THE PATH TO CARBON NEUTRALITY

BOE DISPLAY'S LOW-CARBON STRATEGY REPORT

京东方科技集团股份有限公司
BOE TECHNOLOGY GROUP CO., LTD.

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Letter from BOE's President

Recent years have witnessed mounting challenges of climate. change. According to the latest report of the UN Intergovernmental Panel on Climate Change (IPCC), a global temperature rise of 1.5°C will lead to destructive climate impacts. Looking back to 2022, all countries are working together to reduce greenhouse gas emissions under the Paris Agreement. China has put in place a '1+N' policy framework for carbon peaking and carbon neutrality, which demonstrates the global vision of China as a responsible major country. However, achieving carbon neutrality is a long-term and arduous task. It will take years of painstaking and collective effort from all sectors to transit from peak carbon emissions to achieving carbon neutrality.

We adhere to the people-oriented "Screen of Things" development strategy of BOE Technology Group over the past 30 years, take "becoming one of the most respectable companies on Earth" as its mission, and take "leading green development and creating a better life" as our vision. We are committed to providing consumers with semiconductor display products that are "lower carbon, more environmentally friendly and more innovative", and providing customers with low-carbon and sustainable display technology solutions, collaborating with stakeholders to create a "clear and accessible perspective".

A journey of a thousand miles begins with a single step. We firmly believe that clear goals helps to better implement low-carbon development measures. As a representative enterprise in China's semiconductor display industry, we promise that we will achieve carbon neutrality for operations by 2050.

To achieve carbon neutrality, we have formulated a green path to development with "BOE characteristics". We focus on "green management", "green factory", "green supply chain" and "green products". We map out our own low-carbon development action plan around four key areas. As an important part of our corporate sustainability blueprint, we place equal emphasis on cooperation and empowerment with our supply chain partners in low-carbon power transition. We actively explore comprehensive renewable energy resources, hoping to help suppliers with low-carbon power transition and providing a strong guarantee for low-carbon supply chain optimization.

We embark on a new journey towards sustainable development and implement positive and effective moves in our strategy to achieve a sustainable future. Aiming at carbon neutrality for operations by 2050, we give full play to technological innovation advantages, continue to develop green products and promote the application of green low-carbon products. At the same time, we actively promote value chain reconstruction to achieve green transformation, and jointly create a green ecosystem of semiconductor display industry with upstream and downstream ecological partners!

President of BOE Technology Group Co.,Ltd
Gao Wenbao
June 2023

About us

Lighting up the light of innovation and embarking on a new journey of high-quality development. BOE Display[BOE Technology Group Co., Ltd. Semiconductor Display Business] is the core of BOE Technology Group[BOE Technology Group Co., Ltd.]'s "1+4+N+Eco-Chain" business structure, focusing on device and machine business, with 17 semiconductor display production lines and 5 smart manufacturing plants. Our production bases are located in 12 provinces and cities, including Beijing, Chengdu, Sichuan and Hefei, Anhui. Our business covers innovative applications such as TVs, monitors, laptops, tablets, mobile phones and VR/AR, automotive, medical, splicing, wearable, EPD, commercial, industrial control, home and whiteboard products. Currently, more than a quarter of the world's displays come from BOE, and its UHD, flexible and micro-display solutions have been widely used in well-known brands at home and abroad. Over the past 30 years, BOE Display has led China's semiconductor display industry from small to large, from big to strong, overcoming the China's problem of the lack of screen in the semiconductor field, and leaping to become the leading enterprise in the semiconductor display industry.

BOE is committed to achieving harmony between human and the environment and fulfilling its commitment to the environment through green systems, green products and green operations. BOE insists in improving energy efficiency, reducing emissions and saving energy through continuous innovation, and strictly manages the environment footprint throughout the product life cycle, ensuring that the processes of research and development, design, procurement, production, logistics and recycling meet the requirements of environmental sustainability. BOE continuously develop green products and technologies, explore to use new technologies to address new environmental issues and challenges, and realize a virtuous cycle of symbiotic development between the company and the environment, to create a green ecosystem.

BOE Technology Group Green Vision

Green Vision

Leading green development to create a better life

[1]BOE Technology Group Co., Ltd. Semiconductor Display Business
[2]BOE Technology Group Co., Ltd.

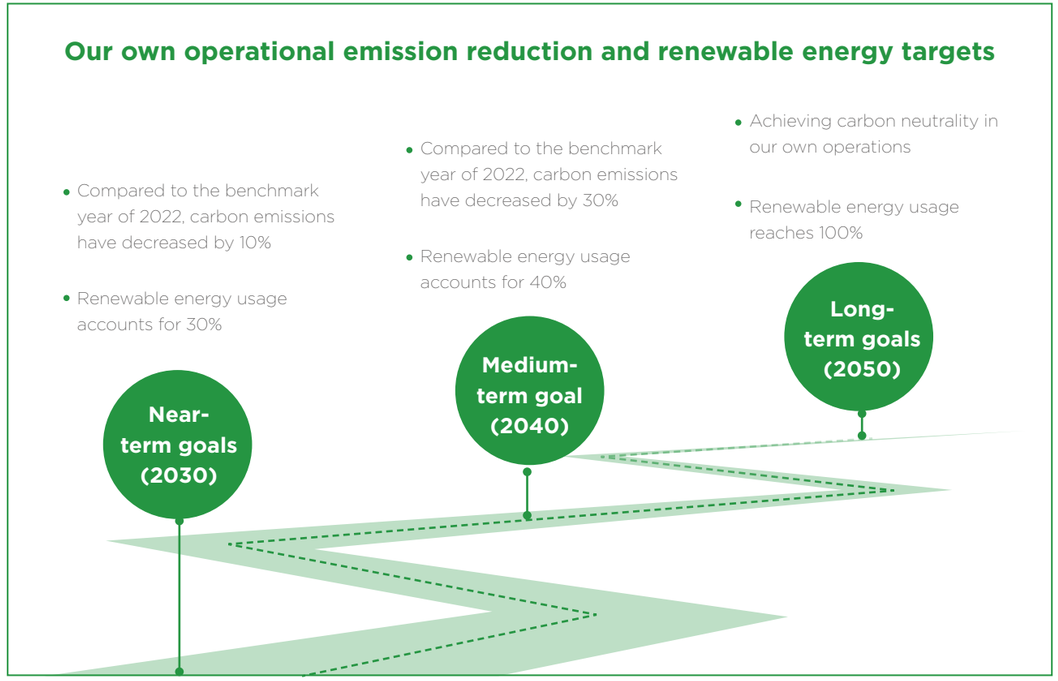
Report summary

BOE Display adheres to the people-oriented business philosophy of BOE Technology Group over the past 30 years, closely links products and services with human life, and contributes to social sustainable development. In this "The Pathway to Carbon Neutrality: BOE Display's Low-Carbon Strategy Report", BOE Display disclosed the carbon emissions of its own operations for the first time, and elaborated on the carbon neutral commitment with the green low-carbon achievements and carbon reduction implementation path.

Carbon neutrality commitment

Driven by the vision of "Leading Green Development for a Better Life", BOE Display will unswervingly contribute to the carbon neutrality. BOE Display is committed to achieving carbon neutrality for its own operations by 2050.

Our own operational emission reduction and renewable energy targets



Overview of report content

Green management (see pages 13-20 for details)

BOE Display has established a comprehensive low-carbon management system. Through the application of digital platform, real-time monitoring and analysis of energy and carbon emission data is realized, providing strong support for refined management, and actively joining international organizations to further promote BOE Display's sustainable low-carbon development.

Green factory (see pages 21-34 for details)

BOE Display continues to promote the application of energy saving and low carbon processes, reducing energy and process gas consumption through technological innovation and process improvement; while actively introducing clean energy to replace the use of traditional energy sources to fundamentally reduce the impact on the environment.

Green supply chain (see pages 35-44 for details)

BOE Display is committed to building a green supply chain, taking low carbon, harmless and low consumption as the core elements of supply chain management, working closely with suppliers, promoting green production by green procurement and continuous empowerment of upstream suppliers, reducing energy consumption and environmental pollution, and helping the green transformation and upgrading of the supply chain.

Green product (see pages 45-56 for details)

BOE Display focuses on reducing carbon emissions from the early stages of product planning, promoting innovative green design and the use of environmentally friendly materials, and actively disclosing the quantitative carbon footprint of its products. We provide customers and consumers with lower carbon products and solutions.

Capacity Building in Employees and Digitalization (see pages 57-61 for details)

BOE Display attaches great importance to the cultivation of professional talents in low carbon and the building of digital capability, forming a continuous driving force to help the enterprise move forward with low carbon.

GREEN RESPONSIBILITY

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CHAPTER I

Corporate responsibility on climate mitigation

Climate change becomes a global issue

Climate change is a challenge for all of humanity. The sustainable development of the Chinese nation and the future of the planet depend on tackling it successfully. The Paris Agreement adopted in 2015 marked a historic and important step in the global response to climate change. In 2023, the IPCC released its Sixth Assessment Report Synthesis Report, Climate Change 2023. The report summarises the key findings of the assessment of the facts, impacts and risks of climate change and climate change mitigation and adaptation, recognising the interdependence of climate, ecosystems and biodiversity, and human society. The report recognises the interdependence of climate, ecosystems and biodiversity, and human society. In the face of significant climate change risks, rapid and effective actions are needed by all parties globally to ensure sustainable development.

"Double carbon" target demonstrates great power's role

China is actively implementing the Paris Agreement, further enhancing its independent national contribution, and pushing forward various key tasks in a strong, orderly and effective manner. On the basis of its commitment to the international community to achieve the 2020 climate action target, China has further proposed the vision of striving to reach the "carbon peak" by 2030 and to achieve "carbon neutrality" by 2060. In response, China has issued implementation plans and a series of support and safeguard measures for key sectors and industries, forming a '1+N' policy framework for carbon peaking and carbon neutrality. This has a profound impact on the transformation of industrial structures, the layout of industries and the growth drivers of enterprises.

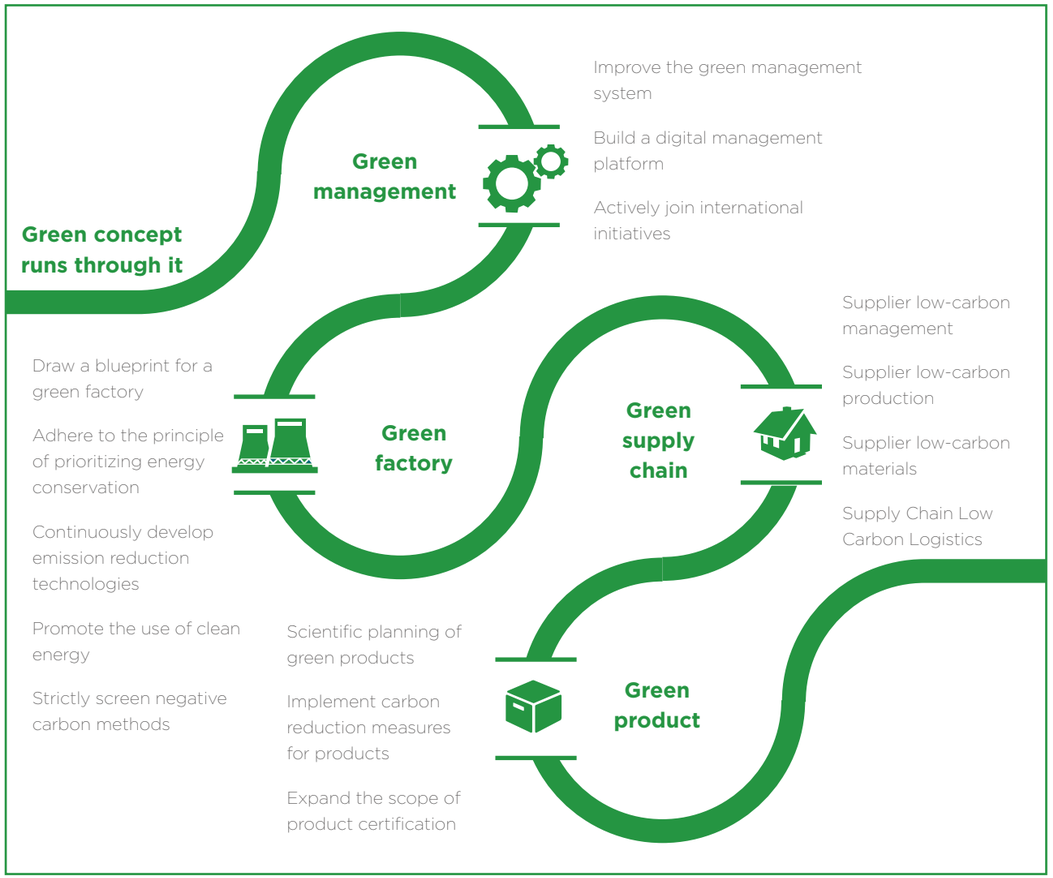
Led by the new development concept of "innovation, coordination, green, openness and sharing", the country is actively promoting the green transformation of industrial structure, strengthening emission reduction in key regions and industries, implementing green transformation and upgrading projects by category, and optimising the green layout of key regions. Under the active promotion of the climate governance system and policy development at home and abroad, the position of enterprises as the main body of green technology innovation has been strengthened, becoming a key force in the country's high-quality development and implementation of the double carbon target.

[3]AR6 Synthesis Report: Climate Change 2023 - IPCC

[4]This concept was proposed by President Xi at the Fifth Plenary Session of the 18th Central Committee of the Communist Party of China

Green development principles

Starting from the perspective of sustainable development, BOE Display is guided by the green concept, takes into account its own development and low-carbon transformation needs, constantly gives play to its own advantages, integrates green development genes on the basis of traditional organizational management, factory manufacturing, supply chain management, and product production, and creates a new green management, green factory, green supply chain, and green product segment. BOE Display will always adhere to the goal of providing customers with high-quality services and display device solutions, comprehensively promote scientific carbon reduction, and comprehensively create low-carbon, harmless, low-power green products.



Green development achievements

With a sense of responsibility for sustainable development and adherence to the concept of green development, BOE Display has been systematically promoting a series of green initiatives and achieving positive results over the years.

» Green Management:
BOE Display actively joins international initiatives to drive itself forward.

Green management governance

- BOE Display's 2 factories joined the Science Based Carbon Targets Initiative (SBTi)
- Chongqing BOE Optoelectronics[5] became the first semiconductor display panel manufacturer in mainland China which joined SBTi

» Green Factory:
As an advocate and practitioner of the concept of sustainable development, BOE Display continues to implement proven environmental actions in all aspects of its own operations.

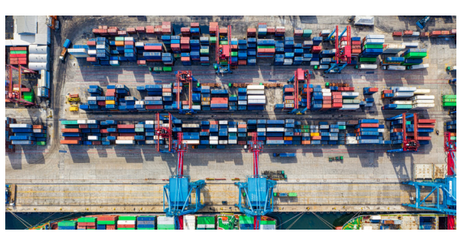
Green Factory Governance Achievements:

- BOE Display's 15 factories obtained National Green Factory Certification
- Beijing BOE Display[6] obtained the national green building three-star certification
- Beijing BOE Display awarded "Carbon Neutral" Assessment Certificate
- Fuzhou BOE Display[7] was awarded the title of "Lighthouse Factory", the highest honor for global smart manufacturing
- Chongqing BOE Optoelectronics passed UL3600 (Certification Measures Circular Economy Efforts) and UL2799 (Environmental Claim Validation Procedure for Zero Waste to Landfill, Gold Level) certifications. With a company circularity of 74%, BOE became the first to pass UL 3600 and obtain its certificate in Chinese mainland.

» Green Supply Chain:
BOE Display is committed to building a green supply chain system, strengthening green material management, adhering to green logistics initiatives and leading suppliers to strengthen green certification.

Green supply chain governance outcomes:

- 2 factories of BOE Display achieved National Green Supply Chain Certification
- By 2022, promote 34 suppliers to achieve Green System Certification and increase coverage rate by 10% compared to last year
- By 2022, annual iron transportation volume exceeds 11,000 tons and freight trips are optimized by 9% compared to theoretical values



» Green Product:
Continuously optimize product design, prioritize the use of low-carbon materials, improve the use of clean energy in the production process, and create high-quality and leading green low-carbon products.

Green product governance outcomes:

- 2 factories of BOE Display were rated as national industrial product green design demonstration enterprises, and established a low-carbon product management system leading the industry
- BOE Display's 16 inch 4K product became the first laptop LCD product to obtain Carbon Trust Carbon footprint certification
- BOE Display VUSION series 4.2/2.6/2.2/1.6 inch electronic price tag products won the first Carbon footprint assessment report of electronic price tag products in the global retail field

Green development strategic pathways

Based on a deep understanding of the overall green transformation of economic and social development, and combined with its own corporate characteristics, BOE Display believes that "low carbon development" is the key to sustainable development of the enterprise, and is also an inevitable requirement to provide quality low carbon products and solutions to downstream customers and consumers. In order to better plan the path of low carbon development, BOE Display has completed a carbon emission inventory based on a widely accepted methodology at home and abroad, and on this basis has scientifically set its own carbon neutral target at the operational level. In the future, BOE Display will take its own operational carbon neutral strategy as the guide, strengthen green management efforts, actively build green factories and green supply chains, and continue to export industry-leading green products, so as to achieve comprehensive low-carbon green development.

To fulfill these commitments, BOE Display has set its own operational carbon neutrality targets and accelerated carbon reduction initiatives within the company.

Key points in the carbon neutrality target

BOE Display plans to achieve carbon neutrality for operations by 2050. To achieve this goal, BOE Display will:

Our own operational emission reduction and renewable energy targets

Short-term goals (2030)
- Compared to the benchmark year of 2022, carbon emissions have decreased by **10%**
- Renewable energy usage reaches **30%**

Medium-term goals (2040)
- Compared to the benchmark year of 2022, carbon emissions have decreased by **30%**
- Renewable energy usage accounts for **40%**

Long-term goals (by 2050)
- Implement carbon neutrality in one's own operations
- Renewable energy usage reaches **100%**

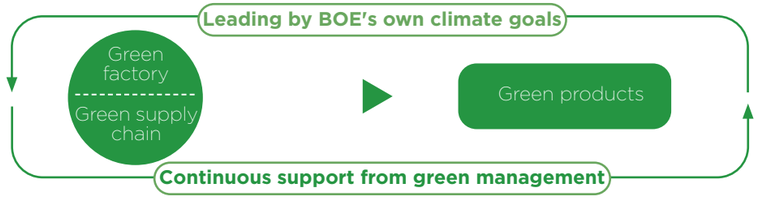
[5]Chongqing BOE Optoelectronics Technology Co., Ltd.

[6]Beijing BOE Display Technology Co., Ltd.

[7]Fuzhou BOE Display Technology Co., Ltd.

Low carbon development path

From the goal of carbon neutrality in our own operations, BOE Display comprehensively promotes carbon reduction in its organization and products. In the process, we have developed a strategic plan through a green management system, co-ordinated a low-carbon development path, and continued to promote the steady implementation of measures at all levels of green factory, green supply chain and green product, with precise efforts around the four main areas mentioned above:



Green management

Improve green management system:

Build an all-round, multi-level green management organisation structure to ensure effective supervision and promotion of low-carbon development strategies

Create a digital management platform:

Improve the Smart Energy Management System, build" Enterprise Carbon Emission Management Platform, Product Carbon Footprint Management Platform, Supplier Carbon Management Platform" and product-level digital carbon management platform to achieve efficient and collaborative internal carbon management. Management platform to achieve efficient and collaborative internal carbon management

Actively join international initiatives:

Proactively explore joining international organisations such as SBTi and RE100 to enhance the green value of the brand

Green factory

Draw up a blueprint for green factories:

Implementing programmatic carbon neutrality targets, formulating action blueprints for green factories that can be implemented and operated, and guiding factories in green transformation action initiatives

Adhere to the principle of prioritising energy efficiency:

Optimising production processes and processes and promoting the application of energy-efficient and low-consumption production processes

Continue research and development of emission reduction technologies:

Promoting the application of energy-saving and low-carbon processes to reduce energy consumption and carbon emissions

Promote the use of clean energy:

Build rooftop distributed photovoltaic and natural gas distributed energy projects and cooperate with the procurement of hydropower, further increase renewable energy procurement and actively participate in renewable energy investment

Strictly screen carbon-negative means

Strictly follow the guidelines of the international carbon neutral standard PAS2060, carry out assessments of forestry carbon sink projects, identify opportunities for strategic development of cutting-edge technologies in carbon-negative areas, and seize new opportunities for low-carbon development

Green supply chain

Optimize the internal management model (including low-carbon management of suppliers):

Strengthen the internal management model and strategy of low-carbon management of suppliers, build scientific and effective evaluation and assessment indicators, and construct the internal management model of green supply chain

Engage external partners (including low-carbon production by suppliers and low-carbon materials by suppliers):

Promote upstream suppliers to improve environmental information disclosure, environmental management optimisation and use of clean energy, and work together with supplier partners to achieve low-carbon development

Innovative low-carbon logistics initiatives (including low-carbon supply chain logistics):

Promote upstream suppliers to improve environmental information disclosure, environmental management optimisation and use of clean energy, and work together with supplier partners to achieve low-carbon development

Green product

Plan of green products:

Build a green product management system and assessment indicators, clarify the division of functions and performance requirements of various departments, and promote the green product management model from the inside out and from the point to the surface

Implement product carbon reduction measures:

Taking products and packaging as the two main grasps, we will gradually promote carbon reduction measures from low-carbon design, low-carbon materials and low-carbon end-processing to provide customers and consumers with "low-carbon, harmless and low-power consumption" high-quality display parts and complete machine products

Expand the scope of product certification:

Develop and build product carbon footprint accounting models and methods, expand the scale and number of products with carbon footprint accounting, and actively obtain authoritative certification for low-carbon products at home and abroad

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CHAPTER II

An effective, scientific and reasonable green management system is an important prerequisite for promoting the low-carbon development of enterprises, and is one of the core tasks for establishing low-carbon values of enterprises. BOE Display has taken multiple measures to ensure the effective implementation of its low-carbon development strategy through a solid low-carbon management structure, effective management tools and continuous improvement of the digital level of carbon management, and continued benchmarking with international climate initiatives.

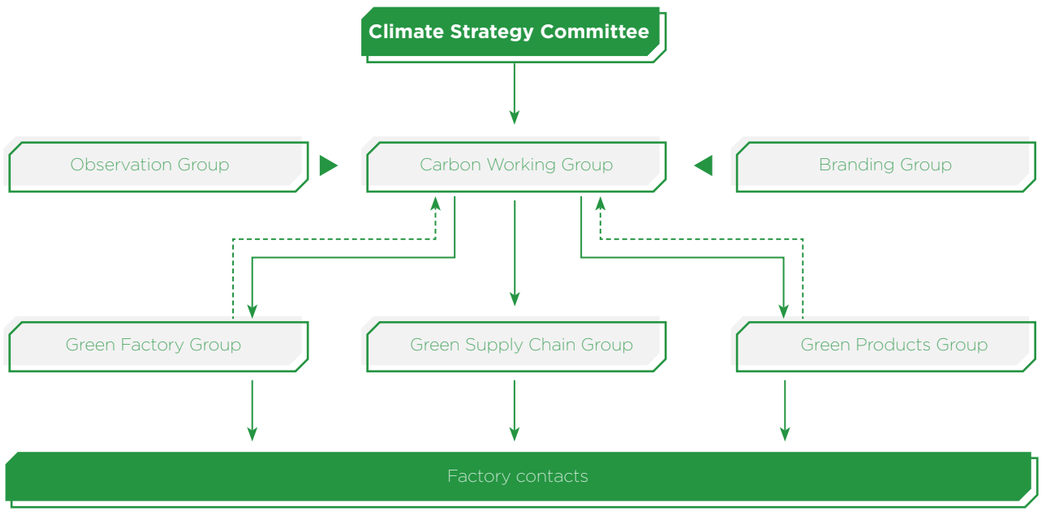
Overview of BOE Display's green management

BOE Display has established a carbon neutral management structure and performance assessment system with the help of the Group, and plans to launch an internal carbon pricing mechanism in the near future to further mobilize the participation of all subordinate units and departments in reducing emissions, thus promoting the steady achievement of the enterprise's carbon neutral target.

Three-tier green management framework

BOE Display attaches great importance to sustainable development and has set up the BOE Display Carbon Neutral Management Framework. Each team has its own role to play in promoting the creation of a carbon neutral management structure. The Climate Strategy Committee is responsible for operational dual carbon strategic planning and related decision-making. the Carbon Working Group is responsible for low-carbon business planning, coordination, performance assessment, project tracking and implementation; the Observation Group is responsible for external to internal information input and trend tracking. and the Branding Group is responsible for low-carbon branding. The Climate Strategy Committee makes decisions, the Carbon Working Group promotes the project, and each factory implements specific implementation plans to ensure the smooth implementation of carbon neutrality from the top down.

The Green Factory Group is responsible for carbon emission data and target aggregation in factories and tracking of energy saving and carbon reduction projects; the Green Supply Chain Management Team is responsible for supply chain carbon emission calculation, target tracking and supplier management. The Green Supply Chain Group is responsible for supply chain carbon emission calculation, target tracking and supplier management. The staff members are responsible for promoting carbon neutral work according to their specific responsibilitiesThe Green Products Group is responsible for green product research and development, green product manufacturing, standard compliance and zero carbon product manufacturing. The staff members are responsible for promoting carbon neutral work according to their specific responsibilities



Management assessment system

In order to achieve comprehensive green transformation and steadily promote carbon reduction measures, BOE Display has made adjustments to the performance evaluation categories of relevant responsible departments as well as units at all levels, clearly supplemented low carbon assessment indicators, closely linked performance evaluation with carbon reduction targets, and reasonably dismantled bottom-level targets and top-level targets to form a comprehensive and systematic low carbon management performance assessment system, and the improved assessment indicators include but are not limited to:

Internal carbon pricing

Internal carbon pricing is one of the ways in which companies can effectively reduce their greenhouse gas emissions, providing significant incentives to reduce energy consumption and mitigate the climate crisis. According to a recent survey by the Carbon Disclosure Project (CDP), an increasing number of companies are implementing internal carbon pricing mechanisms and are initially achieving reductions or revenue gains. The main mechanisms for internal carbon pricing include shadow prices, internal carbon prices and internal carbon trading.

BOE Display has many intelligent manufacturing lines, the implementation of internal carbon trading could meet the current demand for emission reduction, motivate each unit to reduce emissions, improve the efficiency of carbon reduction management and maximise the benefits of emission reduction.

In line with the concept of "total control and emissions trading", BOE Display plans to take each subordinate factory as the main participant, give full play to the efficiency advantages of the market mechanism, and design a general framework of carbon trading mechanism in line with BOE Display's "2050 carbon neutral" path In order to achieve the goal of carbon neutrality, BOE Display plans to allocate the greenhouse gas emission reduction targets to each of its factories in a reasonable manner.

Future actions: Refine the integrated green management structure

Refine management structure

Continue to promote the construction of BOE Display's carbon neutral management structure, refine the low-carbon responsibilities of each department, and optimize the internal process decision-making system to further help the implementation of green transformation.

Improve performance assessment standards

Through performance assessment results, accurately assess the progress of each refined target completion and update corresponding strategies in a timely manner.

Promote internal carbon pricing mechanism

Implement internal carbon trading design scheme and expand the coverage of participating trading subjects.

Digital management platforms

The digital management platform is an important tool to enhance the efficiency of green management. Through the application of blockchain, big data and other digital technology, it realizes the consistent and collaborative integration of carbon emission, energy and environmental protection management chain.

BOE Display continues to make efforts in the field of low-carbon digitalization, and has developed and launched an internal intelligent energy management system to achieve fine control of energy consumption. At the same time, BOE Display has launched the construction of three carbon management platforms, namely, Enterprise Carbon Emission Management Platform, Supplier Carbon Management Platform and Product Carbon Footprint Management Platform, to help enterprises manage low carbon in all aspects and form an efficient, standardized and accurate digital management system.

BOE Display Smart Energy Management System

BOE Display strengthens the three major integrated capabilities of "efficient and comprehensive utilization of multiple energy sources, integrated dispatch of supply, distribution, storage and energy IOT platform", application and ecology, and launches BOE Display 's low-carbon comprehensive energy service empowerment platform - Smart Energy Management System, focusing on a number of energy solutions.

Case | Application of Smart Energy Management System to improve production efficiency

Beijing BOE Display has achieved carbon neutrality by establishing a carbon emission management system, running a Smart Energy Management System and implementing energy saving and carbon reduction management measures at some of its display plants.

1. Renewable energy sources contribute over **23%** of carbon reduction
2. Neutralised carbon emissions by **6,560** tonnes in 2020
3. Integrated energy saving rate of **61.5%** from 2017-2021

Case | Application of Smart Energy Management Systems to help low carbon development

Through its energy management platform, Mianyang BOE Optoelectronics[8] uses edge computing and big data technology to monitor environmental temperature and humidity in real time, collect equipment energy usage data, analyse energy usage and plan for targeted use of energy, and will be certified as a "Green Factory" by the Ministry of Industry and Information Technology in 2022.

100% for reusing waste

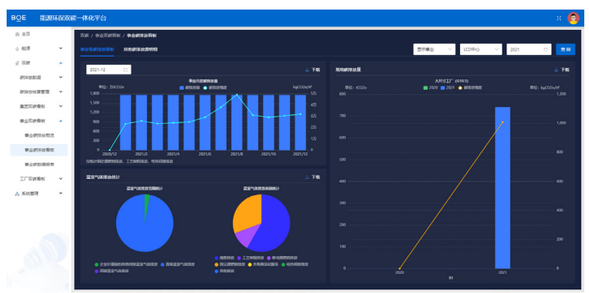
100% use of water and electricity in manufacturing processes

Reduction in unit consumption of products

From 2021 to 2022, a total of 20 energy-saving and emission reduction projects were implemented, achieving **28** million kilowatt hours of electricity savings

BOE Display Corporate Carbon Emission Management Platform

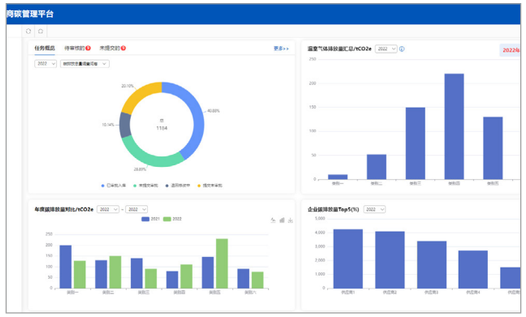
The BOE Display Corporate Carbon Emission Management Platform is a service platform that integrates intelligent energy, carbon emission monitoring, carbon emission analysis, carbon performance management and carbon information management into one. The platform can use big data technology to efficiently complete data filling and carbon inventory, and use electronic information technology as a carrier to analyze and present visual charts of real-time energy management, carbon emission trend, carbon emission reduction project process and carbon performance evaluation through massive data, realizing carbon emission data visualization, green management informatization and process, and providing data support for management to make quick and efficient decisions.



[8]Mianyang BOE Optoelectronics Technology Co., Ltd.

BOE Display Supplier Carbon Management Platform

BOE Display Supplier Carbon Management Platform improves the carbon emission data entry port for supplier data and enhances the authenticity and validity of value chain carbon emission analysis through first-level data collection. The unified collection, management and evaluation of all types of emission data from upstream suppliers according to demand, and the fully digital management approach will greatly enhance the efficiency of supplier carbon management and provide digital support for building a green supply chain management system.



BOE Display Product Carbon footprint Management Platform

The BOE display product carbon footprint management platform covers product modelling, carbon footprint measurement and accounting, carbon footprint analysis and other functions. The platform follows the ISO14067 and PAS2050 accounting standards, with built-in carbon footprint accounting formulas in line with industry norms, and integrates the mainstream carbon emission factor libraries at home and abroad, keeping regular updates. The platform is also connected to the supplier carbon management platform, enabling the carbon footprint of components to be traceable and providing a data base for subsequent green product design and development.

Future actions: Improve efficiency for green management by digital management platforms

Realise digital and intelligent carbon management

The three carbon management platforms of "enterprise - supply chain - product" will work together to enhance the digital capability of carbon management.

Drive business development

To address the pain points and scenarios of energy and resource consumption in industrial parks and factories, we will connect the relevant hardware and facilities in the parks and use the digital management platform to drive the whole park and factory to reduce costs and increase efficiency, driving business development.

Responses to global initiatives

Currently, climate initiatives that are widely recognized in the international community include the International Science Based Targets initiative (SBTi) and the Renewable Energy 100 (RE100). BOE Display actively evaluates and joins relevant international initiatives to further improve the international competitiveness and brand influence of enterprises in the wave of green and low-carbon development of enterprises.

Science Based Targets initiative (SBTi)

SBTi is an international initiative by the Carbon Disclosure Project (CDP), the World Resources Institute (WRI), the World Wide Fund for Nature (WWF) and the United Nations Global Compact (UNGC) to enable companies to set science-based, effective carbon reduction targets based on the Paris Agreement's "1.5°C temperature control target". emissions reduction targets.

BOE Display is now joining SBTi on an individual basis in its subordinate factories, "leading the way" to effectively promote more proactive internal actions and solutions to reduce emissions in response to global climate change. Currently, BOE Display has two factories that have submitted their commitment letters to SBTi, with Chongqing BOE being the first semiconductor display panel company in mainland China to join SBTi.

Renewable Energy 100 (RE100)

RE100 is a global initiative launched and managed by a partnership between the international non-profit climate organisation The Climate Group (TCG) and CDP in 2014 to drive the corporate transition to 100% renewable electricity and accelerate the transition to net zero emissions from the global grid. Companies joining the RE100 are required to commit to using all renewable electricity by 2050 and to annually disclose their electricity consumption data and progress towards their targets. Currently, more than 380 companies worldwide have joined the RE100 initiative.

Renewable energy is an important part of low carbon development. BOE Display has now set a strategic goal of achieving 100% renewable energy use by 2050 and has initiated an assessment of the feasibility of joining the RE100 to encourage its own green transition with higher requirements.

Future actions: Actively join international initiatives and practicing green concepts

BOE Display will further evaluate the possibility of more factories joining international organisations and actively respond to various international climate initiatives and stakeholder expectations, thus driving continuous innovation within the company, helping companies to save costs and enhance their competitiveness, and achieving high-quality low-carbon development.

CHAPTER III

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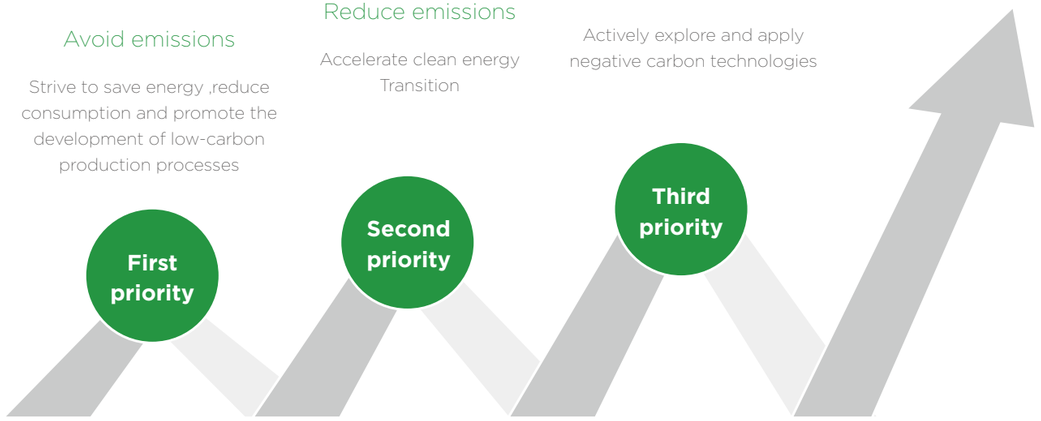
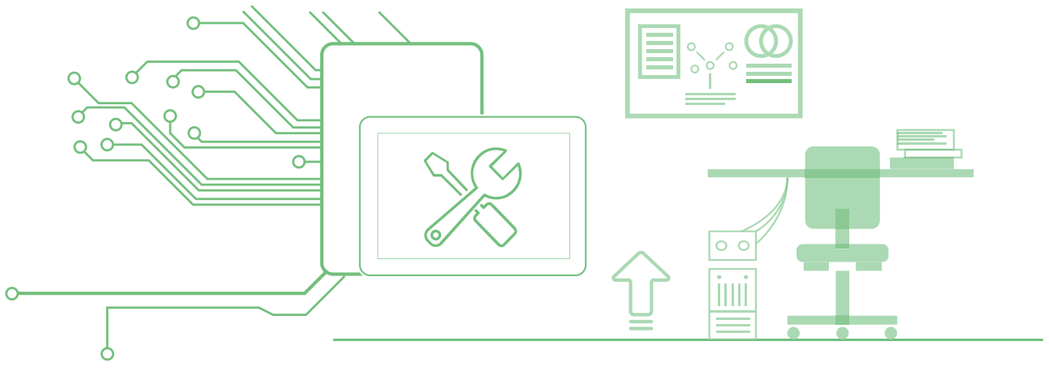
Factory is one of the important carbon emission sources for manufacturing enterprises. For BOE Display, building a green factory is an important part of our own operation to reduce carbon, also to build a solid foundation for creating a green value chain and green products.

BOE Display insists on the principle of energy saving first, and actively explores the direction of action and development of green factory in green production process, renewable energy use and carbon offset. By the end of 2022, BOE Display has implemented 933 carbon reduction projects, reducing emissions by 3.05 million tons, playing a vital role in achieving the goal of carbon neutrality in its own operations.

To achieve carbon neutrality for operations by 2050, BOE Display has made further systematic plans for the future development of the green factory segment to advance sustainable green and low-carbon development.





BOE Display's operational carbon emissions in 2022

The first step for BOE Display to develop a carbon neutrality strategy and roadmap is to understand our own energy consumption and carbon emissions. Since 2010, BOE Display has been collecting and measuring carbon emission data, as well as accepting third-party verification since 2018, has established an enterprise-level carbon emission database that has been operating effectively for more than ten years. 2022, BOE Display will account for its own carbon emissions from operations and disclose the information for the first time.

Verification standards

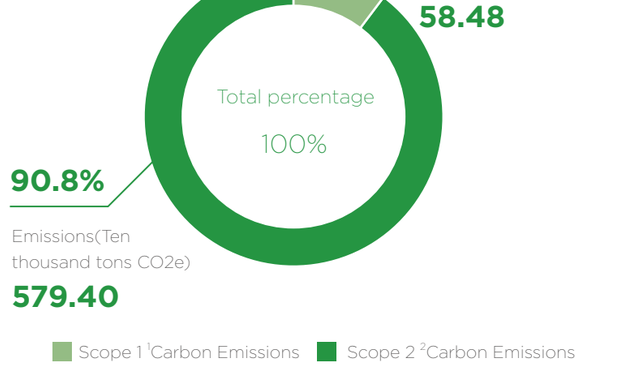
In accordance with:
ISO 14064-1:2018, and
The World Resources Institute (WRI) & the World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol: Guidelines for Corporate Accounting and Reporting.

BOE Display carbon emissions in 2022

Overall

In 2022, total GHG emissions from own operations of BOE Display is 6,378,800 tons of CO2e, with Scope 1 emissions of 584,800 tons of CO2e and Scope 2 emissions of 5,794,000 tons of CO2e.

BOE Display carbon emissions in 2022



Notes:
As defined in the World Resources Institute (WRI), World Business Council for Sustainable Development (WBCSD) and China National Institute of Standardization (CNIS) Greenhouse Gas Accounting System Accounting and Reporting Standards:
[1]Scope 1: Including direct emissions from sources owned or controlled by the enterprise.
[2]Scope 2: Including indirect emissions resulting from the production of electricity, steam, heating or cooling purchased by the enterprise.
[3]In this report, the calculation of emission sources by BOE in 2022 has been supplemented and added compared to the "BOE Sustainability Report 2022". The accounting results of this part have been verified by a third-party organization. Please refer to the data in this report.

Intelligent digital transformation of factories

For manufacturing enterprises, the low carbon performance of their own factories can reflect their management ability, technical ability and digital intelligence ability. BOE Display has set the priority of emission reduction for the enterprise, takes the principle of saving as the priority, achieving "avoiding emission - reducing emission - offsetting emission" through "energy saving - technological innovation - clean energy transformation - carbon offsetting", BOE Display is steadily promoting carbon neutrality through multiple measures.

At the 30th anniversary of the founding of BOE, 14 semiconductor display production lines and one intelligent manufacturing factory (15 plants in total) have been awarded as "National Green Factorys".

Case | **Study Building a "Lighthouse Factory" at the cutting edge of the semiconductor display industry**

As a typical representative of innovative digital factory of BOE, Fuzhou BOE Display has been awarded the title of "Lighthouse Factory", the highest honor in global smart manufacturing. Through the energy management system designed and built by BOE, energy use is controlled, analyzed and optimized by information technology, and electricity consumption is reduced by 39% and water consumption is reduced by 27%, which greatly improves the green and sustainable development ability and becomes the industry benchmark in the field of intelligent manufacturing. With this as a benchmark, BOE Display has built a comprehensive intelligent energy management platform in all semiconductor display factories, unifying the platform and pulling through the management. In the future, BOE Display will continue to lead the development of intelligent manufacturing in the industry, promote the digital upgrade of the whole industry chain, and help the efficient promotion of sustainable development.

Future actions: Designing and building green factories with the concept of sustainable development

Designing and building the green factory with the concept of sustainable development is the main measure for BOE Display to implement green operation in the future. BOE Display will continue to aim at achieving carbon neutrality, steadily grasp the new opportunities brought by Industry 4.0, promoting high quality of its own low carbon transformation and development and the construction of low carbon green factories.

Energy-saving priority strategy

BOE Display actively promotes the implementation of energy management system in each production line and business department to improve the efficiency of energy usage by transforming equipment, upgrading system, green office, etc.; through optimizing the production process and exploring low-carbon alternative processes to realize low-carbon production, which together help BOE Display steadily move towards carbon neutrality.

Upgrading to improve energy efficiency

BOE Display avoids energy waste and improves equipment energy efficiency by renovating old equipment in factories, adding energy management platforms, and optimizing operation and maintenance modes.

Case | **Hefei BOE Display won the title of "Green Factory" for its comprehensive energy-saving upgrade**

Heifei BOE Display[9] has successfully reduced energy consumption per unit product area by more than 30% through energy-saving technology improvement, and will be certified as a "Green Factory" by the Ministry of Industry and Information Technology in 2020:

Upgrading of old equipment and systems

- MAU humidifier frequency control, annual power saving of **868,000** kWh
- Replacement of Roots fan in wastewater station with magnetic levitation fan, with annual power saving of **818,000** kWh

Energy management platform

- Adopt edge computing and big data technology to monitor environmental temperature and humidity in real time, collect equipment energy consumption data, analyze energy consumption, and plan energy utilization in a targeted manner.

Energy-saving system operation

- Clean room temperature optimization, annual energy savings of **4.433** million kilowatt hours
- Pre-heating water optimization in the water section, annual electricity savings of **1.814** million kWh

Scientific operation and maintenance

- Adopt energy management system, use technology to empower and improve energy utilization Cleanroom illumination zoning management, annual
- energy savings of **15.914** million kWh

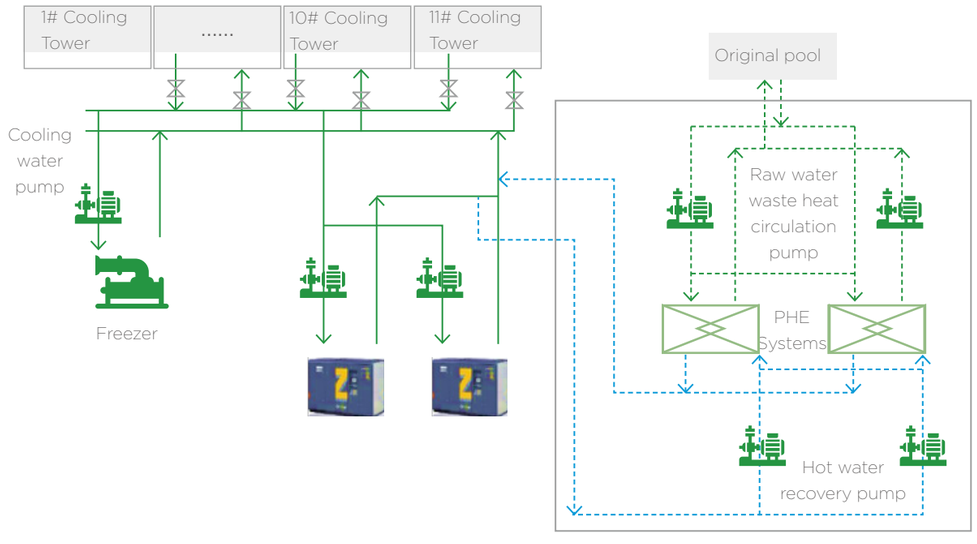
[9]Hefei BOE Display Technology Co., Ltd.

Case | **FreeCooling technology reduces winter cooling energy consumption, widely used in 9 plants**

FreeCooling technology is used to prepare chilled water from cooling water in cooling towers through plate heat exchangers, replacing chillers in traditional refrigeration cycles and significantly reducing winter cooling energy consumption. The technology has been implemented in nine plants, saving approximately 86 million kWh of electricity annually and reducing carbon emissions by nearly 49,000 tons in 2022.

Case | **More than 12 plants complete air pressure heat recovery transformation to achieve cost reduction and efficiency**

Pneumatic heat recovery refers to the recovery of excess heat generated by air compressors, which can directly reduce the load of medium-temperature chillers and improve the operating efficiency of heat recovery chillers, resulting in significant energy savings for chillers. The air pressure heat recovery project has been completed in at least 12 BOE plants to achieve cost reduction and efficiency improvement.



Full participation, behavior management energy saving

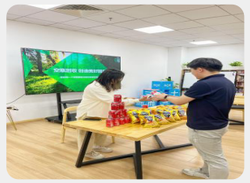
BOE Display administrative organization focuses on the concept of sustainable development, innovates management mode, focuses on green park, green office, green travel and green life, and carries out "green action" through Administrative Service Points System innovation to promote all employees to change to green sustainable development mode and create a low-carbon, green and healthy working and living environment. Employees get green points through online self-declared behavior punch cards to help achieve the goal of carbon neutrality with practical actions.

Results of the participation in energy conservation of BOE Display (data as of May 2023):

More than **315,000** times clocked in the Green Action Points System

Practicing green action clocked in **90,000** times

More than **470** promotional activities conducted by various units



*Data statistics as of May 2023

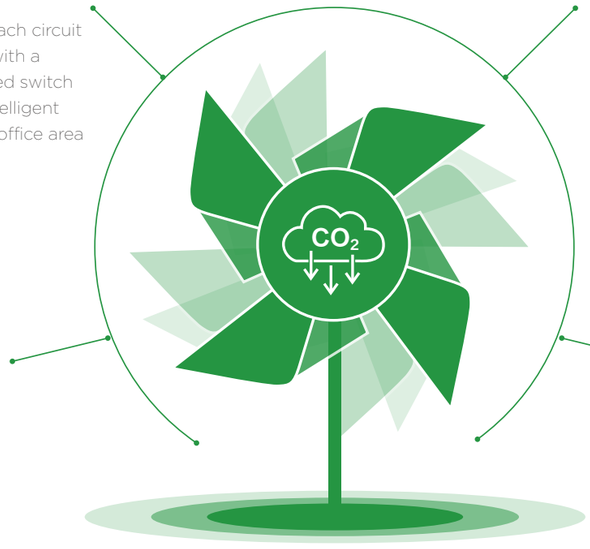
Specific measures

Office area lighting

ensure that each circuit is equipped with a time-controlled switch to achieve intelligent shutdown of office area lighting

Aisle lighting

adjust the opening time of the aisle lighting, using infrared switches for control



Factory lighting

control the factory lighting and adjust the time of street light opening

Other emission reduction measures

optimize the operation of elevators, and turn off equipment through intelligent monitoring of public areas, etc.

Case | Implement green office and cultivating employees' daily environmental awareness

Chongqing BOE Display controls office area lighting and proposes lighting schedule initiatives to employees according to the lighting conditions in Chongqing;

By adjusting the temperature and humidity settings of office air conditioners in different seasons, Kunming BOE Display[10] saves water and electricity for humidification while guaranteeing a comfortable office environment for employees, in response to the meteorological characteristics of Kunming, Yunnan Province.

Case | Establish Green Action Points System to encourage employees to live a low carbon life

In 2022, BOE Display carried out "Green Action" through Administrative Service Points System to promote the transformation of all employees to green and sustainable development and create a low-carbon, green and healthy working and living environment. Through online self-declaration, employees will get green points for their carbon reduction behavior, and everyone will help the company to reduce emissions.

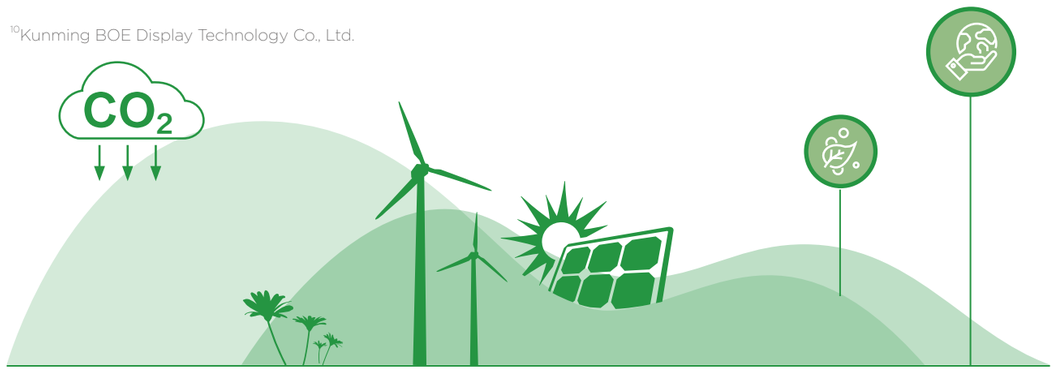
Future actions: Energy-saving measures to help industry meet carbon neutrality

Explore new technologies to promote energy saving and consumption reduction

Continuously explore new technologies and space for emission reduction in the operation process, and improve energy use efficiency by transforming equipment and upgrading systems.

Daily operation to promote energy-saving actions

BOE Display will continue to implement and promote the "four green" initiatives of green park, green office, green travel and green life, further enhance the awareness of environmental protection among all employees, and continue to promote environmental protection activities.



[10]Kunming BOE Display Technology Co., Ltd.

Decarbonization technologies creativity

The innovation of low-carbon production technology is the perpetual motive to drive enterprises to reduce emissions. BOE Display actively optimizes production processes, fluorinated gas emission reduction, resource recycling and other areas to lead its own low-carbon development. At present, BOE Display has taken the following measures:

By reducing the use of fluorinated greenhouse gases in the production process and gradually replacing process gases with high global warming potential (GWP) values, we are striving to reduce carbon emissions throughout the process by properly handling fluorinated gas emissions. At present, the treatment rate of NF3 and SF6 gases in the production process has reached over 99%.

A comprehensive resource recycling system has been established in the plant, covering stripping solution, diluent, etching solution, waste targets, waste screens and other types of forms, to continue to promote the "circular economy" development model and further reduce resource dependence.

Optimization of production processes

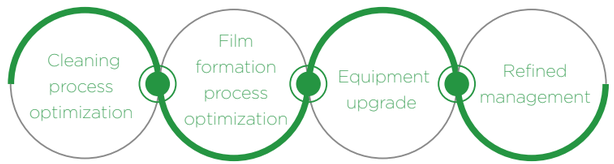
Case | Color film plant optimizes process, reduces oven equipment use

The color film process uses Oven equipment to bake the PR glue on each layer of the color film. On the basis of meeting the product characteristics requirements, BOE Display actively optimizes the color film production process, shortens the Oven process time of PR glue, and thus reduces the operating time of Oven equipment. BOE Display's factories that have imported this technology can save an average of 40 million kWh of electricity annually compared to the previous year, which is equivalent to reducing carbon emissions by approximately 23000 tons per year.

F-gas Abatement

Case | Thinning of a-Si to reduce the use of fluorinated gases

In addition to ensuring the performance of the products, BOE Display has realized the thinning of the overall a-Si layer thickness, which reduces the use of SF6 and NF3 gases during the etching process, thus achieving the goal of reducing greenhouse gas emissions in the process. It is estimated that the use of fluorinated gases for etching can be reduced by a total of 21.1 tons/year (3.7 tons of SF6 and 17.4 tons of NF3), which translates into a reduction of 3,072.9 tons/year of carbon emissions, after the introduction of this technology for all products.



At present, the NF3 reduction program has been promoted and pulled through in each product department, among which the CFC unit is the first time to be verified and applied in the industry. After the project is fully implemented in the plant, the overall NF3 consumption will be reduced by about 800 tons/year compared with that before the improvement of emission reduction, which is

Case | Thinning of a-Si to reduce the use of fluorinated gases

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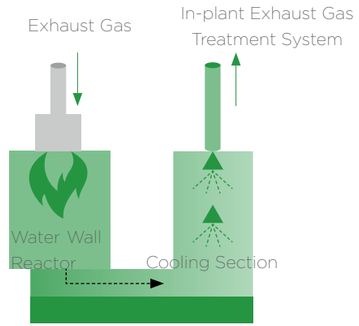
Case | Reinforcement of F-gas management, NF3 and SF6 gas treatment efficiency has reached over 99%

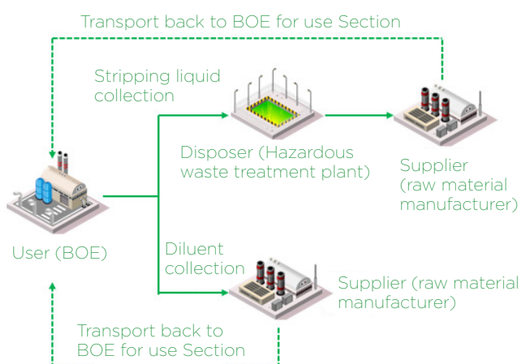
BOE Display has always attached importance to the management of fluorinated greenhouse gases, and all factories under BOE Display have installed 100% exhaust gas treatment equipment at the early stage of plant construction. The fluorinated gases are first passed through the POU treatment system to remove the fluorinated gases from the exhaust gas by high-temperature combustion, and then scrubbed through the lye scrubber. At present, the efficiency of NF3 and SF6 treatment in BOE Display plants has reached over 99%.



Resource recycling

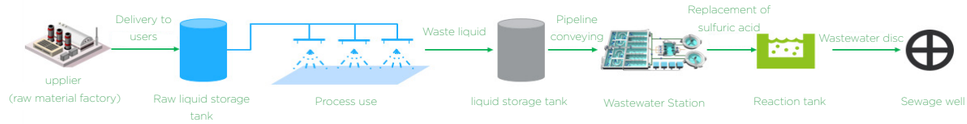
Case | Establishment of Green Recycling System for stripper and diluent

In the LCD process, a large amount of stripping solution, diluent and other chemicals are used. BOE Display has realized the green recycling system of supplying stripping solution and diluent and recycling waste liquid, and realized 100% recycling of such waste.



Case | ITO etchant recycling system

The waste ITO etchant, equivalent to 10% sulfuric acid concentration, can be used to adjust the pH in the wastewater treatment system, thus reducing the use of purchased sulfuric acid, achieving the purpose of reducing operating costs and hazardous waste generation, and realizing "zero" discharge of waste acid. At present, BOE Display has the ability to utilize 100% waste ITO etchant.



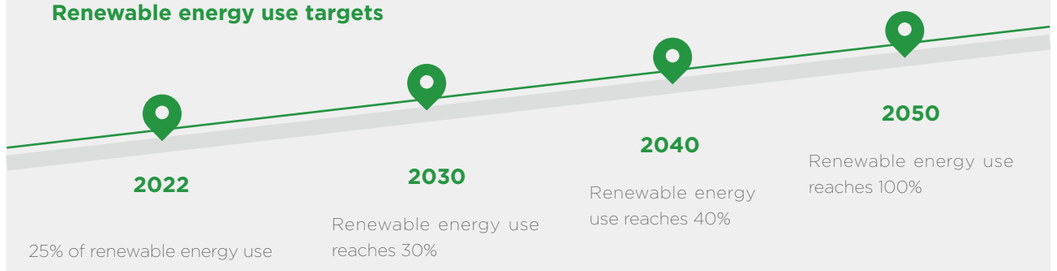
Future actions: Innovative R&D on emission reduction technology

In the future, BOE Display will continue to promote the optimization of production processes, fluorinated gas emission reduction, resource recycling and other areas. We will continue to innovate and develop emission reduction technologies to empower the green economy.

Use of clean energy

The increase of the proportion of renewable energy is the key for the enterprise to move towards the road of high efficiency decarbonization, and also provides the enterprise with more possibilities of high-speed development. In line with the development of the times and the low-carbon needs of the industry, BOE Display continues to increase the proportion of clean energy use, and has implemented means including the construction of rooftop distributed photovoltaic and natural gas distributed energy projects and with the procurement of hydropower, and will further increase renewable energy procurement and actively participate in renewable energy investment in the future to gradually achieve the goal of 100% clean energy use.

Renewable energy use targets



Note: Renewable energy use part of the proportion to consider hydropower projects

Current status of clean energy use

Photovoltaic

In China, light energy resources are evenly distributed, and 76% of the country's land area is full of light. Photovoltaic as a kind of power generation system using solar energy is suitable to be widely used. BOE Display has integrated factory rooftop resources and carried out "self-built distributed photovoltaic" action, which has achieved significant carbon reduction results. At present, BOE has more than 10 factories have built their own distributed PV projects, with a total installed capacity of over 110 MW and an annual power generation capacity of over 10,000,000 kWh.

Photovoltaic Project in Hefei BOE Display

Photovoltaic Project in Chongqing BOE Display

Case | Hefei BOE Display Rooftop Distributed Photovoltaic Power Plant

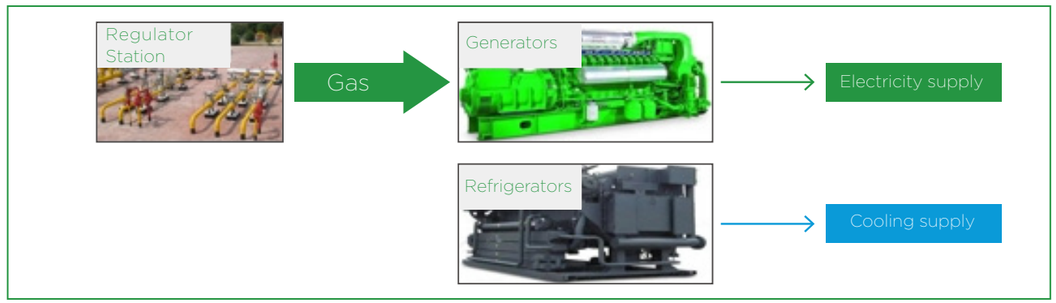
Hefei BOE Display is building a distributed photovoltaic power plant on the roof of its factory, with a total installed capacity of about 24 MW and an annual power generation of about 25 million kWh.

Hydropower

Hydropower is not only a clean energy source with proven applications, but also a highly flexible energy storage system. The Sichuan region of China is rich in water resources and is one of the most important hydroelectric power generation bases in China. Its installed hydroelectric power generation capacity accounts for more than one-third of the total installed capacity in the country and has delivered over trillions of kilowatt hours of hydroelectric power over the years. The plants of BOE Display in the Sichuan region take advantage of its unique geographical advantage to achieve nearly 100% hydropower consumption.

Natural Gas

In response to the dual carbon policy and to develop low carbon economy, Chongqing BOE Display plans to use the existing vacant land to build a natural gas distributed energy project. After the first phase of the project is completed, the annual power supply in normal operation can reach 10,000,000 kWh, which can reduce carbon emissions by about 19,000 tons.



Future actions: Multi-measures to help achieve 100% green power

BOE Display will expect to actively participate in renewable energy trading according to its own situation and external requirements. In the context of carbon neutrality, companies have become one of the most important means to lock in resources by investing in renewable energy to obtain clean energy. Currently, BOE Display has invested in a centralized PV project in Inner Mongolia, which can generate up to 400 million kWh of electricity annually. BOE Display is actively deploying other centralized power generation projects to further enhance the company's ability to acquire renewable energy and move towards the goal of using 100% renewable energy to achieve clean production and operation.

Development of carbon-offset strategies

For carbon emissions that cannot be reduced through active emission reduction, BOE Display plans to use negative carbon technology to achieve carbon offsets. In the procurement of carbon offsets, BOE Display will fully consider the additionality of emission reduction, the location of the project and the credibility of the certifying agency, and strictly follow the guidelines of the international carbon neutral standard PAS 2060. In addition, BOE Display has conducted an assessment of forestry carbon sink projects to identify strategic development opportunities for cutting-edge technologies in carbon capture and storage (CCS), such as bioenergy with carbon capture and storage technology (BECCS) and direct emission with carbon capture and storage (DECCS), and to seize new opportunities brought by carbon neutral strategies.

Future actions: Actively promote the process of negative carbon technology innovation

Negative carbon technology development measures level

through strengthening the investment in negative carbon technology innovation, expanding the application scale of negative carbon technology, and increasing the financial support for negative carbon technology.

Negative carbon technology development path level

through research and development of negative carbon technology with the characteristics of low cost, low energy consumption, low threshold, high efficiency, high quality and green, and research and development of negative carbon technology with the characteristics of carbon conversion, carbon utilization and carbon recycling.

Negative carbon technology development support level

By strengthening the top-level design of negative carbon technology, establishing a standard specification system and management system for negative carbon technology application, transformation, testing, verification, safety, production, etc., and continuously exploring the combination point of negative carbon technology and various businesses to expand the emission reduction potential.

GREEN SUPPLY CHAIN

- SUPPLY CHAIN CARBON MANAGEMENT PROGRESS 37
- SUPPLY CHAIN DECARBONIZATION DIRECTIONS 39
- ENGAGEMENT WITH SUPPLIERS IN GREEN DEVELOPMENT 41
- TRANSITION TO LOW-CARBON TRANSPORTATION 43

CHAPTER IV

BOE Display has realized that a healthy, stable and sustainable green supply chain is crucial for the long-term stable development of enterprises.

BOE Display improved the supply chain management system internally, established and improved the supplier green procurement system, and actively launched the supplier empowerment action plan; We will work together with our supplier partners to deepen the green transformation of the supply chain, promote the healthy development of the upstream and downstream industries, and establish an external evaluation system for suppliers, starting from the five major aspects of "green certification, green design, green production, green logistics, and green circulation".

In the future, BOE Display will work with its supply chain partners to provide customers with high-quality products and services that meet the requirements of sustainable development from the source.

Supply chain carbon management progress

For a long time, BOE Display gives full play to its advantages in technology and resources, and actively drive suppliers and other interested parties to study energy-saving and carbon reduction technologies in depth. Through close communication and cooperation, we aim to jointly build a transparent, responsible, and sustainable supply chain.

Achievements of green supply chain management system

BOE Display has incorporated the environmental risk management level into the environmental management evaluation system of suppliers, and has put forward clear requirements for suppliers in terms of environmental permits, hazardous substance control standards, energy consumption, greenhouse gas emissions, etc. to promote suppliers to continuously improve their environmental risk management level. In

addition, BOE Display actively assists suppliers in identifying environmental risk points such as “lack of awareness of greenhouse gas emission reduction” and “inadequate implementation of emission reduction measures”, so as to urge suppliers to make up for their environmental management shortcomings.

Case | Improve supplier CSR performance evaluation system

In 2022, BOE Display will incorporate "dual-carbon management" into the supplier CSR performance evaluation index, effectively promoting suppliers to develop a low-carbon development concept, gradually building a carbon emission management system and meeting the needs of multiple parties for low-carbon development.

Green supply chain specific management measures

In 2022, BOE Display has promoted 34 suppliers to obtain international certifications such as ISO14001, a 10% increase in certification coverage compared to 2021.

In the production process of components, BOE Display encourages suppliers to implement green design, green production, green logistics and other concepts. In terms of green design, adopt standardized tandardized, harmless, low-consumption and disassembled solutions, as well as green, low-carbon and recyclable products and packaging materials; in terms of green production, BOE Display supports and promotes suppliers to use green electricity and gradually realise green production of materials and packaging; in terms of green logistics, we work with upstream component suppliers to increase the proportion of electric trucks and explore the feasibility of using clean fuels feasibility.

At the same time, BOE Display focuses on the green recycling performance of its suppliers, promotes the use of recyclable materials in packaging materials, injection moulded parts and other materials by its supplier partners, encourages suppliers to actively pass UL2799 zero waste to landfill, product carbon footprint and UL3600 recycling system certification, and actively promotes low carbon development of suppliers from a whole life cycle perspective.

Case | Empowering suppliers to develop low carbon

Supplier Conference

BOE Display regularly holds GP exchange conferences for its supply partners every year, with 635 suppliers participating in the conference in 2022. In addition, we will continue to improve the low-carbon management ability of our supplier partners.

Supplier training

BOE Display always pays attention to the needs of suppliers and organizes quality training and green product training on topics related to environmental protection, low-carbon development and international certification, to strengthen the in-depth communication between suppliers and BOE Display from both the technical and management sides. In 2022, BOE Display has launched a supplier training program, and for the first time has realized the training of secondary suppliers, further strengthening the communication and collaboration with upstream suppliers, promoting the close association between the company and suppliers, realizing industrial synergy and value creation.

Supply chain decarbonization directions

BOE Display continues to improve the supply chain management system internally and refine the internal indicators of supply chain management to provide guarantee for the effective implementation of green supply chain management methods and approaches; establish and improve the green procurement system for suppliers in three steps: before procurement, during procurement and after procurement, and fully consider supplier management in the procurement process; actively launch the supplier empowerment action plan to enhance suppliers' green knowledge reserve, environmental awareness and action ability in all aspects, and jointly build a green and low-carbon supply chain.

Green management systems within the supply chain

Based on our own low-carbon development strategy, BOE Display has integrated advanced concepts from home and abroad to build a green management system for the supply chain that suits its own characteristics, designed management processes and methods that are applicable to different types of suppliers, and improved the supply chain department assessment system accordingly to ensure that supply chain management measures can be effectively implemented.

BOE Display shows green procurement system

Green procurement is one of the important links in the green transformation of the supply chain, and building a green procurement system is one of the important guarantees for BOE Display to reduce carbon emissions in the whole procurement process. BOE Display has incorporated green procurement requirements into the three major steps of "before procurement, during procurement and after procurement", and deeply explored the work links that can be optimized to ensure that the concept of low-carbon development is deeply penetrated into the green procurement system.

Set up a green low carbon assessment session

Involvement in managing the design / production chain of suppliers

Greening of warehousing / logistics

Implementing "paperless" green procurement

Improving waste recycling capacity

Low carbon management of existing suppliers

Supplier Empowerment Action Plan

BOE Display understands the pain points and difficulties of suppliers' low carbon development, systematically improves suppliers' low carbon literacy through the Low Carbon Empowerment Action Plan, standardizes suppliers' carbon emission data reporting, helps suppliers to formulate emission reduction plans, and works together to reduce carbon emissions in the supply chain and build a long-term sustainable partnership.

Batch opening of data collection, guidance on filling in

Regular training on carbon emission data filling is conducted to guide suppliers to be able to accurately understand the filling requirements and achieve accurate filling of carbon emission data.

Building supplier low carbon knowledge systems

Regular training work on supplier topics around low carbon hot topics in the supply chain.

Assisting suppliers in identifying carbon reduction technologies

Share BOE Display 's excellent low carbon practice experience and carbon reduction benefit accounting methods, and assist suppliers to choose energy saving and emission reduction measures and technologies according to the carbon reduction effect.

Enabling suppliers to transform cleanly

While driving suppliers to clean transformation, it can provide technical support and renewable energy reserves for upstream and downstream partners, effectively improving the external conditions required for clean transformation and ultimately realising the establishment of a green low-carbon ecological cluster together with suppliers.

Future actions: actively promote carbon-negative technological innovation processes

Implement a low carbon management system for the supply chain and continue to expand the scope of management of

In order to strengthen the green transformation of the supply chain, BOE Display will gradually expand the number and scale of supplier management, gradually transition from core control suppliers and key control suppliers to general control suppliers; refine supplier management assessment performance indicators, promote suppliers to carry out green system certification and actively carry out internal self-evaluation of the supply chain.

Improve the green procurement system and achieving full element management of the procurement process

BOE Display will further improve the green procurement system based on advanced domestic and overseas experience and its own procurement business model. Before procurement, BOE Display will further strengthen its ability to review suppliers' carbon emissions; during procurement, BOE Display will encourage suppliers to actively take carbon reduction initiatives in the production of key components; after procurement, BOE Display will further enhance its recycling and reuse capabilities.

Supplier Empowerment Action Plan, working with supplier partners to enhance their capabilities

BOE Display will systematically and comprehensively implement the Supplier Empowerment Action Plan, clearly communicate BOE Display's low-carbon development philosophy, continuously conduct training seminars on hot low-carbon topics and cutting-edge technologies, and guide supplier partners to skillfully apply the contents of the low-carbon knowledge system in production practice through online consultation and field visits.

Engagement with suppliers in green development

BOE Display has established a sound supplier management system through macro analysis and micro in-depth excavation, scanning and analysis of the key issues of low-carbon development in the value chain and the related upstream demand for low-carbon products, joining hands with suppliers to jointly promote their own green and low-carbon transformation from multiple dimensions and all aspects, and jointly building green supply chains and delivering green products.

External green management system for suppliers

An effective supplier management system is the cornerstone of a solid green supply chain development. BOE Display combines the low-carbon development path and green product planning dimension of the enterprise, from the perspective of the whole process of supplier management business, it finds the starting point of external supplier management and constructs the external green management system of the supply chain including five aspects of "green certification, green design, green production, green logistics and green recycling".

Green certification for suppliers

Actively promote suppliers to improve environmental management, energy management, greenhouse gas certification and other aspects of certification to enhance the level of green management of enterprises, while driving industry chain enterprises to enhance the image and influence of green demonstration enterprises.

Green Design for Suppliers

Encourage suppliers to green design key materials and encourage them to increase the proportion of recycled materials used in raw materials.

Supplier Green Production

Pay attention to suppliers' production processes, support them to actively develop the use of renewable energy and encourage them to optimise and upgrade low-power production processes in their production.

Supplier Green Logistics

Encourage suppliers to enhance their low-carbon transport capacity and promote active integration of capacity resources and innovative low-energy transport methods.

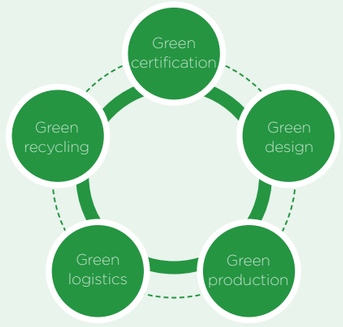
Supplier Green Cycle

Promote the cultivation of recycling technologies and work with suppliers to explore innovative and replicable ways and means of recycling resources.

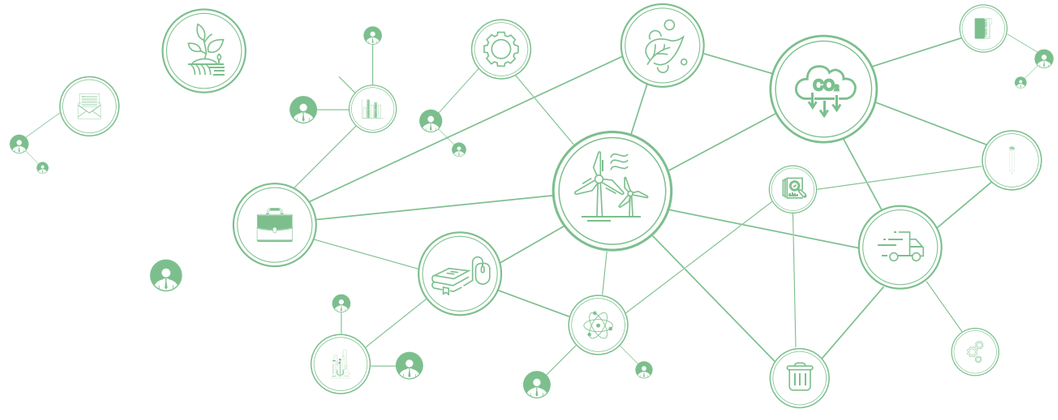
Case | Promote low-carbon throughout the entire supply chain

By promoting the recycling of waste in the upstream supply chain, BOE Display has been able to add PCR (Post Customer Recycled) and PIR (Post Industrial Recycled) materials to key components such as glass, stamped parts and injection moulded parts in the design of notebook display modules. At the same time, the introduction of recycled materials and emission reduction measures in the areas of packaging and transport has contributed to the establishment of a circular economy in the industry.

Future actions: Continued concerted efforts in five areas to improve external supplier assessment indicators



BOE Display will insist on the five aspects of "green certification, green design, green production, green logistics and green recycling", further improve the external assessment index of suppliers, clarify the assessment index and requirements of key dimensions, and enhance the enthusiasm and initiative of suppliers to reduce carbon.



Transition to low-carbon transportation

Carbon emissions in transportation are one part of the Carbon footprint of products. BOE Technology shows that while encouraging upstream parts suppliers to reduce carbon emissions in the transportation of raw materials (see 4.3 for details), it will continue to reduce carbon emissions in the transportation of downstream products by pooling efforts through "internal management improvement" and "external logistics optimization".

Reduce carbon emissions from upstream raw material transportation (see pages 41-42 for details)

Internal management improvement

BOE Display has further optimized the packaging and stacking forms internally, optimized the selection of warehouses, transport stations and routes, and actively improved the logistics load factor. In 2022, BOE Display shows that the actual transport vehicles will decrease by 9%.

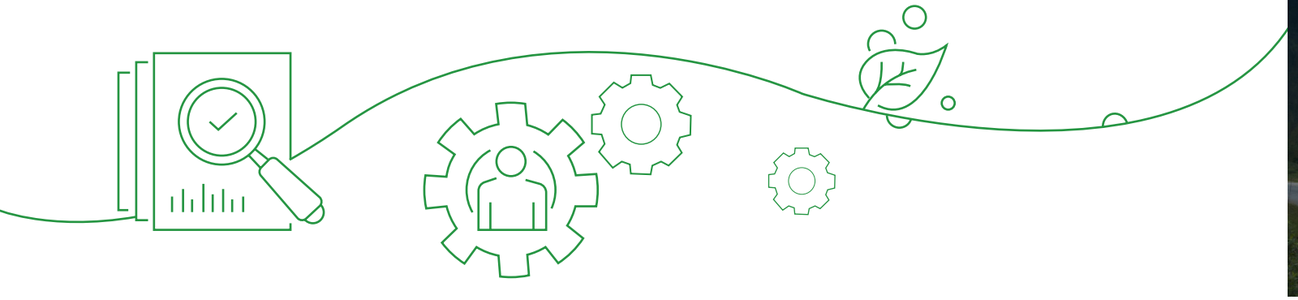
Convergence of forces to reduce carbon emissions from downstream product transportation

External logistics optimization

BOE Display actively joins hands with logistics suppliers externally to actively explore the use of clean transportation fuels and increase the proportion of land transportation methods to reduce the environmental impact of the logistics and transportation process.

Case | **Partnering with logistics providers to reduce carbon emissions from downstream transport**

BOE Display is actively working with external logistics providers to explore possible solutions to increase the share of road transport modes. BOE Chongqing has replaced display products originally exported to Europe using air transport with cross-border road transport from China and Europe, significantly reducing the carbon emissions generated from downstream transport and making a positive contribution to reducing carbon emissions in the value chain for customers.



Future actions: a two-pronged approach to promote green logistics

Continuously improve the full load rate of cargo transportation

BOE Display will further optimize the spatial layout and route selection of transportation sites internally through operation planning, Internet of Things and big data technology, reasonably arrange the transportation time of logistics suppliers dynamically according to the factory shipment time, and comprehensively improve the full load rate and transportation efficiency of transportation vehicles.

Explore the feasibility of clean fuels and transportation methods

BOE Display will work with external logistics suppliers to actively explore the use of clean fuels such as biomass aviation fuel, and study the feasibility of using clean fuel transport vehicles in some transport routes, and will gradually carry out the whole range of the enterprise after the pilot is successful.

Sharing of advanced practical experience in low carbon logistics Sharing of advanced practical experience in low carbon logistics

BOE Display brings into play its long-accumulated advantages in the field of supply chain management, integrates cutting-edge achievements and excellent practical cases in the field of low carbon logistics, tows suppliers in low carbon logistics, and creates a low carbon logistics ecological network of co-creation, sharing and win-win.

CHAPTER V

GREEN PRODUCT

- INTRODUCTION OF GREEN PRODUCTS ACHIVEMENTS 47
- GREEN PRODUCT DESIGN STRATEGIES 48
- PRODUCT DECARBONIZATION APPROACHES 49
- ECO-FRIENDLY CERTIFICATIONS FOR PRODUCTS 56

To provide customers with "low carbon, harmless and low power consumption" products is the direction BOE Display has been working for a long time.

BOE Display takes scientific green product planning as a starting point, creates green products through low-carbon design, low-carbon materials, low-carbon end-processing and other series of methods, completes the quantification of product carbon footprint accounting, disclosure and certification, and actively applies for domestic and international authoritative certifications such as low-power consumption and recycled materials to provide customers and consumers with high-quality display products.

BOE always follows the principles of "life cycle concept, representativeness, applicability, compatibility, and green high-end leadership", puts the green low-carbon concept into the whole life cycle of products, and devotes to create more low-carbon and environment-friendly display products, taking LCD products as an example, BOE is committed to:

LCD Products

100% recycled material solutions for backlight materials starting in 2024 except for LEDs

100% recycled material solutions for Tray-type packaging by 2025

Introduction of green products achievements

Since 2011, BOE has started a comprehensive product carbon footprint assessment based on international authoritative standards such as ISO 14067 and GHG Protocol, fully considering the resource use and environmental impact of each product link, analyzing the carbon footprint of the whole product life cycle, and obtaining third-party certification from authoritative institutions.

The product carbon footprint accounting results of BOE not only provide data support for the company itself to reduce carbon emissions in product segments, but also provide reference basis for upstream supply chain partners to reduce carbon footprint of raw materials. The product carbon footprint values of BOE Display 7-inch Q Panel, 14-inch TFT-LCD panel, and 32-inch TV LCD display have been recognized and used by authoritative institutions such as Environmental Planning Institute of the Ministry of Ecology and Environment and China Urban Greenhouse Gas Working Group, and have been included in the "China Product Lifecycle Greenhouse Gas Emission Factor Set (2022)", providing the industry with scientific, accurate and professional product carbon footprint standard values.

Case | **VUSION series electronic price tag products partially receive the first carbon footprint assessment report for electronic price tag products in the global retail sector**

In 2022, The VUSION series 4.2/2.6/2.2/1.6 inch electronic price tag products of BOE Display received a product carbon footprint verification report, which is the first carbon footprint assessment report for electronic price tags in the retail sector in the world. The carbon footprint assessment of the electronic price tag adopts the whole life cycle evaluation scheme, covering all stages of raw materials, manufacturing, distribution and retail, consumer use, final disposal or recycling, etc., which lays a technical foundation for carbon disclosure and carbon footprint standard development, carbon emission management system construction and improvement.

Green product design strategies

In order to ensure that all the work of green products can be effectively promoted, BOE Display has established a top-level framework for green products, clarified the dimensions and objectives involved, vertically matched the functional responsibilities of green products in each department, and supported by effective planning and management system to promote the low-carbon upgrade of existing products and the orderly implementation of new low-carbon products.

Future actions: BOE Display takes overall consideration and scientific planning of green product management mode

Horizontal: Scientific setting of green product targets and expanding the coverage of green product targets

Broad targets

BOE Display will set macro targets around each link of the entire product life cycle, such as raw material procurement, upstream transportation, manufacturing, downstream transportation, product use and waste disposal, respectively, and dismantle them to form key planning indicators. Through high-level and high-quality scientific research and development work, BOE Display will actively explore the possibility of using emerging green materials on the basis of ensuring product quality and setting green material use targets, such as increasing the proportion of using marine plastics and using biodegradable materials such as bamboo fibers in products and packaging.

Comprehensive products

BOE Display will analyze the macro policy development trend in all aspects and angles, gain insight into the low carbon requirements of customers and market for different types of products, add green product categories and models according to local conditions and internal and external coordination, set low carbon product targets in LCD, OLED and whole machine products, and gradually improve the scale of green product coverage.

Vertical: Detailed green product responsibilities and performance assessment, effectively promote the green development of products

Clear division of responsibilities: In order to ensure the feasibility and implementation of the goals, the goals will be reasonably allocated according to the main work content of the department, and the effectiveness of work execution will be included in the assessment content of the responsible department. Together, we will promote the implementation of carbon reduction work and ensure the steady progress of carbon goals.

Clarify management objectives > Low carbon design of products > Investing in low carbon production > Product carbon footprint accounting > Report certification & advocac > Continual optimization

Product decarbonization approaches

Based on the product life cycle perspective, BOE Display scientifically designs the product carbon reduction process, integrates the green concept into multiple aspects of product and packaging R&D, production, transportation and disposal according to four steps: low carbon design, low carbon materials, low carbon logistics and low carbon end-processing, effectively reduce the product carbon footprint and further meet the needs of customers on the basis of compliance requirements.

Low Carbon Design

Product Design

Based on the product lifecycle management system, BOE Display conducts ecological (ECO) evaluation of product design, adheres to the concept of low-carbon design, and actively works on the low-carbon design concept of "weight reduction, thinness, and low power consumption" while ensuring product quality, and is committed to bringing customers and consumers a more energy-saving and environmentally friendly experience. We are committed to bringing customers and consumers a more energy-efficient and environmentally friendly experience.

Reduction has always been one of the key principles of the low-carbon design of BOE Display. We seek to create higher value with less material. By streamlining design, optimizing structure and material selection, we reduce the consumption of resources required for products, while reducing waste generation and enhancing product sustainability and resource utilization efficiency.

Lightweight and thinness is also one of the key concepts of the low-carbon design of BOE display. By reducing the weight and volume of products, developing and using lighter and thinner display product backsheets, glass and other key components, we reduce carbon emissions generated during logistics for customers and provide consumers with a more convenient and comfortable user experience.

Low power consumption is also one of the important considerations for low-carbon design of BOE Display. By optimizing the energy-efficient design of displays and developing technological innovations for product energy saving and consumption reduction, we continue to reduce the carbon emissions generated from the use of products.

Case | 1.3-inch Si-OLED display of BOE Display further enhances user experience

At SID Display Week 2023, BOE Display unveiled the world premiere of its 1.3-inch high-definition and high-brightness Si-OLED display, an ultra-thin and large viewing angle Si-OLED binocular optical system with extreme thinness as its main feature. The product adopts 1.3-inch 4K*4K display module of BOE Display with a large viewing angle thin and light Pancake optical solution, and the total optical length is as low as 14mm, which is nearly 50% lower than the head competitor. This ultra-thin and large viewing angle HD optical system will help VR further improve the visual effect and wearing comfort, bringing a new experience for users.

Case | BOE Display provides customers with low power consumption and super endurance OLED display screens

The 6.79-inch flexible OLED screen is equipped with the first low-power ultra-HD eye care solution, and adopts a number of industry-leading innovative technologies such as super endurance, ultra-clear color display, ultra-core eye protection, and LTPO adaptive dynamic refresh rate technology, reducing the power consumption of the whole machine by 10% and 15%. It solves the pain points of terminal products with high brush power consumption, and brings people a new visual experience with low flicker and low power consumption display effect.

Image source: Meizu

Packaging Design

By optimizing the packaging structure, reducing the number of layers and using environmentally friendly materials, BOE Display reduces the weight of packaging, significantly reduces the carbon emissions generated by packaging in the transportation of products and other aspects, and provides customers and consumers with more environmentally friendly and convenient product packaging.

Case | BOE Display adheres to the concept of low-carbon packaging design and strives to develop low-carbon packaging design

BOE Display adheres to the concept of green packaging, under the premise of ensuring transportation safety, continuously improving product packaging strategy, removing unnecessary packaging, reducing packaging size to enhance the loading capacity of containers, reducing the size of packaging boxes, reducing the use of plastic packaging, increasing the use of recyclable packaging materials, optimizing the efficiency of the use of packaging materials, while effectively improving the packing rate of transport containers and the number of transport, optimizing transport efficiency In addition, it can reduce the carbon emissions generated during the packaging and transportation process.

Low Carbon Materials

Product Material

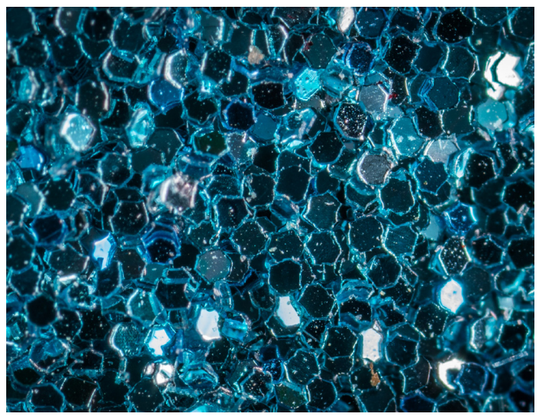
The use of low-carbon and sustainable materials is one of the core elements of product carbon reduction. BOE Display cooperates with upstream suppliers to increase the proportion of renewable materials used. In key components such as glass, backsheet, plastic frame and packaging, BOE Display is committed to promoting the renewable use of plastic, glass, metal and other materials to reduce reliance on natural resources and reduce carbon emissions.

Case | BOE Display insists on using recyclable, recyclable and degradable materials

In the process of product development, Hefei BOE Display increases the application of recyclable, degradable and other materials and technologies, such as by finding alternative low-temperature solders on lamp strips and printed circuit board modules. As far as possible, non-toxic or less toxic materials are used to replace more toxic materials, and all comply with the relevant national environmental protection regulations and chemical registration, evaluation, licensing and restriction systems. At the same time, increase the selection of green materials, and introduce zero VOC materials into the product. At the same time, Chongqing BOE Optoelectronics, in collaboration with Lenovo and other customers, has introduced low-temperature solder paste and zero VOC materials in the product development stage, and carried out green design and use of green materials from the source of the product.

Case | Add renewable materials to set an example of sustainability in the industry

BOE Display has joined hands with the world's leading supplier of glass materials to jointly develop and launch a glass with added renewable materials for the backsheets of the display. This innovative backplane material not only has excellent physical properties and excellent optical properties, but also significantly reduces carbon emissions during production. By introducing renewable materials, we have managed to reduce resource consumption and environmental impact. This cooperation has not only achieved a breakthrough in technological innovation, but also set an example for the sustainable development of the industry.



Packaging Material

By reducing the use of packaging materials and using more environmentally friendly materials, BOE Display effectively reuses recycled materials generated from the use of waste and by-products in the production process, reduces the demand for virgin resources, promotes the development of a circular economy, and reduces the environmental impact of packaging.

Case | Introduction of new foam packaging materials, leading the new trend of low-carbon packaging

BOE Display actively introduces new foam packaging materials, breaks through the traditional packaging methods, and changes the PET Tray to GPO foam Tray, reducing the carbon footprint of packaging materials and resource consumption. In 2023, BOE Display LCD Tray packaging PET recycling material proportion increased to 50%, with GPO, EPO instead of PET to promote lightweight packaging, the use of multi-piece loading to increase the loading capacity. Tray packaging gradually uses pulp molding and buffer paper to replace PET and EPE, further improving the proportion of recycled packaging materials. This cooperation has broken through the traditional packaging methods and led the development of new packaging methods in the industry. In addition, BOE Display machine product series advocates the use of post-consumer recyclable plastic raw materials to make external components, promoting the recycling of resources. Through the design of the buckle, it is conducive to the disassembly and classification of the product after scrapping, and the recyclable proportion of the whole product is greatly increased to achieve sustainable development.

Low Carbon End Treatment

Product end-processing

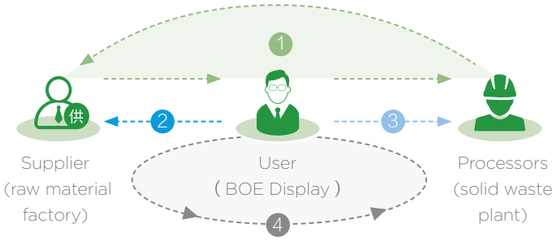
Packaging end-processing

BOE Display follows the 4R principles of recycling, reduction, regeneration and responsibility to treat raw materials, insists on comprehensive utilization, and recycles 100% of hazardous waste through qualified third-party professional institutions, and supervises and manages the third-party institutions.

Case | "Collecting as much as possible", actively creating a solid waste recycling model

BOE Display strives to achieve " collecting as much as possible " for solid waste:

- Collecting and recycling the waste targets generated by the Array and CF processes;
- Packaging containers generated by the plant, part of the unbroken empty drums are returned to chemical supply manufacturers to be re-made into chemical packaging, and the other part is returned to hazardous waste disposal manufacturers to be reused after crushing and sorting for granulation;
- Recycling the waste glass generated by the process through waste disposal vendors and reused after crushing and sorting.



1. Through the comprehensive utilization of solid waste disposal manufacturers, it becomes a new pharmaceutical liquid and returns to the original factory for use, such as NMP waste liquid
2. The packaging produced after the use of raw materials is returned to the supplier, and the supplier will recycle and reuse, such as target materials and empty chemical drums
3. Waste is disassembled and broken in the plant and recycled by solid waste disposal manufacturers, such as waste screens and defective products
4. Recycle in the factory, such as aluminum etching liquid, ITO etching liquid, etc.

Case | International certification for product recyclability and waste disposal

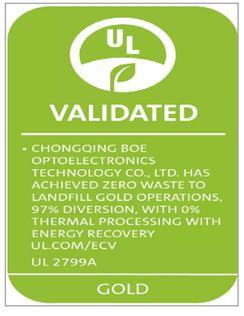
By choosing recycled materials for the production of plastic frames and backsheets, the recyclability of 15.6-inch products was verified to be 51%, and the recyclability at the company level was 74%, making Chongqing BOE Optoelectronics the first company in mainland China to pass UL3600 certification and obtain certification.

Waste reduction

Chongqing BOE Optoelectronics optimized copper-containing wastewater treatment process, reduced copper-containing sludge by 510 tons/year, carried out waste acid plant reuse project, and reduced hazardous waste by 1,230 tons/year;

Waste disposal

Chongqing BOE Optoelectronics actively carries out the audit of waste manufacturers to ensure the compliance of waste disposal.



Future actions

Digging deeper into the feasibility of low carbon design

BOE Display will continue to adhere to the concept of low-carbon design and continue to strengthen its efforts in two dimensions: product and packaging.

Product design level

BOE Display always adheres to the three major low-carbon design concepts of "reduction, thinness and low power consumption", prioritizes reducing the use of unnecessary parts, reducing the thickness and volume of products, improving product transmittance and reducing power consumption, etc., and incorporates continuous reduction of product carbon footprint as an assessment indicator in product evaluation.

Packaging design level

BOE Display will continue to promote the goal of packaging reduction and recyclability, continue to invest in R&D and innovation, improve the sustainability and environmental friendliness of packaging, work with partners, share resources and experience, and jointly promote the development of low-carbon packaging.

Continuously explore innovative applications of low carbon materials

Product material level

BOE Display will further strengthen the R&D and application of low-carbon materials, and continue to explore and introduce more environmentally friendly and sustainable materials to further reduce the carbon footprint of products.

Packaging material level

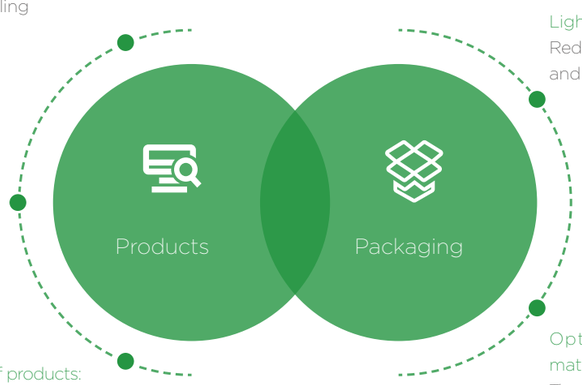
BOE Display actively explores the feasibility of introducing renewable and degradable materials in packaging materials, reduces the proportion of primary plastics used in product packaging, and cooperates with suppliers, partners and stakeholders in a joint effort to promote the innovation and application of packaging materials in order to achieve more sustainable development goals.

Improve the system construction to enhance the recycling capacity

BOE Display will gradually improve the construction of recovery and recycling system at the company level, actively explore waste recycling technology in the field of semiconductor display, improve the recycling rate of core materials such as metal, plastic and glass, and enhance the recycling capacity of BOE Display.

Modular product design:
Modular production reduces the difficulty of product recycling

Lightweight packaging design:
Reduce the weight of carton shells and other packaging



Replace low-carbon materials:
Try to choose materials with lower carbon footprint and less energy consumption in post-processing

Optimization of packaging materials:
The use of low carbon emissions, biodegradable and reusable packaging materials

Reduce energy consumption of products:
Improve product permeability and power consumption

Eco-friendly certifications for products

BOE Display regularly carries out product carbon footprint accounting and evaluation, and actively applies for product authoritative certification on innovative practices such as product energy consumption reduction and low-carbon material use, striving to create more competitive high-quality low-carbon products.

Future actions: Proactively disclose quantitative data and actively expand the scope of certification

On the one hand, BOE Display will regularly invite third-party authoritative institutions to evaluate product carbon footprint and disclose the product carbon footprint accounting certification results to the public and society in a timely manner, It will always adhere to the concept of being responsible to customers, the public and society, and ensure that product environmental impact information is more open and transparent.

On the other hand, in addition to product carbon footprint accounting certification and carbon neutral product certification, BOE Display will further expand the scope of certification in other areas such as low power consumption, renewable materials, and recycling capability, in order to provide customers with more competitive and valuable display products.

Case | BOE Display products are certified for ultra-low power consumption

Powered by ADS Pro, a technology brand of BOE Display, the low-power products using BOE Oxide technology have passed the Intel Low Power Display Technology (LPDT) ultra-low power certification and meet the EVO requirements of the whole machine. At present, it has reached project cooperation with many leading brands such as Lenovo and Dell. For example, a 14.0-inch product equipped with Oxide Panel is expected to reduce greenhouse gas emissions by 6.8 kg over its life cycle compared to other Panel products, which is about the annual carbon uptake of two trees.

ALLION Engineering Services

TEST CERTIFICATE
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Certificate No. LPDT-2019-004

Holder of Certificate
Company: BOE Technology Group Co., Ltd
Address: No.12 Xihuanzhong RD, BDA, Beijing, 100176, P.R. China

Tested Product
Product Type: Panel
Model Name(s): NE156FHM-N61

Confirmation of Test
Test Service: Low Power Display Technology
Test Center: Allion Labs.
Test Platform: Embedded Display

Note:
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Jul. 10, 2019
Date of Issue

Summer Chien
CEO, Allion Lab,Inc.

CHAPTER VI

CAPACITY BUILDING IN EMPLOYEES AND DIGITALIZATION

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- CARBON MANAGEMENT DIGITALIZATION 61

BOE Display recognizes that improving personnel capabilities and strengthening digital capabilities are important supports for BOE Display to move towards green development.

BOE Display focuses on "talent building", accelerates the construction of high-quality, professional "carbon neutral" talent team, guides employees to participate in emission reduction activities, and actively carries out related carbon reduction training. At the same time, BOE Display actively strengthens the digital construction, promotes the implementation and application of the tool-type platform, and uses digital technology to effectively realize energy saving and carbon reduction as well as low-carbon project progress tracking work.

Talent cultivation on climate change

BOE Display focuses on cultivating the concept of sustainable development of employees in daily operations. Through diversified training forms and diversified training contents, BOE Display encourages employees to carry out a series of green actions in layers, cultivates professionals to establish the concept of "carbon", improves the low carbon cultivation of employee, and gives priority to the concept of low carbon.

Diversified Training Forms

Internally, BOE Display makes full use of scientific and perfect training and rich and diverse activities to convey green concepts to employees. Externally, BOE Display actively participates in eco-environment-related activities to help raise public awareness and join the construction of a better society.

Diversified training contents

The training content includes global dual carbon development pattern, interpretation and practice of dual carbon policy, and low carbon goal leading economic development. At the same time, the combination of dual carbon and photovoltaic, charging infrastructure, green electricity and green certificates, circular economy, etc. was comprehensively analyzed, and the principles of carbon reduction were profoundly elaborated.

Layered and regular training

Regular training for general staff and special education programs for staff in key positions are conducted to improve the ability of professionals in all aspects through new staff training or special thematic training.

Case | **Actively carry out environmental management training and cultivate environmental awareness among key positions**

BOE Display regularly carry out environmental protection on-the-job training, and personnel in key positions of environmental risk prevention and control carry out regular training around climate change, waste disposal, and basic knowledge of environmental management in the form of ledger management to ensure that employees in key positions understand the impact of climate change on enterprise development and master the treatment and discharge of wastewater and waste gas pollutants, hazardous waste collection and storage and transfer, chemical storage and logistics, special gas storage and Promote enterprise professionals to actively respond to climate change and to think about the future development path of BOE Display from the perspective of sustainable development.

Live photos of the managers' energy management training and discussion

New employee orientation environment training

Case | **Conducting green power and green certificate training to improve the overall professional ability of employees**

In order to help achieve the goal of carbon neutrality, BOE Display invited more than 10 external experts to hold more than 10 "Green Development Theme" training sessions, with the participation of more than 20 units in total, to popularize the national green development trend for BOE Display employees, explain the development of international green actions and a series of domestic initiatives to achieve the "Dual Carbon ". It helps employees understand the development history and future development of green electricity and green certificates, and improves the overall professional ability of the company.

Held more than 10 training sessions on "green development themes" with the participation of more than **20** units

Future actions: Adhere to the concept of sustainable development and enhance employees' awareness of environmental protection

Encourage employees to conduct training and learning of related knowledge

BOE Display insists on promoting sustainable development strategy and continues to promote environmental protection actions in all aspects of daily operation. In order to enhance employees' low-carbon awareness, BOE Display encourages employees to conduct training and learning of related knowledge, and customizes related courses to meet the needs of low-carbon development, and records employees' learning hours.

Carry out relevant activities to cultivate employees' low-carbon literacy

To cultivate employees' low-carbon literacy more deeply, we stimulate employees' interest through diversified training forms, such as combining online and offline, holding salon activities or knowledge competitions and other related activities to deepen employees' environmental awareness, continuously create green value and jointly guard the earth's bright future.

Carbon management digitalization

At the recently held 27th Conference of the Parties (COP 27) of the United Nations Framework Convention on Climate Change, digital technologies such as automated accounting and online monitoring were constantly mentioned.

BOE Display takes digital capability improvement as an important task in its strategy to achieve carbon neutrality, and makes joint efforts in display and tool digital construction segments to promote the integration of digital technology, digital infrastructure and industry, forming a virtuous cycle of digital assistance for low-carbon development of enterprises.

Display type digital construction is flourishing

BOE Display digital exhibition hall introduces multimedia technology on the basis of traditional exhibition hall, fully integrates new display, VR/AR/XR, sensing, AI algorithm and other leading technologies with low-carbon scenes, and transforms display content from traditional static to dynamic form with unique full-scene digital experience to present to the public, highlighting the green development and technological innovation of BOE Display side by side.

Tools digital platforms are coming online one after another

BOE is actively building various energy and carbon management tools platforms to drive the low-carbon transformation of enterprises through digital, networked and intelligent advanced capabilities and improve the sustainable operation and intelligence of enterprises.

Case | The industry's first green smart manufacturing experience space for the public

On June 5, 2023, World Environment Day, BOE Display officially announced that it has successfully built the industry's first Green Smart Manufacturing Experience Space in Yizhuang, Beijing. Beijing Gen 8.5 TFT-LCD production line uses AR technology to vividly demonstrate the recycling of resources under the concept of green production and operation of BOE Display, realizing a green closed loop, providing users with greener and low-carbon products, and leading the industry on the road to sustainable development.

Future actions: Increase digital capability to help enterprises achieve "Dual Carbon" goal

Develop and improve the tool platform

BOE Display will continue to develop platform functions and expand application scenarios to meet the increasing demand for energy and carbon management, and help enterprises achieve efficient low-carbon development.

Promote digital upgrade of the whole value chain

BOE Display will rely on its technological advantages to empower its value chain partners and jointly grasp the new opportunities brought by low-carbon digital development.

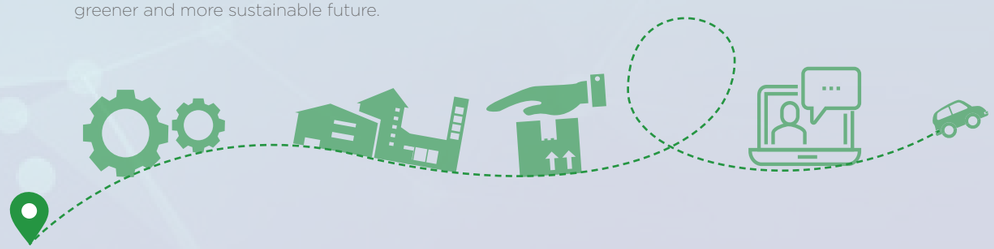
Forward Looking Statement

Climate change has become a common challenge for all mankind. Under the leadership of the 1.5 °C target of Paris Agreement and the "Dual Carbon" goal of China, enterprises should take the initiative to integrate climate change into their production, operation and development strategies. At the same time, the new development model in the era of carbon neutrality and the consequent changes in the external environment have put forward new requirements for enterprises. In addition to their own low-carbon development, enterprises should work closely with their partners to build a green, low-carbon and sustainable business model.

BOE Display, as the leading enterprise of global semiconductor display industry, actively responds to the call of international society and national strategic deployment, and takes the initiative to undertake corporate social responsibility. BOE Display has made remarkable achievements in the low-carbon field through its long and unremitting efforts. However, BOE Display is now at the new starting point of green and low carbon transformation, and we know we can do more.

Guided by the goal of achieving carbon neutrality in its own operations by 2050, BOE will accelerate technological innovation and product upgrading from the four major sectors of green management, green factory, green supply chain and green products, and provide customers and consumers with industry-leading products of "low carbon, harmless and low power consumption" through a high level of low-carbon manufacturing capabilities. At the same time, BOE Display will further strengthen close cooperation with the government, academia and industry partners to jointly promote the semiconductor display industry to increase research and development and application in the field of recyclable materials, low-carbon production processes, negative carbon and other technologies, and share experience and resources; meanwhile, actively participate in and promote the formulation of low-carbon standards in relevant industries, and further promote the standardization and standardization of the low-carbon development of the semiconductor display industry.

The journey ahead is long and difficult, but opportunities and challenges exist. BOE Display has the determination, strategy and ability to deal with the challenges brought by climate change, while grasping the new opportunities brought by the convergence of Industry 4.0 and carbon neutral changes, and continuously exploring new low carbon development paths to make the future path of the company wider, farther and more sustainable, working together with partners to create a cleaner, greener and more sustainable future.



Appendix

About the Report

This report is the first low carbon development report released by BOE Display. The report announces the own operational carbon neutrality target for 2050 of BOE Display and elaborates on the low carbon development strategy of BOE Display.

Key Concepts

The concept of "Carbon neutrality" in this report is consistent with the PAS 2060 Carbon Neutrality Statement Specification, refers to: Condition in which during a specified period there has been no net increase in the global emission of greenhouse gases to the atmosphere as a result of the greenhouse gas emissions associated with the subject during the same period.

Reference materials

[1] IPCC, Sixth Assessment Report

[2] COP 27, https://unfccc.int/cop27

[3] SBTi , https://sciencebasedtargets.org

[4] RE 100, https://www.there100.org

[5] Ministry of Ecology and Environment< China Greenhouse Gas Emission Coefficient Library for Product Life Cycle (2022)>

[6] BOE Corporate Social Responsibility Report 2021

[7] BOE Sustainability Report 2022

Statement

This report contains forward-looking statements, such as the carbon neutrality objectives of BOE Display and action plan, which are subject to uncertainty and a number of factors could cause actual results to differ from those stated in the report. In the future, if any information is adjusted, the latest release version shall prevail.

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