving a reduction ofcarbon emissions across society.

Innovative Business Scenarios

Responding to the growing market demand for clean energy, TCL Photovoltaic Technology has built an innovative business system targeting multi-scenario, multi-level applications, forming a complete solution matrix covering commercial & industrial (C&I), residential, overseas markets, operation & maintenance (O&M), and electricity-carbon synergy.

The C&I Business

TCL Photovoltaic Technology launched the "Te Neng" series of five product solutions—Te Neng Fa, Te Neng Ying, Te Neng Xiang, Te Neng Chu, and Te Neng Fu—meeting the needs of C&I users in power generation, energy storage, and energy usage optimization. In 2025, TCL Photovoltaic Technology's commercial business connected 110 projects to the grid throughout the year, with a total capacity of 696.51 MW. These projects generated over 800 million kWh annually, reducing carbon emissions by 628,000 tons, equivalent to planting 35.94 million trees. Among these, the Yangjiang Yichuan 125 MW/ 250 MWh energy storage station became a benchmark for China's largest user-side energy storage. Projects like the "agriculture-pastoral-photovoltaic hybrid" in Lingshi, Shanxi, were selected as models of green intelligent manufacturing, supporting the zero-carbon transition of numerous industries.

The Residential Market

TCL Photovoltaic Technology deeply implements the rural revitalization and "dual carbon" strategies, focusing on household energy needs. It innovatively creates smart energy solutions integrating "green power generation plus building renewal". The business covers 23 provinces and cities nationwide, establishing a service network of over 2,000 dealers. In 2025, the cumulative number of contracted households reached nearly 360,000. For high-end demand, it introduced the "Shuye Xinju" Smart Energy Solution, harmonizing green electricity with a better life and painting a vivid picture of "golden roofs, sunshine enriching the people".

TCL Photovoltaic Technology Residential Application Scenario

Overseas Business

Focuses on key markets such as Southeast Asia and Europe, introducing localized, integrated photovoltaic and storage solutions to meet local energy needs. In 2025, TCL Photovoltaic Technology successfully held an installer symposium in Thailand, attracting over a hundred solar energy partners, demonstrating the company's technological influence and ecosystem appeal in the global market.

TCL Photovoltaic Technology Thailand Installer Symposium Site

Technology Empowering Industries

TCL Photovoltaic Technology deeply integrates advanced photovoltaic technology with industry characteristics, implementing a series of exemplary green projects across multiple sectors such as education, industry, and parks. In the education sector, the 3.49 MW distributed photovoltaic power station at Tianjin Modern Vocational College has become a benchmark for campus green transformation. Through technological breakthroughs and the integration of multiple values, it has reduced energy costs and established an innovative model of "PV plus Education". Regarding zero-carbon park development, the "FIRE zero-carbon engine" system developed by TCL Photovoltaic Technology provides replicable, scalable overall zero-carbon solutions for parks through modules including energy planning, smart management, and recycling. This project won the "Best Zero-Carbon Park Design Gold Award" at the 2025 "Southern Power Grid Zero-Carbon Cup" Zero-Carbon Park Solution Competition.

3.49 MW Distributed Photovoltaic Power Station Project Recognized as a "Dual Carbon" Technological Innovation Case

Best Zero-Carbon Park Design Gold Award

Digitalization and Electricity-Carbon Synergy

TCL Photovoltaic Technology leverages AI technology and digital management platforms to provide intelligent support for the entire lifecycle of photovoltaic power stations, from construction and operation to maintenance, enhancing power generation efficiency and system reliability. The company has launched its electricity-carbon business. By constructing a synergistic "energy-carbon-electricity" system, it connects the entire value chain from green power production to carbon asset trading, assisting users in achieving emission reduction targets and enabling them to obtain additional carbon revenue.

Case **TCL Air Conditioner 's "Integrated PV and Storage" Project Creates a New Landmark for Zero-Carbon Factory**

In November 2025, Guangdong TCL Deep Blue Technology Co., Ltd., a subsidiary of TCL Air Conditioner , successfully connected its commercial and industrial energy storage project in Zhongshan, Guangdong, to the grid in a single attempt. The project adopted a customized "PV-Storage Integration" solution, integrating a 200 kW photovoltaic power generation system with two 50 kW / 100 kWh energy storage systems (utilizing two BlueArk X5 standard cabinets in parallel). It employs a TOU (Time-of-Use) strategy for refined peak shaving and valley filling.

Project photo

Addressing the site's space constraints, the project employed a modular design—two 100 kWh standard cabinets operating in parallel, supporting flexible capacity expansion and redundancy. Maintenance on one unit does not affect critical loads. The system charges during off-peak nighttime hours and discharges during peak hours. During midday peak photovoltaic generation, green electricity is prioritized for storage in the batteries, maximizing photovoltaic self-consumption. The energy storage system acts as an "energy buffer", smoothing photovoltaic fluctuations, improving power supply quality and stability, while achieving seamless grid-to-off-grid switching in < 20 milliseconds to ensure uninterrupted power for critical loads.

The project generates annual electricity cost savings of hundreds of thousands of RMB for the park, effectively reducing the company's peak electricity costs. It also provides a refined, efficient, and cost-effective microgrid demonstration solution for surrounding small and medium-sized enterprises, further assisting TCL Air Conditioner in progressing towards a zero-carbon factory.

AI Empowers Green and Intelligent Manufacturing

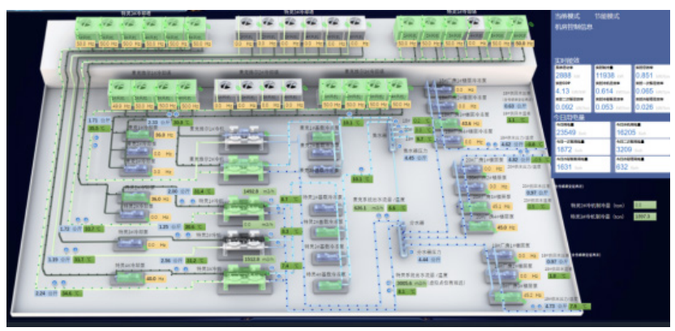
GETECH, a subsidiary of TCL Industries, deeply integrates AI algorithms with industrial mechanisms to create a smart solution driven by the dual wheels of "energy-carbon management and AI intelligent control". Combined with digital twin technology, it provides end-to-end digital solutions from energy input to carbon emissions. Through systematic energy-carbon collaborative management, TCL Industries achieves fine-grained control of energy use and carbon emissions across the entire process, driving green manufacturing with technological innovation and providing the industry with replicable and scalable smart energy pathways.

Case Smart energy saving, AI-powered! GETECH Partners with Enterprises to Create New Benchmarks in Energy-carbon Management and HVAC Intelligent Control

As China's "dual carbon" policy deepens, the manufacturing sector faces dual pressures of energy conservation, carbon reduction, and quality and efficiency improvement. Against the backdrop of the "dual carbon" goals driving manufacturing transformation and upgrading, a globally leading 3C electronics manufacturer's production base in Shenzhen partnered with GETECH's dual carbon team to successfully advance the "Smart Facility Energy-Carbon System and HVAC AI Intelligent Control" project. This project is not only an active response to national policies on manufacturing energy conservation, carbon reduction, and dual transformation but also a key milestone in the company's digital and green strategy implementation.

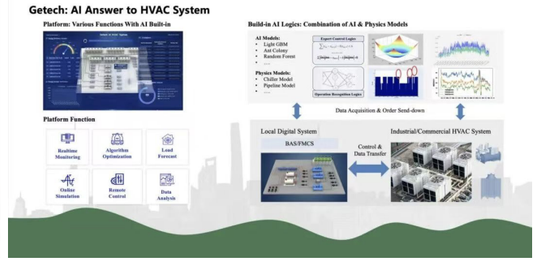
Centered on building a "unified smart facility energy-carbon management platform", the project integrates AI algorithms, digital twins, and other cutting-edge technologies to achieve fine-grained management of the entire process of energy use and carbon emissions. It particularly focuses on intelligent optimization of high-energy-consuming systems like HVAC, aiming to set a new industry benchmark for energy-carbon management.

Ultimately, through the dual-drive model of "energy-carbon management and AI intelligent control", the project not only achieved the company's own energy conservation, carbon reduction, quality improvement, and efficiency gains but also provided replicable and scalable smart energy solutions for other manufacturing enterprises, demonstrating the strong driving force of technological innovation in green manufacturing.



Case GETECH debuts at Bangkok Climate Action Week to Co-create a Sustainable Future for Southeast Asia

At the Bangkok Climate Action Week in September 2025, GETECH showcased its AI energy-carbon management solution, originating from the semiconductor manufacturing industry. Targeting key energy consumption pain points in Southeast Asia's green buildings and industrial sectors—HVAC systems—the solution integrates AI algorithms like Light GBM and Random Forest with equipment mechanism models. It enables real-time dynamic optimization control of chillers, fans, pumps, and other equipment. By using a self-developed multi-protocol adaptation engine compatible with over 95% of industrial protocols on the market, combined with the EMS, CMS, and AI algorithm optimization applications, it provides end-to-end digital solutions from energy input to carbon emissions, achieving an average annual energy savings rate of up to 20%.



Waste Recycling and Resource Recovery

We are committed to integrating the principles of a circular economy into the entire product lifecycle, dedicated to reducing resource consumption and environmental impact, providing consumers with more green and durable product choices, and promoting the standardized recycling and resource recovery of end-of-life products.

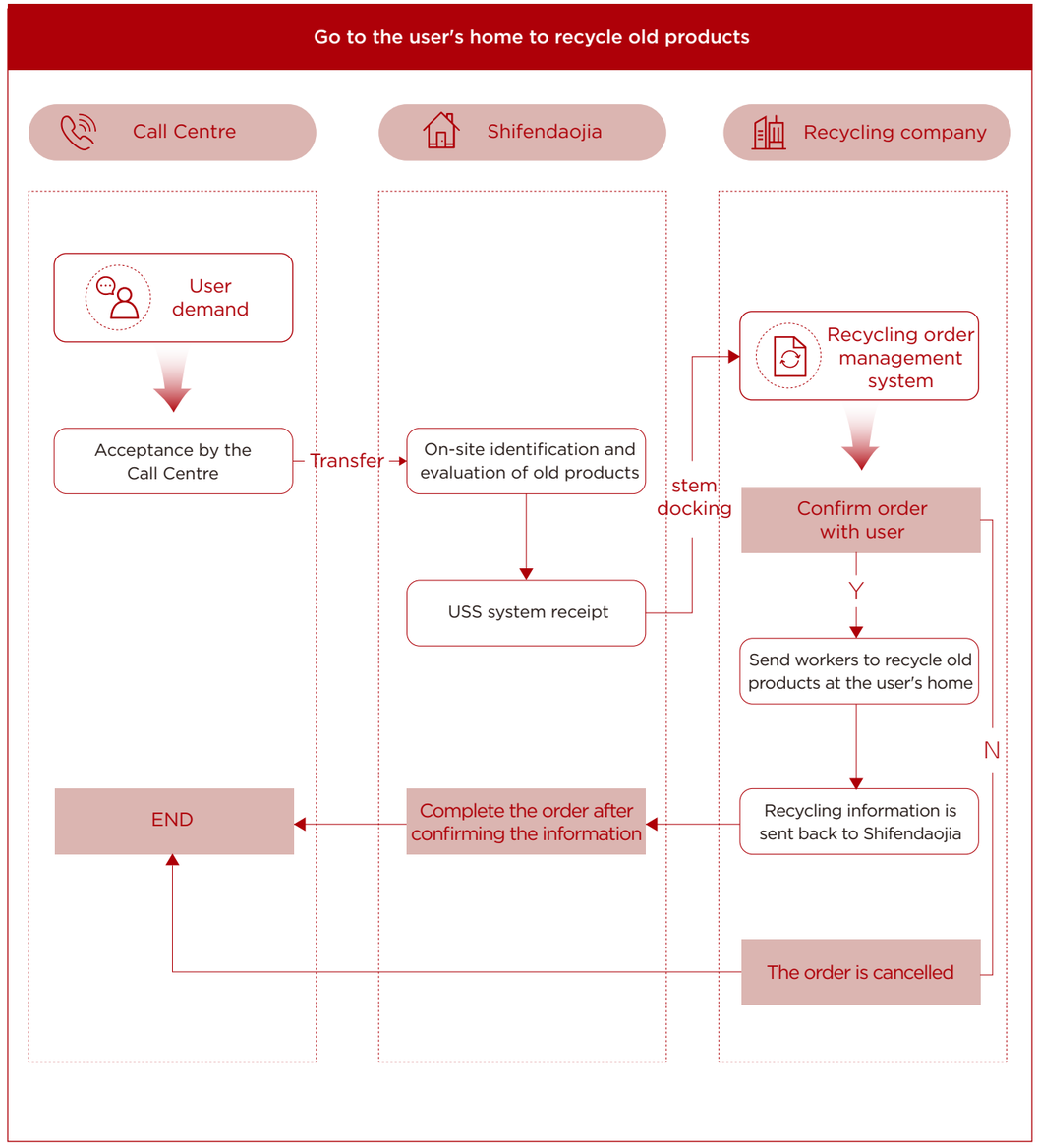
Electronic Waste Recycling Management

TCL Industries deeply integrates circular economy concepts into its corporate operations, systematically practicing the principles of "reduce, reuse, recycle" and is committed to building an e-waste management system covering the entire product lifecycle. We strictly comply with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the laws and regulations of our operational locations. We also actively reference international standards such as the EU Waste Electrical and Electronic Equipment (WEEE) Directive, ensuring full compliance in the cross-border movement and disposal of waste. In 2025, approximately 45% of the e-waste generated by the Company was recycled and reused.

We systematically promote the transformation of waste electronic products into sustainable resources through the establishment of a globally compliant recycling network, minimizing environmental impact and enhancing the value of resource circulation. At the source, we implement eco-design, reduce raw material use, and practice the resource recovery of production waste, creating favorable conditions for end-of-life recycling and reuse.

To ensure the standardized and efficient disposal of waste electronic products, we have set up retail store drop-off points, designated delivery points, and provide consumers with convenient mail-in and scheduled pickup recycling services. Furthermore, we actively lower the barrier to public participation. In North America, all TCL audio-video product packaging clearly displays the How2Recycle® label and provides a convenient recycling network covering the entire United States, guiding consumers to jointly build a green recycling ecosystem.

Recycling Process for Waste Electronic Products



End-of-life products are managed under the centralized oversight of TCL Environmental Technology, or entrusted to partners with international certifications such as R2 and e-Stewards® for compliant disposal. Products meeting specific criteria enter reuse or refurbishment processes. The remaining parts undergo efficient disassembly, with materials like metals and plastics recovered for resource recycling, continuously improving the resource recovery rate.

Case **TCL Environmental Technology's Recycled Plastic Achieves PCR Certification, Integrated into International High-End Supply Chains**

In the field of e-waste resource recovery, the Tianjin base of TCL Environmental Technology modifies and processes waste plastics generated from appliance disassembly to develop recycled plastic pellets that meet specific performance requirements. These have been successfully reintroduced into products such as TCL TV back covers and internal air conditioner components. Building on this, the recycled plastic project at the Tianjin base obtained Post-Consumer Recycled (PCR) certification from an international authoritative body, securing a "passport" to enter international high-end supply chains.

Leveraging this PCR certification, TCL Environmental Technology's recycled plastics have been successfully integrated into the supply chain systems of international brands like Lenovo, helping customers comply with stringent environmental regulations in markets such as the European Union. Concurrently, building on this technological foundation, the company is proactively investing in R&D to build up its technical capabilities for recycling and disposing of future high-volume waste streams, such as decommissioned photovoltaic panels and wind turbine blades, thereby continuously pushing the boundaries of the circular economy.

R&D personnel conducting reagent formulation in the laboratory

Green Consumption and Inclusive Technology

TCL Industries is integrating low-carbon concepts into the smart lives of global consumers through full-scenario green solutions. By deeply understanding the characteristics and consumption trends of different regional markets, the company precisely aligns the energy-saving and environmentally friendly features of its products with the actual needs of users. Leveraging a digital communication matrix and scenario-based experiential marketing, it systematically builds consumer value recognition for green products, promoting the formation of a sustainable consumption consensus worldwide.

In the domestic market, TCL Industries continues to strengthen the brand keywords of "green, smart, low-carbon". Through multi-dimensional, holistic marketing innovation, it leads the mainstreaming process of green consumption. In overseas markets, its brands actively implement green consumption guidance mechanisms. Through product energy efficiency upgrades and enhanced transparency regarding carbon labels, they steadily advance the transformation of the global household appliance consumption structure toward low-carbon, demonstrating the leadership of Chinese brands in the global green consumption transformation.

Building a Smart and Green Brand Image

Public Community Engagement	Leading Industry Standards
Regularly collaborates with authoritative media to create major green brand events, enhancing brand credibility and social influence. • Featured report by CCTV's Green Intelligent Manufacturing. • The TCL Green global brand initiative communicates the zero-carbon vision of "leading technology, green products, excellent governance, and shared value".	Participates in formulating carbon footprint evaluation standards for home appliances and green packaging technical specifications, promotes the inclusion of TCL green building technology in low-carbon technology catalogs, strengthening technical authority.

At the level of industry exchange and cooperation, we proactively share sustainable development concepts and cutting-edge technological achievements with industry partners, promoting common technological progress and industrial integration. In 2025, focusing on three core technology strategic directions, that is, "display picture quality, intelligence, health & energy saving", TCL Electronics continued to increase its efforts in open innovation and ecosystem collaboration. With enhancing the core competitiveness of our products as the primary goal, we focus on key technological challenges, increase investment in forward-looking technology reserves, and accelerate the speed and quality of technology transfer through deep integration with top universities, research institutions, and industrial partners.

Case **Integrating AI, Art, and Technology: TCL Electronics Presents an Immersive Smart Ecosystem at CES 2025**

In January 2025, TCL Electronics blended AI futuristic style, digital art, and technological installations to create an immersive technology experience space. The exhibition area covered products including TVs, gaming monitors, air conditioners, refrigerators, washing machines, tablets, mobile phones, RayNeo smart glasses, home energy management systems, and smart locks.

TCL Electronics at the International Consumer Electronics Show (CES)

Case **TCL Air-Conditioner Drives Industry's Green Transition with Innovative Energy Efficient Products**

The low-temperature variable frequency enhanced enthalpy modular unit technology developed by TCL Air-Conditioners BU for the Intelligent HVAC has been included in the Recommended Catalogue of Energy Saving and Carbon Reduction Technologies in Refrigeration and Air Conditioning Applications. With this technology, the BU's representative product series, Diamond Energy King modular units, operate stably in ultra low temperature environments as cold as -38 °C. This delivers significantly improved heating performance and achieves dual top grade (Grade 1) energy efficiency in both cooling and heating modes, raising overall energy efficiency by up to 25%. These units have been successfully implemented in major commercial and public projects across multiple regions in China, demonstrating reliable energy saving performance and operational stability under diverse climate and load conditions.

TCL Air-Conditioners BU's Intelligent HVAC Selected for the Recommended Catalogue of Energy Saving and Carbon Reduction Technologies in Refrigeration and Air Conditioning Applications

Case **TCL Air-Conditioners Safeguards Family Health with Intelligent Energy Efficiency and Wellness Care**

TCL Air-Conditioners integrates AI enabled energy saving technology, wellness focused features, and scenario-based intelligence to deliver environmentally friendly, comfortable, and inclusive smart living experiences. Equipped with proprietary AI power saving technology, our systems continuously learn user habits and incorporate real time environmental data to dynamically optimise operation, enhancing energy efficiency over time and helping households lower energy consumption. The AI air conditioners also utilise precise temperature control and a gentle airflow design, maintaining indoor temperature within ‡0.5°C and avoiding direct cold drafts to protect the health of sensitive groups such as children and the elderly. Furthermore, they can connect with whole home smart devices to automatically adjust settings based on daily scenarios, reducing energy waste. Through dedicated product lines tailored to different user groups, TCL Air-Conditioners provides personalised healthy air solutions that enhance living quality while supporting a sustainable lifestyle.

TCL AI Health Conditioner

Case **Hefei Home Appliance BU Achieves High-Efficiency Drying through Heat Pump Technology and Waste Heat Recovery**

To advance green technology and product energy efficiency, Hefei Home Appliance BU has actively applied heat pump technology to its tumble dryer products. By establishing a closed-loop thermodynamic cycle of "evaporation-condensation-reheating", the system efficiently recovers and reuses waste heat from the exhaust air, leading to a significant leap in product energy efficiency. This innovation has notably elevated its European energy efficiency rating from Class E to Class B.

TCL High-Efficiency Dryer

Development of Industry Standards

We actively engage in the formulation and revision of multiple key industry standards, contributing our technical expertise and management experience in product quality, safety, environmental protection, and energy efficiency to enhance industry standards and promote industrial standardisation and high-quality development.

The publication status of standards co-developed by TCL Industries in 2025	Standard No.
Green Product Assessment - Refrigeration and Air Conditioning Equipment for Commercial and Industrial Use	GB/T 45780- 202
Greenhouse Gases - Quantification Requirements and Methods of Product Carbon Footprint - Room Air Conditioners	GB/T 46027-2025
Safe Service Life of Household and Similar Electrical Appliances—Particular Requirements for Air-Conditioners	GB/T 46738-2025
Technical Specification of Age-Friendly Technology for Household Electrical Appliances - Part 1: General Requirements	GB/T 46484.1- 2025
Intelligent Household Appliances - Intelligent Technology Requirements and Evaluation - Part 1: General Requirements	GB/T27941-2025
Specification for User Experience Evaluation of Household Air Conditioners	GB/T46502- 2025
Evaluation Specification of User Experience Design for Household and Similar Electrical Appliances	GB/T 46287- 2025
Water Chilling (Heat Pump) Packages Using the Vapor Compression Cycle - Part 2： Water Chilling (Heat Pump) Packages for Household and Similar Applications	GB/T 18430.2- 2025
Technology Process for Repairing and Regenerating Graphite Anode from Scrapped Lithium-ion Batteries	T/QGCML 1631-2023
Technology for Repairing and Regenerating Lithium Cobalt Oxide Cathode Materials in Used Batteries	T/QGCML 3057-2024
Requirements for Restricted Use of Hazardous Substances in Electrical and Electronic Products	GB 26572-2025
Measurement Methods of RGB -Mini LED Backlight Unit for TV	T/CVIA 171-2025
Technical Specification of Grading for Image Quality of Flat Television under Ambient Light	T/CVIA 162-2025
Ambient Light Test Conditions for UHD TV Subjective Evaluation	T/CVIA 161-2025
Labelling Requirements for Restricted Use of Hazardous Substances in Electrical and Electronic Products	SJT 11364-202
Green Product Assessment - Audio and Video Equipment	20241664-T-339
Health and Hygiene Preservation Evaluation for Refrigerators – Part 1: Technical Requirements for Meat Preservation Evaluation	TCPQS E00079.1-2025
Health and Hygiene Preservation Evaluation for Refrigerators – Part 2: Evaluation of Antibacterial, Bactericidal, and Odor Removal Effects	TCPQS E00079.2-2025
Maximum Allowable Values of Energy Consumption and Energy Efficiency Grades for Household Refrigerators	GB 12021.2-2025

Case **Homa Built-in Maternal & Infant Refrigerator Selected for the Catalogue of the First Batch of Recommended Products Meeting the New National Energy Efficiency Standards**

In December 2025, the Homa Built-in Maternal & Infant Refrigerator was successfully listed in the Catalogue of the First Batch of Recommended Products Meeting the New National Appliance Motor Energy Efficiency Standard at the Sixth Appliance Industry Chain Ecological Cooperation Conference. This conference was guided by the Guangdong Provincial Department of Industry and Information Technology and Department of Commerce, and jointly organised by the China National Electric Appliance Research Institute and the China Electrical Equipment Industry Association. This product has become one of the first representative products in the maternal and infant category to receive certification under this new national standard.

The product is designed around three core needs of families with infants: precise storage, health protection, and energy saving with low noise, and it is developed through extensive user research. Integrating strengths in energy efficiency, functionality, and design, the product meets the Grade 1 requirement of the new national energy efficiency standard, consuming only 0.89 kWh per 24 hour cycle. Equipped with an intelligent triple inverter system, it achieves low power consumption and stable temperature control with an independent 82 liter variable temperature compartment for maternal & infant, supporting adjustable temperatures from -20°C to 5°C. Made with baby bottle grade materials and featuring sterilisation technology, it ensures safe storage of food for mothers and infants. Its bottom heat dissipation design and ultra thin body allow for zero clearance installation and easy door opening, optimising both space efficiency and user experience.

Homa Fully Built In Maternal & Infant Refrigerator Selected for the Catalogue of the First Batch of Recommended Products Meeting the New National Appliance Motor Energy Efficiency Standard

Green Public Welfare and Community Co-construction

We practice green public welfare, protect the ecology, and implement green development concepts through concrete actions to promote ecological and environmental protection.

Case **Tri-City Coordination for Mountain Cleanup and Environmental Public Welfare Action**

In November 2025, TCL Industries, jointly with the Hiking Association, simultaneously launched environmental mountain cleanup activities in Shenzhen, Huizhou, and and Zhongshan. 135 employee volunteers participated, conducting a total of about 8 hours of mountain cleaning and environmental awareness campaigns, beautifying the environment and spreading a green lifestyle through practical actions.

Mountain Cleanup Environmental Philanthropic Activity

In 2025, TCL Industries

3
Simultaneously launched environmental mountain cleanup activities

135
Employee volunteers participated

8
Conducting a total of hours

Case **Building Green Campuses, Public Welfare Empowers the Original Intention of Education**

TCL Photovoltaic Technology actively engages in educational philanthropy and launches the "PV-enabled Low-Carbon Campus" philanthropic donation and construction project. By the end of 2025, the project had completed photovoltaic power station construction for 35 schools in Inner Mongolia, Ningxia, Guangdong, Shaanxi and other places, with a total installed capacity of 2,054.65 kW. This initiative allows students to witness the transformation of green energy on campus and foster low-carbon and environmental awareness from an early age. Up to now, the project has reduced carbon dioxide emissions by a cumulative total of 49,871 tonnes.

The "PV-enabled Low-Carbon Campus" Philanthropic Donation Project

In 2025, TCL Photovoltaic Technology

35
Completed photovoltaic power station construction for schools

2,054.65 kW
With a total installed capacity

49,877 tonnes
Reduced carbon dioxide emissions by a cumulative

Conclusion

Looking back from the vantage point of 2025, TCL Industries has taken a solid stride on its journey towards carbon neutrality. Transitioning from "capacity building and implementing reductions" to "comprehensive capacity building and deepening continuous carbon reduction", we have sketched our unique mark on the canvas of green transformation, using "digital-intelligent carbon exploration" as our brush and the "inner-middle-outer ring" framework as our ink.

We are keenly aware that achieving carbon neutrality is a marathon spanning three decades. Reaching the 2025 milestone is not the finish line but the starting signal for a new and higher beginning. Facing the future, TCL Industries will continue to uphold its ESG strategy of "Leading technology, green products, excellent governance, and shared value". We will progress from emissions reduction in our own operations towards low-carbon transition across the entire value chain, striving to align every factory with zero-carbon benchmarks, embed a green essence into every product, and unite every ecological partnership into a concerted force for carbon reduction.

We firmly believe that the warmth of technology lies in serving our shared future, and the value of an enterprise is realized in thriving together with society and the environment. TCL Industries will steadfastly maintain the courage to innovate and the determination to delve deep. Standing shoulder to shoulder with global partners, we will transform every increase in energy efficiency, every innovation in materials, and every realization of a zero-carbon factory into lasting momentum driving us towards a zero-carbon future.

The canvas for the "3050" dual carbon goals has begun to take shape, yet the chapters to be written are longer still. Guided by this original aspiration and unwavering resolve, TCL Industries will transform, stroke by stroke, the vision of a zero-carbon future into a tangible reality within reach.

Appendix

The 2025 Annual Report on Carbon Neutrality (hereinafter referred to as "this Report") by TCL Industrial Holdings Co.,Ltd. aims to objectively, impartially, and comprehensively reflect the performance of the Group regarding its carbon neutrality goals in 2025.

Scope of the Report

The policies, initiatives, and data presented in this Report cover TCL Industries Holdings Co., Ltd. and its subsidiaries, including the Hong Kong-listed TCL Electronics Holdings Limited (Stock Code: 01070.HK, a company incorporated in the Cayman Islands with limited liability) and the Shenzhen-listed Guangdong Guangdong TCL Smart Home Co., Ltd.,(Stock Code: 002668.SZ). This scope aims to provide a balanced reflection of the Company's performance regarding its carbon neutrality targets. The reporting period aligns with the fiscal year of the Annual Report, covering the period from January 1, 2025 to December 31, 2025 (referred to as "this Year"). To enhance comparability and forward-looking insights, some content appropriately extends beyond this time-frame.

TCL Electronics, TCL Smart Home, and Tonly Technology also publish independent environmental, social, and governance (ESG) reports. For more detailed information on TCL Industries' sustainability-related performance, please refer to the sections concerning carbon neutrality in the 2025 Environmental, Social and Governance Report by TCL Electronics Holdings Limited, the 2025 Environmental, Social and Corporate Governance Report by Guangdong TCL Smart Home Co., Ltd., and the 2025 Environmental, Social and Governance Report by Tonly Technology Co. Ltd.

Explanation of Main Terms

TCL Industries, the Company, we	TCL Industries Holdings Co., Ltd. and its major subsidiaries
TCL Electronics	TCL Electronics Holdings Limited
TCL Communication	TCL Communication Technology Holdings Limited
FALCON Technology	Falcon Technology Holdings Limited
TCL Photovoltaic Technology	Huizhou TCL Photovoltaic Technology Co., Ltd.
TCL Air Conditioner	TCL Air Conditioner (Zhongshan) Co., Ltd.
Tonly Technology	Tonly Technology Co. Ltd.
TCL Industrial Park	TCL Technology Industrial Park Co., Ltd.
GETECH	Getech Technology Co., Ltd.
TCL Environmental Technology	Huizhou TCL Environmental Technology Co.,Ltd
TCL Financial Service	TCL Financial Service Holding Group (Guangzhou) Co., Ltd.
TCL Smart Home	Guangdong TCL Smart Home Co., Ltd.,
TCL King (Huizhou)	TCL King Electrical Appliances (Huizhou) Co., Ltd.
Hefei Household Appliances	TCL Household Electric Appliance (Hefei) Co., Ltd.
Homa Refrigerators	Guangdong Homa Refrigerator Co., Ltd.
Smart Display	Smart TVs under the Large Display business
BU	Business Unit under TCL Industries
BG	Business Group under TCL Industries
All entities	All product BUs/business units, BGs, capability centres and functional platforms under TCL Industries

Glossary of Technical Terms

Term	Explanation
GHG	Greenhouse Gas, referring to gases in the atmosphere that absorb and emit infrared radiation, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), etc.
Scope 1	Direct Greenhouse Gas Emissions, referring to emissions from sources owned or controlled by the company, such as stationary combustion, mobile combustion, process emissions, and fugitive emissions.
Scope 2	Indirect Greenhouse Gas Emissions, referring to emissions from the generation of purchased electricity, steam, heating, or cooling consumed by the company.
Scope 3	Value Chain Indirect Greenhouse Gas Emissions, covering emissions from a company's upstream and downstream activities across 15 categories, such as purchased goods and services (Category 1) and the use of sold products (Category 11), etc.
Carbon Intensity	Carbon emissions per unit of economic output. In this report, it refers to "tCO_2e / ten thousand yuan of revenue", used to measure the company's carbon reduction efficiency.
SBTi	The Science Based Targets initiative, a collaboration between CDP, UNGC, WRI, and WWF, driving companies to set emission reduction targets based on climate science.
EcoVadis	An internationally recognized corporate social responsibility rating platform that evaluates companies across four dimensions, including environment, labor & human rights, ethics, and sustainable procurement.
GPM System	The Green Product Management system, used for the digital management and analysis of carbon footprint data across the entire product lifecycle.
PCR Material	Post-Consumer Recycled material, referring to material recycled from products discarded after consumer use and reprocessed into new materials.
ECORA™	An eco-composite material independently developed by TCL, combining waste ceramic powder as a filler with thermoplastic resin to achieve waste resource utilization.
TOU Strategy	Time-of-Use strategy, which optimizes the charging and discharging periods of energy storage systems based on the differential between peak and off-peak grid electricity prices to reduce electricity costs.。
Zero-Carbon Factory	A production facility where net carbon emissions within its operational boundary are zero, achieved through measures such as energy efficiency retrofits, clean energy substitution, and carbon offsetting.
Waste-Free Factory	A factory that minimizes solid waste generation and maximizes resource utilization through source reduction, process control, and resource recycling.
"1+N" Carbon Inventory Personnel Network	A carbon management talent system established by TCL Industries, consisting of 1 coordinator and multiple carbon inventory specialists from various factories/departments, covering the entire company.
T-LEARNING	TCL's internal online learning platform, where the "Carbon Inventory for Everyone" course series mentioned in this report is available.

Data Sources and Reliability Statement

The information in this Report is primarily sourced from the Company's statistical reports, publicly disclosed information, and internal communication documents.

Access to Report

This Report is available in Chinese and English. In case of any discrepancy in interpretation, the Chinese version shall prevail. The electronic version of the Report can be accessed on the company's official website (www.tcl.com).

We value the opinions of all stakeholders and welcome readers to contact us through the following channel.
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