Low-Carbon Action White Paper

vivo | SUSTAINABILITY

vivo Low-Carbon Action White Paper

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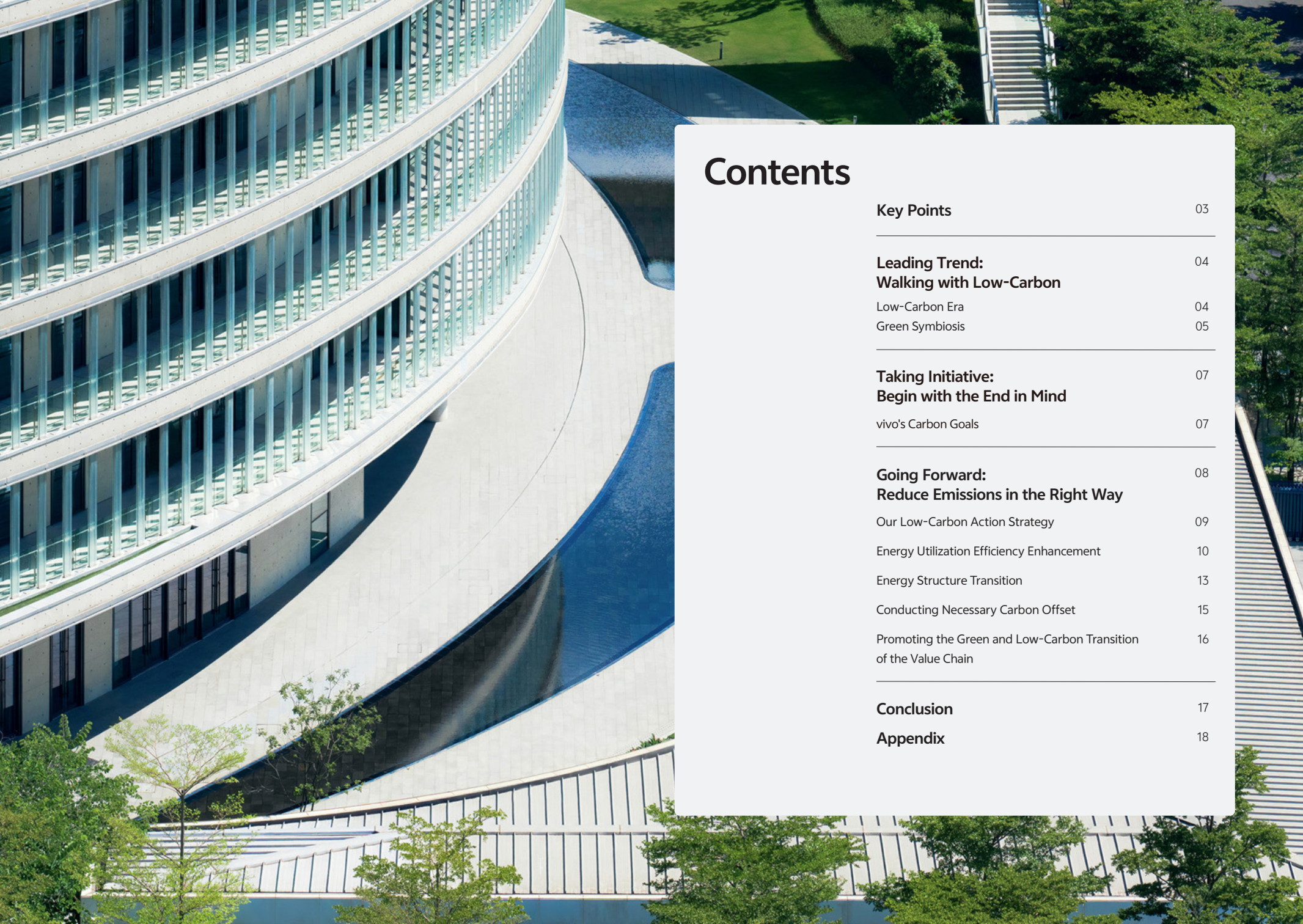


Contents

Key Points

As we enter a low-carbon era, vivo is taking decisive steps toward sustainability by releasing its first vivo *Low-Carbon Action White Paper.* This paper focuses on key areas such as carbon governance, carbon inventory, carbon goals, and carbon emission reduction. It highlights vivo's role as a responsible pioneer in addressing the challenges of climate change.

Carbon Governance:

We integrate the concept of climate change and carbon governance into our Corporate Social Responsibility (CSR) governance system. To oversee this effort, we have established a CSR committee under the Company's Management Committee, chaired by our Senior Vice President.
This committee brings together multiple departments to ensure that carbon emission management is fully integrated into all aspects of our business operations.

Carbon Inventory:

In 2021, we completed our first carbon inventory, covering our operations in China. The total emissions recorded amounted to 145,745 tCO_2e. Of these, Scope 1 and Scope 2 emissions contributed 8% and 92% respectively.

Carbon Goals:

Achieve a 50% reduction in carbon emissions in our operations by 2035 compared to 2021 levels.
Achieve carbon neutrality in our operations by 2050.

Carbon Emission Reduction:

Our strategy for reducing carbon emissions prioritizes direct emission reductions over carbon removal and removal over offsetting. We are committed to driving a green transformation across our value chain, with clear emission reduction pathways and actionable plans.
We continuously refine our approach by learning from past initiatives and adopting new technologies to enhance our carbon neutrality strategies.

Leading Trend: Walking with Low-Carbon

Low-Carbon Era

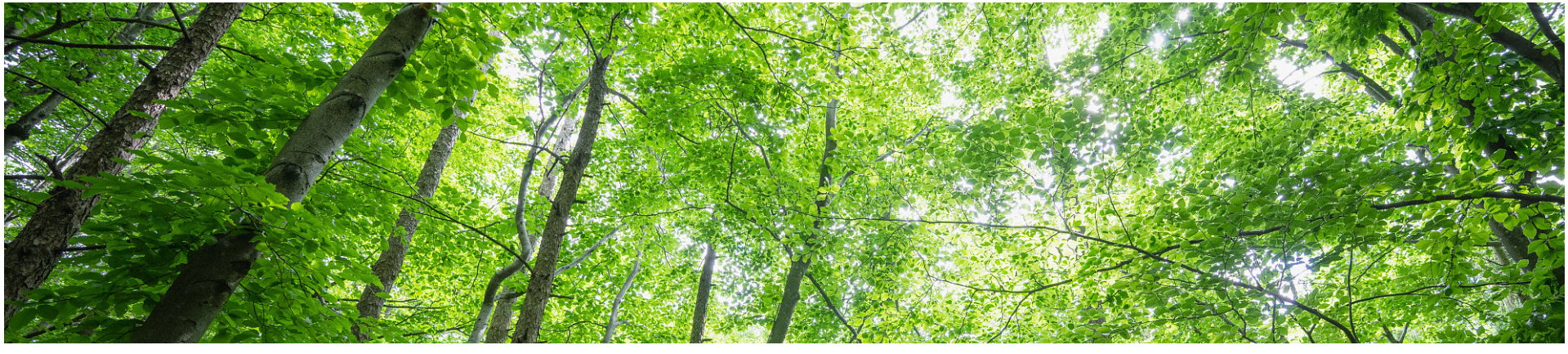
Since the Industrial Revolution, the frequency and severity of extreme weather events driven by global climate anomalies have increased dramatically. Heatwaves, droughts, and erratic rainfall patterns are now common across many countries, leading to significant economic and social impacts. The environment and biodiversity have suffered extensive damage, posing serious threats to the health and survival of humanity. Climate change has become a long-term global challenge.

According to the *Paris Agreement,* to achieve the target of keeping a global temperature rise below 2°C, global carbon neutrality must be reached around 2065 to 2070. In response, over 130 countries and regions have proposed goals for net-zero emissions or carbon neutrality. China, focusing on its "30·60" goals for carbon peaking and carbon neutrality, has gradually established a "1+N" dual-carbon policy framework. Various provinces, cities, and industries are developing carbon reduction pathways tailored to their unique resources and conditions.

To coordinate and develop the green and low-carbon development of the ICT industry, China has introduced industry policies such as the *14th Five-Year Plan for the Development of the Information and Communication Industry, the Action Plan for Green and Low-Carbon Development of the Information and Communication Industry (2022-2025),* and *2023 Guidelines for the Construction of a Green and Low-Carbon Standard System in the Telecommunications Industry.* As the world enters a new phase of technological revolution and industrial transformation, emerging technologies like big data, artificial intelligence, and 5G are increasingly integrated with green and low-carbon initiatives. Advances in energy efficiency, energy structure transition, and carbon offset and removal technologies are driving the shift from high-carbon to low-carbon industrial structures and development models, helping enterprises adapt to the challenges of global climate change. The industry of technology, represented by ICT, will become an important player in helping achieve carbon peaking and carbon neutrality.

> "In the next ten years, the primary global risk is not armed conflict, not societal polarization, but extreme weather events."
>
> ——World Economic Forum's Global Risks Report

In the face of global climate change and environmental challenges, low-carbon development and green symbiosis have become the general trend. As a technology company committed to social responsibility, vivo has always believed that human destinies are connected and that protecting our planet is our undeniable duty. We remain dedicated to our mission and will continue to advance, contributing our expertise and efforts to mitigate global climate change and support China in achieving its "dual carbon" goals as early as possible.



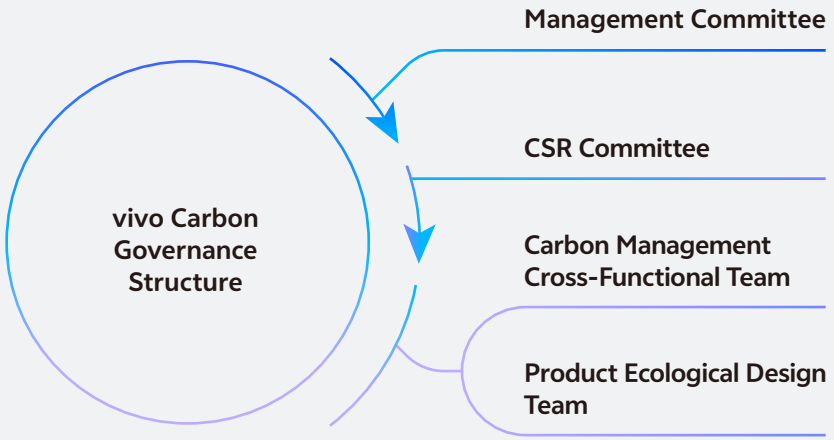
Green Symbiosis

As a global technology leader, vivo has initially established a top-level governance structure to address climate change, continuously refining it to ensure that our management is fully engaged in carbon emission strategies. This approach allows for the effective implementation of carbon management initiatives across all business departments. We are committed to embedding the concept of "Green Symbiosis" into every stage of our product life cycle management and business operations. Through advanced management practices and innovative technologies, we are driving carbon reduction efforts, exploring clean energy solutions and green development opportunities, and supporting the green and low-carbon transformation of our value chain.

Since 2021, vivo began conducting the carbon inventory to provide the data necessary for more precise and efficient energy conservation and emission reduction planning. This process also guides us in setting scientifically based carbon reduction targets and pathways, empowering us to meet our carbon neutrality objectives.

Carbon Governance Structure

vivo has incorporated carbon emission management into its corporate social responsibility (CSR) governance system and various business segments. A CSR Committee, chaired by the Senior Vice President and comprising senior managers from multiple departments, has been established under the Company's Management Committee. To effectively address key issues in carbon management, the CSR Committee has established a Carbon Management Cross-Functional Team and a Product Ecological Design Team.



The highest decision organization

Coordinate the Company's carbon emission management work, ensuring that the principles and action plans for carbon emission management align with the Company's development direction.

Formulate carbon goal planning, medium and long-term development plans, and strategic directions, as well as develop and implement annual target plans based on internal and external insights.

Implement green design for products, increase the proportion of sustainable raw materials used, and promote the replacement of degradable packaging materials to reduce carbon emissions throughout the product's life cycle.

Carbon Management Cross-Functional Team includes business leaders from over a dozen departments involved in various fields, such as System and Process IT, Administrative Affairs, Production, Logistics and Storage Center, PMC, Quality, various product departments, various development departments, Hardware Testing, and Customer Service. Each representative is assigned specific responsibilities related to carbon management.

Current Carbon Emissions

In 2021, according to ISO 14064-1:2018, vivo conducted a carbon emission inventory using the operational control approach for four industrial parks and six office buildings located in eight cities across China, namely Dongguan, Chongqing, Shanghai, Beijing, Hangzhou, Nanjing, Shenzhen, and Xi'an.

- **Overall Status**

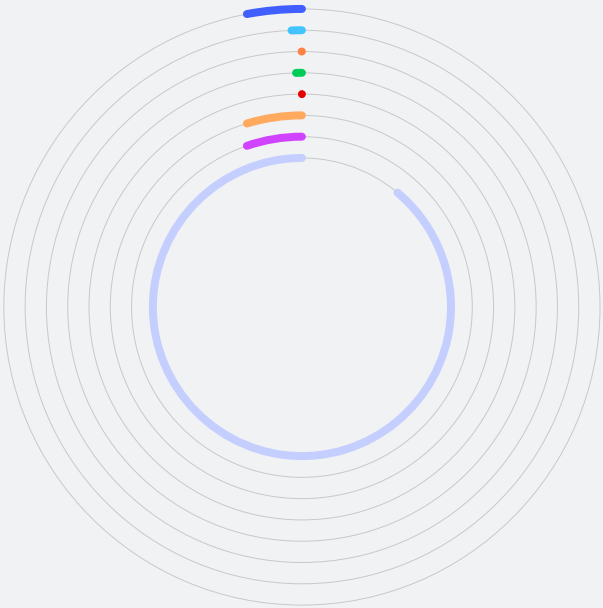
In 2021, the total carbon emissions within the vivo's operational scope amounted to 145,745 tCO_2e. Scope 1 emissions were 11,506 tCO_2e, accounting for approximately 8%, which included fossil fuel emissions and fugitive emissions. Scope 2 emissions were 134,239 tCO_2e, accounting for about 92%.

- **Emission Status by Source**

vivo's Scope 1 emissions total 11,506 tCO_2e, with emission sources divided into fossil fuel emissions (natural gas, liquefied petroleum gas, gasoline, and diesel) and fugitive emissions (methane, rust removers, fire extinguishers, and refrigerants). vivo's Scope 2 emissions total 134,239 tCO_2e, primarily originating from electricity used in production, office operations, residential living, and cooling and heating systems.

- **Value Chain GHG Inventory**

In 2021, vivo conducted a GHG inventory to assess emissions from various sources within its value chain. This included emissions from auxiliary material production, infrastructure construction, and power production facilities. Additionally, a preliminary assessment was conducted to evaluate emissions related to employee's business travel, finished goods transportation, conveyance, and sewage treatment. These efforts are part of vivo's groundwork for developing a comprehensive Scope 3 emissions inventory in the future.



- Natural gas: 2.22%
- Diesel: 0.34%
- LPG: 0.02%
- Gasoline: 0.27%
- Fugitive emissions of rust removers: 0.0000001%
- Fugitive emissions of fire extinguishers: 2.13%
- Fugitive emissions of refrigerants: 2.92%
- Purchased electricity: 92.11%

Figure 1 Proportion of Carbon Emissions by Source for vivo in 2021

Taking Initiative: Begin with the End in Mind

vivo's Carbon Goals

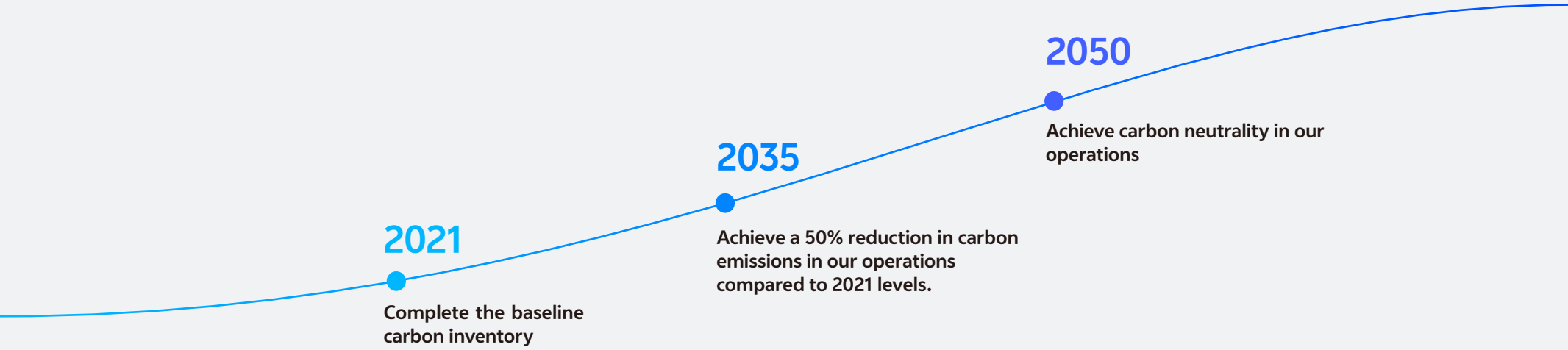
In alignment with the *Paris Agreement's* goal of limiting global temperature rise to below 2°C and China's "dual carbon" goals, vivo released its low-carbon development goals[1] in 2024 and detailed the roadmap toward achieving carbon peaking and carbon neutrality.

- Achieve a **50%** reduction in carbon emissions in our operations by **2035** compared to **2021** levels.
- Achieve **carbon neutrality** in our operations by **2050.**

vivo has also set specific target to integrate these carbon goals into its management of clean energy usage and production energy consumption:

- Strive to reduce the electricity consumption in production by at least 40% by **2025** compared to the 2021 level.

vivo will conduct long-term tracking of progress toward its targets, and continue to increase the proportion of clean energy in its power consumption. This will be achieved by expanding photovoltaic deployment and purchasing green electricity, while also promoting energy-efficient technological upgrades across production lines. In the future, we will gradually expand the coverage of low-carbon actions, setting key targets related to data centers, packaging materials, and product energy efficiency to fully support the achievement of its carbon goals.



[1]The goals and targets are based on the Company's current operation status and will be reviewed and adjusted in due course.

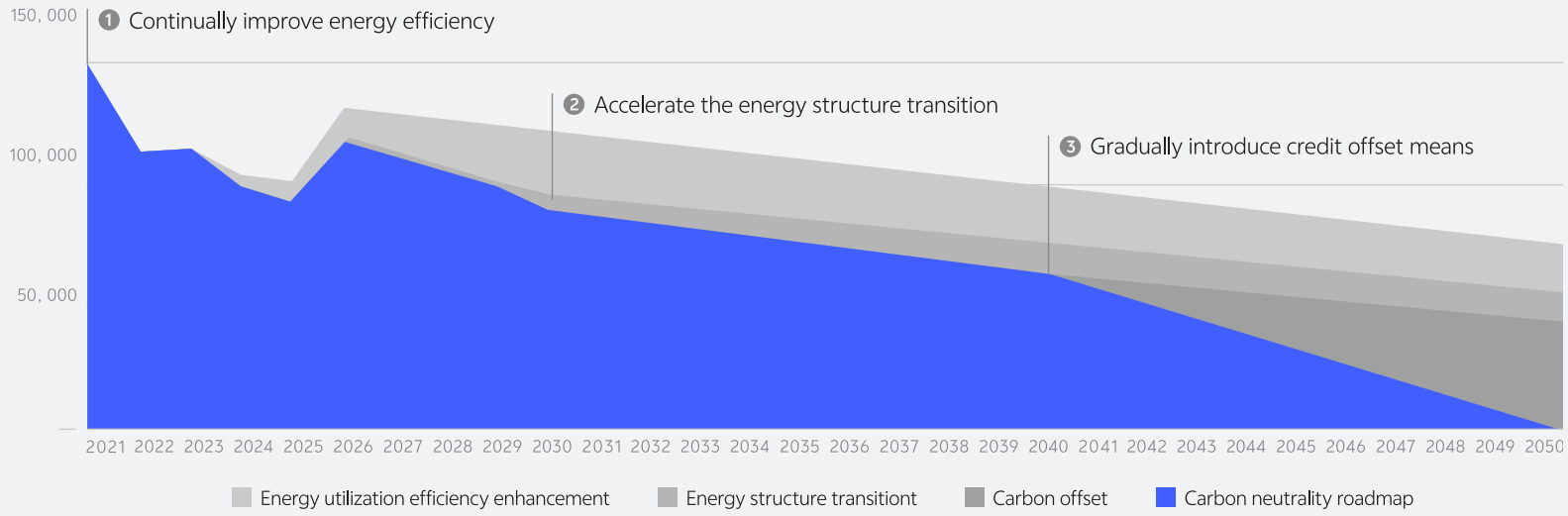
Going Forward: Reduce Emissions in the Right Way

vivo strictly follows the sustainable development strategy of "Green Symbiosis" and continues to drive its low-carbon transformation through data-driven initiatives.

Since 2021, we initiated a carbon inventory to identify the primary sources of our carbon emissions, assess opportunities for emission reductions, and establish scientifically grounded and achievable reduction targets. Our approach prioritizes direct emission reductions over carbon removal, and removal over offsetting, ensuring that we continuously support the green transformation of our value chain. We have developed emission reduction pathways and specific action plans tailored to our operations and the value chain. Additionally, we remain focused on optimizing our carbon neutrality strategies by learning from past experiences and leveraging advancements in technology.

To achieve carbon neutrality in our operations, we prioritize energy conservation, efficiency improvements, and the optimization of our energy structure to reduce absolute carbon emissions. Specifically, we have established an internal intelligent energy management platform to support these efforts, setting customized energy-saving targets and implementing energy-saving technological transformations across various scenarios, such as production, office work, and daily activities, continuously improving energy efficiency. Additionally, we are actively promoting the use of photovoltaic power generation technology, accelerating the replacement of traditional equipment with new energy facilities, and exploring opportunities in the renewable electricity trading market to increase the proportion of clean energy in our operations. For the emissions that are difficult to reduce through the above measures, we will conduct carbon offsets by investing in promising renewable energy projects, utilizing ecological carbon sinks, and exploring negative carbon technologies. We will also participate in carbon market trading, further supporting our long-term goal of achieving carbon neutrality in our operations.

On this basis, vivo integrates the green management concept into every aspect of product life cycle management. We actively seek emission reduction opportunities at key phases such as product design, packaging, material selection, logistics, and electronic waste recycling. By identifying and implementing viable solutions in these areas, we aim to significantly reduce carbon emissions and drive the green and low-carbon transformation of our value chain.



vivo's Operational Carbon Neutrality Roadmap (tCO_2e)

Our Low-Carbon Action Strategy

Energy conservation and efficiency enhancement:

We optimize energy use in various scenarios such as production, office work, and daily activities. We set customized energy consumption targets for major energy-consuming units, supported by regular data analysis and monitoring. We implement energy-saving technical improvement projects, optimize scheduling for production, commuting, and transportation, and explore diversified energy utilization methods.

Clean energy:

We are committed to expanding the use of clean energy by planning, constructing, and operating photovoltaic power generation projects to increase our reliance on renewable electricity. We are also transitioning to new energy vehicles (NEVs) and promoting the integration of vehicle electrification with hydrogen energy applications. Additionally, we are expanding the use of environmentally friendly refrigerants and fire extinguishers to further reduce fugitive carbon emissions.

Low-carbon design:

By utilizing a professional database to manage carbon footprints throughout the product life cycle, we have developed a circular manufacturing system that incorporates various ecological design principles. This includes efforts to reduce product weight, minimize plastic usage, and ensure widespread adoption of smart screen-off and energy-saving modes. These initiatives enable us to effectively manage carbon emissions related to product design, production technologies, and processes.

Technological innovation:

We are actively monitoring advancements in carbon capture, utilization, and storage (CCUS) technologies, and are exploring opportunities to implement these technologies in applicable scenarios.

Introduction of offsets:

We will participate in green electricity trading in both international and domestic markets in the future We will carefully invest in renewable energy projects and companies, with a focus on developing high-quality carbon sink projects. Additionally, we will evaluate the feasibility of various carbon offset mechanisms such as CDM, CCER, and carbon inclusion certifications.

Direct Emission Reduction → **Carbon Removal** → **Carbon Offset**

Energy Utilization Efficiency Enhancement

vivo has taken concrete steps to enhance energy efficiency and reduce emissions through effective management and technological innovation. We are committed to optimizing electricity usage in multiple scenarios such as production, office, and daily activities, by integrating energy-saving practices into our everyday operations and advancing specialized technological improvements. Our internal energy management platform enables the intelligent entry and analysis of energy consumption data. Using these insights, we set customized energy consumption targets for key energy-intensive units and implement targeted energy-saving technological modifications. This approach allows us to establish a closed-loop management system, continuously improving the quality of our internal energy management and ensuring progress toward our carbon neutrality goal.

Key Action 1: Enhancing Analysis for Management Improvement

vivo's electricity consumption in production primarily stems from high-energy-consuming areas such as the SMT workshop, storage, assembly workshop, and power center. For this reason, our production department implements comprehensive and stringent energy consumption management. Each year, we set energy consumption targets based on the previous year's operational data, focusing on key metrics like energy consumption per 10,000 SMT placement points, and energy consumption per unit output of assembly and complete device. The administrative affairs department is responsible for aggregating the company's overall energy consumption and output, covering electricity use at all production stages, and setting targets after determining company-wide per-device energy consumption data.

We have established annual energy-saving target of reducing energy consumption every year. This target is broken down into specific areas, such as equipment electricity use, air conditioning return air systems, and lighting. We also conduct monthly analyses to ensure these targets are met, with focused monitoring and corrective actions taken in areas that fall short of standards. Each department sets monthly targets, and through team collaboration and incentive mechanisms, we collectively drive our energy-saving efforts.

Based on our current energy consumption management practices, we will ensure regular analysis and monitoring of energy data, strictly controlling unnecessary electricity usage, and managing the operation and standby times of energy-intensive equipment, as well as zone-specific controls. We will adjust temperature control strategies as needed in areas such as refrigeration rooms and elevator rooms. In the future, we will link energy consumption performance and the implementation of energy-saving measures to the performance evaluations of management personnel, enforce assessment and accountability mechanisms, and designate specific individuals for energy management by department or area. These efforts will help us identify opportunities to further enhance energy efficiency.

Key Action 2: Optimizing Schedules for Technology Improvement

We continue to carry out energy-saving technical upgrade projects, covering various categories such as air conditioning systems, workshop equipment, cooling water pumps, and electricity for lighting. These efforts are supplemented by optimizing production scheduling and vehicle dispatching. We continuously explore emission reduction potential across various scenarios, including production, office spaces, canteens, and dormitories.

- **Air Conditioning System Optimization**

In accordance with national policy requirements, we are actively replacing outdated equipment and optimizing key power-consuming systems within our industrial park. This includes implementing specialized energy-saving measures for air conditioning systems, such as optimizing the frequency of cabinet fans, adjusting the operating modes of chilled water pumps, and reducing the operating frequency of water pumps. We have also adjusted the operating hours of air conditioning systems, reducing their usage from 24 hours a day to only during working hours, and promptly turning them off when not in use, resulting in significant energy savings.

As our data center space expands due to increased production demands, we are also exploring intelligent energy consumption optimization for cooling systems in data centers. We are assessing the feasibility of direct ventilation natural cooling technologies, including chilled water natural cooling, fluorine pump intelligent dual-cycle natural cooling, direct fresh air natural cooling, indirect evaporative natural cooling, and fully variable frequency natural air cooling. These technologies leverage outdoor natural low-temperature cooling sources to reduce the energy consumption of air conditioning systems in data centers.

12%

Percentage of year-on-year reduction in energy consumption per-device actually achieved by vivo in 2023

- **Overall Workshop Optimization**

We are undertaking comprehensive optimization of certain assembly workshop equipment. This includes implementing automatic gas shutoff controls on specific production equipment, optimizing gas pressure settings and standards, enhancing internal lighting control methods, and adjusting the usage duration of display screens on production lines.

In the assembly process, we effectively control gas consumption at the terminal by modifying nozzles and adjusting the equipment's pressure range.

In the reflow process, we optimize energy use by adjusting startup requirements according to the work schedule and setting the reflow oven to standby mode during non-working hours, significantly reducing energy waste.

- **Production Scheduling Optimization**

Every year, we develop an annual production plan, integrating the concept of energy conservation at this stage. By planning production schedules in advance and efficiently allocating temporary tasks, we enhance energy utilization efficiency and minimize the need for individual operation of production lines. Additionally, we have independently developed an automated production scheduling system, which currently covers part of the production process and will continue to guide further optimizations in the future.

- **Employee Commuting Route Optimization**

We have optimized the layout of employee accommodations and adjusted commuting routes based on actual occupancy rates. This includes streamlining stops and effectively shortening the commuting distance between the factory and dormitories, as well as reducing the use of rented land by integrating dormitory layouts according to occupancy rates. Meanwhile, we continue to monitor the occupancy rates of commuting vehicles, the load capacity of transport vehicles, travel times, and energy consumption per task. Based on the occupancy rates, we have adjusted commuting routes in real time to improve resource utilization efficiency, significantly reducing the power consumption of electric commuting buses.

We will also divert some of our vehicle usage by opting to use electric vehicles from third-party platforms, thereby reducing electricity and gasoline/diesel consumption.

In the future, we plan to introduce shared bicycles, shared electric scooters, and electric vehicle charging stations in the park as needed. These additions will provide greater convenience for employees who choose green travel options and support green commuting for those living in rented dormitories outside the park, further reducing the reliance on commuter buses.

- **Optimization of Cargo Transportation Routes**

We are assessing the infrastructure maturity of long-distance transportation routes, taking into account factors such as the availability of charging stations, the presence of supercharging stations for heavy trucks, single-trip mileage, and load capacity. This assessment will help determine the feasibility of using electric heavy-duty trucks for these routes. We are also considering the implementation of direct shipping routes from warehouses to stores, which would reduce intermediate transfer points and make electric truck travel more efficient.

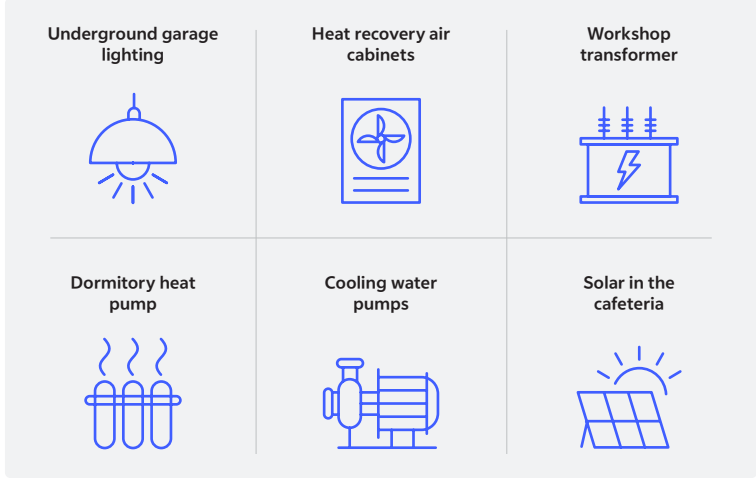
For long-distance transportation and medium-to-long-distance transshipment tasks, we will collaborate with third-party logistics companies to exchange expertise on energy-efficient logistics processes and explore ways to reduce emissions in long-haul transportation. This includes investigating opportunities for multi-modal transport and business partnerships that could enhance sustainability. We will work to increase the use of low-carbon energy sources on select routes, encourage carriers to adopt NEVs, and assist them in researching replacement schemes for vehicles.

In the future, we will explore investments in intelligent heavy trucks and clean energy transportation solutions within the logistics sector. Our goal is to develop a new model for energy-efficient and intelligent transportation, focusing on sustainable, smart, and new energy-powered solutions for mainline logistics.

Key Action 3: Exploring Innovation for Comprehensive Improvement

From the factory to the cafeteria, from the office to the dormitory, we have launched a variety of comprehensive energy-saving improvement projects. These include optimizing underground garage lighting, enhancing the operation of heat recovery air cabinets, improving workshop transformer efficiency, fine-tuning dormitory heat pump operations, implementing frequency conversion for cooling water pumps, and utilizing solar thermal storage in the cafeteria. Additionally, based on the service life and usage requirements of our equipment, we are systematically replacing outdated devices with new energy-efficient ones or making energy-saving modifications. These efforts collectively aim to significantly enhance the company's overall energy efficiency.

Key energy-using equipment in the factory



While implementing existing energy-saving modification projects, we are exploring the feasibility of other measures. These include installing light-sensitive fixtures, photovoltaic sensor trash bins, wind and solar-powered street lights, BIPV natural lighting windows, and solar hot water systems. In the production and manufacturing process, we focus on evaluating further opportunities for energy efficiency, such as optimizing the speed reduction of fan filter units (FFUs) in clean rooms, recovering waste heat through cooling systems and heat exchangers, converting the frequency of chilled water pumps and water towers, expanding variable frequency applications, and incorporating waste heat recovery technologies.

In the future, we are considering establishing the factory as the central hub for energy load management and developing our own gas power generation facilities. By utilizing high-efficiency gas turbines for electricity production, we aim to enhance energy utilization efficiency and reduce our reliance on external power grids. Additionally, the waste heat generated during the power generation process can be effectively recovered to meet the hot water needs of areas such as the factory canteen, replacing the existing heat pumps. This approach will allow for a more diversified and efficient use of energy resources.

31

Total number of energy-saving renovation projects implemented at vivo's global headquarters in 2023

720 MWh

Total average annual power savings achieved at vivo's global headquarters in 2023 nearly

4,000 tCO_2e

Total average annual carbon emission reduction at vivo's global headquarters in 2023 exceeding

Energy Structure Transition

The widespread use of traditional energy sources, especially fossil fuels, not only releases significant amounts of GHGs, exacerbating global climate change, but also generates various pollutants that threaten both the environment and human health. Therefore, promoting the clean use of end-use energy by transitioning to natural gas, electricity, and renewable energy, and accelerating the transition of our energy structure, are critical components of vivo's sustainable emission reduction strategy. This approach not only mitigates environmental degradation and reduces operational costs but also strengthens vivo's competitiveness and market position in the green economy, driving us steadily toward our carbon neutrality goal and delivering long-term economic and environmental benefits. Currently, vivo has installed photovoltaic equipment in several of its facilities, promoted the use of sustainable electricity, and initiated the electrification of equipment. In the future, the Company will continue to explore opportunities for transitioning its energy structure, increasing the proportion of renewable energy in its operations, and providing robust support for achieving its carbon neutrality objectives.

Key Action 1: Electricity cleaning

vivo has commissioned a professional third party to plan, construct, and maintain the photovoltaic power generation project within its industrial park. This collaboration allows vivo to benefit fully from the environmental advantages of the electricity generated. The vivo Dongguan Park, with its abundant sunlight, is an ideal location for large-scale distributed rooftop photovoltaic installations and has been chosen as a key site for these projects. In 2022, vivo completed the first phase of its distributed photovoltaic power generation project at its global headquarters, with an installed capacity of 3.67 MW, which has since been operational. By 2023, this project had generated approximately 4,470 MWh of green electricity for the company. Building on this success, vivo completed the second phase of the project in 2023, bringing the total installed capacity to 5.189 MW across both phases. Together, these installations are expected to generate over 6,320 MWh annually, reducing emissions by an estimated 3,604.3 tCO2e every year.

By the end of 2023, our photovoltaic power generation project had become the largest in the region. Currently, vivo is conducting comprehensive assessments of other operational areas and facilities under construction to evaluate the feasibility of implementing photovoltaic power systems across all operational locations.

In the future, vivo plans to further expand the installation of distributed photovoltaic facilities by promoting rooftop solar projects at all suitable business sites. We are committed to broadening the application of clean energy, aiming to utilize the electricity generated by these photovoltaic systems across various areas including offices, production lines, accommodations, and catering facilities. vivo we will explore the integration of innovative technologies such as photovoltaic sensor waste bins, wind and solar hybrid street lights, and BIPV natural lighting systems to maximize the use of solar energy. These initiatives underscore vivo's dedication to advancing clean and sustainable electricity usage throughout our operations.

As of December 31, 2023, the first and second phases of the distributed photovoltaic power generation project at vivo's global headquarters had achieved:

5.189 MW
A total installed capacity of

6,320 MWh
An estimated annual electricity generation of over

3,604.3 tCO_2e
Equivalent to reducing carbon emissions annually

Key Action 2: Vehicle Electrification

vivo has taken the lead in transitioning to new energy vehicles within Dongguan Park, replacing its shuttle buses and forklifts with electric alternatives. By the end of 2023, 62.5% of all shuttle buses had been replaced with new energy buses, and 100% of forklifts had been fully electrified, achieving complete electrification for intra-park transportation and workshop delivery tasks. We continue to evaluate the condition, usage frequency, and mileage of our existing fuel vehicles, and will develop an annual electrification replacement plan. Our goal is to achieve 100% replacement of shuttle buses with new energy vehicles by 2030 and full electrification of our business vehicle fleet by 2033.

Looking ahead, vivo will continue to explore the potential of hydrogen energy applications, focusing on the development of hydrogen energy policies, infrastructure support, and technological advancements. We will initiate pilot projects for the long-distance transportation of hydrogen-powered trucks, monitor the progress of hydrogen transportation service solutions, and increase the number of hydrogen trucks as needed. Additionally, we will expand usage scenarios and explore opportunities for collaboration with third parties or suppliers.

With significant progress made in the adoption of new energy vehicles, we are confident that the ongoing transition of our vehicle energy structures will further enhance our environmental performance and help us achieve our green and low-carbon development goals. We are committed to reducing carbon emissions and leading the industry toward more sustainable transportation practices. vivo will continue to advance the integration of vehicle electrification and hydrogen energy applications, focusing on optimizing vehicle energy efficiency. We will strengthen partnerships with various stakeholders to build a clean, efficient, and circular logistics system. Through these efforts, vivo aims to set a benchmark in the industry for energy conservation, emission reduction, and green travel, ultimately contributing to the goal of carbon neutrality.

Key Action 3: Fugitive Emission Reduction

Fugitive Emission of refrigerants and fire extinguishers, due to their high global warming potential, can significantly contribute to carbon emissions when released into the atmosphere. vivo is working to identify and prioritize the phase-out of outdated refrigerants and fire extinguishers. This includes gradually replacing second-generation refrigerants with more environmentally friendly third-generation alternatives. Recognizing the high carbon emissions associated with hexafluoropropane fire extinguishers, we are exploring their replacement with perfluorohexanone fire extinguishers. In the future, we will closely monitor advancements in eco-friendly refrigerants and fire suppression technologies. Our goal is to accelerate the transition to fourth-generation refrigerants and natural options like liquid CO2, fully adopt perfluorohexanone fire extinguishers, and implement IG541 fire suppression systems, all of which will help us reduce fugitive carbon emissions.

As of December 31, 2023, vivo had achieved:

100%
Electrification of forklifts;

62.5%
Electrification of shuttle buses.

Conducting Necessary Carbon Offset

vivo is committed to prioritizing direct emission reductions over removal, and removal over offsetting. We focus on achieving the majority of our carbon emission reductions through improved energy efficiency and the transition of our energy structure. For the residual emissions that remain, we plan to achieve carbon neutrality by investing in promising renewable energy projects and pursuing high-quality carbon offsetting and removal initiatives.

Key Action 1: Participating in Renewable Energy Market Transactions and Investments

vivo will fully explore and participate in green electricity transactions in both international and domestic markets. Our efforts include subscribing to China Green Certificate (GEC) transactions, engaging in internationally recognized i-REC transactions, participating in medium to long-term renewable electricity deals, and signing green electricity procurement agreements (such as PPAs), to increase the proportion of clean energy in our operations.

On this basis, vivo will continue to assess our future renewable energy needs, carefully selecting suitable renewable energy projects or corporate investment opportunities to support our goals. In addition, we will closely monitor advancements in renewable microgrids, fuel cells, and energy storage technologies, with plans to invest in relevant projects when appropriate or consider constructing related equipment in future new projects for vivo's electricity use, building a "multi-energy complementary" system.

Key Action 2: Focusing on Carbon Sink Development Projects

vivo will participate in China's carbon trading market, purchasing high-quality carbon sink rights trading projects, building high-quality emission reduction mechanisms, and helping to achieve carbon neutrality in its operations. In addition, we will explore partnerships with third parties to develop ecological carbon sinks, enhancing our carbon asset management capabilities. Through these initiatives, we aim not only to reduce emissions but also to capitalize on opportunities for carbon asset appreciation in the evolving carbon trading market.

Key Action 3: Focusing on Carbon Removal Technologies

Carbon removal can be achieved through both nature-based and technology-based solutions, making negative carbon technologies a critical area of focus. vivo will closely follow the development and application prospects of CCUS technology and will seek to adopt these technologies when the right opportunities arise.

Key Action 4: Focusing on Carbon Offset Opportunities

vivo will focus on international certifications such as CDM, as well as domestic certifications including China Certified Emission Reduction (CCER) and carbon inclusion projects. We will continuously assess their applicability and feasibility, maintain connections with qualified enterprises, and actively seek opportunities for collaboration.

Promoting the Green and Low-Carbon Transition of the Value Chain

vivo effectively manages carbon emissions by conducting life cycle assessments (LCA) that encompass product design, production technology, and processes. We advance the assessment of the carbon footprint throughout the product's entire life cycle, promoting a sound digital, sustainable, and industrial cycle. This initiative pushes for the low-carbon transition of the value chain and aims for zero carbon emissions.

Key Action: Assessing the Carbon Footprint of Products and Promoting Emission Reduction Efforts Across the Value Chain

By leveraging professional databases, we collect, model, and record the carbon emissions of our products and accessories, enabling us to manage the carbon footprint throughout the product life cycle. In the future, we will extend carbon footprint assessments to our core products and gradually expand this to encompass all products. Based on these assessments, we will continue to drive green and low-carbon transition efforts across the entire value chain, focusing on reducing emissions from raw materials, end-users, and partners.

Raw Material Emission Reduction

Ecological Design

- Change the plastic structure with leather lamination to a composite fiberglass board structure, reducing the thickness and weight of the product.
- Continue to use silicone leather, which comes from natural sand rather than petroleum, and does not involve organic solvents in the manufacturing process.
- Develop low-density bio-based polyamide (PA) and bio-based polycarbonate (PC) materials to replace plastic parts and achieve component weight reduction.
- Gradually replace plastic lamination with soy ink technology to reduce the use of plastics.

Circular Manufacturing System

- Implement a plan to convert available waste into production resources, and reduce material consumption, such as exploring the recycling and reuse of aluminum alloy, and adopting die-cast aluminum alloy insert design schemes.

Data Management

- Estimate the carbon emissions of raw materials through a third-party professional database, collect carbon emission information from suppliers, model components that contribute a higher proportion of carbon emissions, and assist in supplier management.

User-end Emission Reduction

Usage Scenario Design

- Smart screen-off and switch to power saving mode.
- Guide users to choose energy-saving lifestyles, such as green travel and online payment.

Product Recycling

- Continuously provide product recycling and second-hand market services while extending the product's service life.
- Actively support and promote product repair, refurbishment, material recycling, and reuse.

Emission Reduction with Partners

Low-carbon Transportation

- Multi-modal transportation reduces the proportion of air transport.·Reduce the empty running rate by optimizing the round-trip flow of routes.
- Consolidated shipping reduces the empty load rate.
- Use recyclable or biodegradable packaging materials during transportation.

Green Computing Power

- Promote the low-carbon transition of owned and leased technology centers, update computing power equipment, reduce energy consumption per unit of computing power, and adopt more advanced and energy-efficient cooling technologies to continuously reduce PUE.

Conclusion

Carbon neutrality is a commitment that benefits both present and future generations.

Throughout our journey of high-quality development, vivo has consistently respected, aligned with, and given back to nature, seamlessly integrating technology into our operations. Our efforts have led to significant achievements in reducing emissions by enhancing energy efficiency and transitioning energy structures. However, our work does not end here. Guided by our carbon goals and pathways, we are committed to embracing a sustainable future.

vivo regards addressing climate change and low-carbon development as a key component of the Company's growth. We spare no effort to achieve the "dual carbon" goals and embedding green principles and actions throughout our entire value chain. By collaborating with partners across the supply chain, we aim to create a positive impact on the entire industry and society as a whole.

A journey of a thousand miles begins with a single step. With a foundational commitment to low-carbon practices, vivo will continue to lead the trends, press ahead with determination, and make the green and low-carbon initiative the best interpretation of sustainable development.

Appendix

Terminology

- **CSR:** Corporate Social Responsibility
- **CO_2e:** Carbon Dioxide Equivalent
- **ISO 14064-1:2018:** Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- **SMT:** Surface Mount Technology
- **FFU:** Fan Filter Unit
- **GEC:** Green Electricity Certificate
- **i-REC:** International Renewable Energy Certificate
- **CCUS:** Carbon Capture, Utilization, and Storage
- **CDM:** Clean Development Mechanism
- **CCER:** China Certified Emission Reduction
- **LCA:** Life Cycle Assessment
- **PA:** Polyamide
- **PC:** Polycarbonate
- **PUE:** Power Usage Effectiveness

Disclaimer

This report outlines vivo's carbon neutrality goals and pathways, including forward-looking statements. Please note that these statements are subject to uncertainties, and various factors may cause actual outcomes to differ from those projected in this report.

Emission Factor Sources

- **Gasoline for business vehicle/ diesel for truck:** *2006 IPCC Guidelines for National Greenhouse Gas Inventories V2, GB/T2589 General rules for calculation of the comprehensive energy consumption, General guidelines of the greenhouse gas emissions accounting methodology and reporting for other industrial enterprises (trial).*
- **liquefied petroleum gas for canteens/ natural gas:** *2006 IPCC Guidelines for National Greenhouse Gas Inventories V2, GB/T2589 General rules for calculation of the comprehensive energy consumption, General guidelines of the greenhouse gas emissions accounting methodology and reporting for other industrial enterprises (trial).*
- **Fugitive CO_2, Hexafluoropropane, Heptafluoropropane from fire extinguishers:** *2006 IPCC Guidelines for National Greenhouse Gas Inventories V3*
- **Fugitive CH4 from septic tanks in factories and dormitories:** *2006 IPCC Guidelines for National Greenhouse Gas Inventories V5*
- **Fugitive R404a, R407C, R410a, R134A, R508a, R23, R32, CO2 from refrigerants:** *2006 IPCC Guidelines for National Greenhouse Gas Inventories V3*

Scope of the Report

This report covers vivo Mobile Communication Co., Ltd. and its subsidiaries, including:

- vivo Mobile Communication (Shenzhen) Co., Ltd.
- Shenzhen iQOO Communication Software Co., Ltd.
- vivo Mobile Communication (Chongqing) Co., Ltd.
- vivo Mobile Communication (Hangzhou) Co., Ltd.
- vivo Software Technology Co., Ltd.
- Xi'an vivo Software Technology Co., Ltd.
- iQOO Software Technology (Shanghai) Co., Ltd.
- Nanjing vivo Software Technology Co., Ltd.

Assurance

The carbon inventory results for the year 2021 have been verified and assured by SGS-CSTC Standards Technical Services Co., Ltd.


Greenhouse Gas Verification Statement

vivo Mobile Communication Co., Ltd.

ISO 14064-1:2018


vivo