ACHIEVING SUSTAINABILITY THROUGH GREEN AND SECURITY DEVELOPMENT

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China Telecom firmly adheres to the principles of green development and is committed to implementing the national "dual-carbon" strategic goals, actively responds to climate change by promoting low-carbon operation and empowering the society to pursue sustainable growth. Meanwhile, the Company is making great efforts to strengthen its security foundation for high-quality development, enhance its security capabilities in the digital environment, and provide customers with top-quality security products and services.

ADVOCATING AND PRACTICING GREEN AND LOW-CARBON

China Telecom is actively responding to the national "dual-carbon" strategic goals and industry requirements for green and low-carbon development, by accelerating the dual improvement of energy efficiency and management capabilities and promoting the dual transformation of energy structure and product innovation, resulting in significant breakthroughs in green and low-carbon development.

Addressing climate change

The Company closely aligns with the national "dual-carbon" goal and its own strategic objectives, vigorously promotes "elements upgrading and integrated innovation," emphasises on innovative development, and comprehensively promotes the green and low-carbon corporate transformation through the expansion and upgrade of the "1236" dual-carbon model into a more comprehensive "1248" dual-carbon action plan with eight major green initiatives and corresponding key measures.
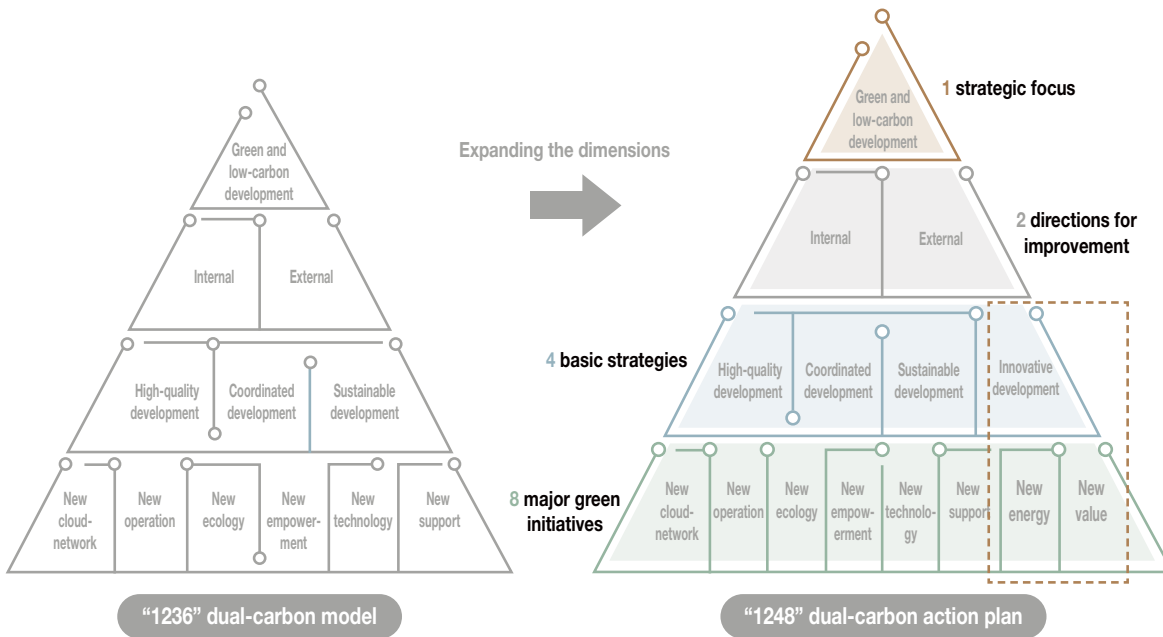
The Company has established a "carbon dioxide peaking and carbon neutrality" leadership group, led by the Chief Executive Officer, who is responsible for overseeing the group's daily activities, promoting the implementation of the Company's green and low-carbon strategy, as well as researching and making key decisions related to "carbon dioxide peaking and carbon neutrality".

The Company has formulated the *China Telecom Carbon Dioxide Peaking Action Plan* and the *China Telecom 2022 Work Requirements and Assessment Methods for Carbon Dioxide Peaking and Carbon Neutrality*, which outline the Company's management framework and departmental responsibilities for addressing climate change and propose goals, specific actions, plans and measures for China Telecom to address climate change and achieve carbon dioxide peaking and carbon neutrality.

Governance level	Accountable department	Composition and main responsibilities
Decision-making level	"Carbon Dioxide Peaking and Carbon Neutrality" leadership group	Establish a carbon neutrality management system to promote the implementation of green and low-carbon strategies, taking a leadership role in green development work, as well as studying and making decisions on important matters related to the management of "carbon dioxide peaking and carbon neutrality" initiatives.
Management level	Green Development Taskforce	Focus on green and low-carbon transformation, formulate key tasks for green development, promote the implementation of green development work, and integrate energy-saving and emissions-reduction requirements into all aspects of production and operation activities, including network planning, procurement, construction, operation, and office management.
Implementation level	The departments responsible for energy-saving and emissions-reduction and related business departments of each unit	Track climate change-related risks and opportunities in real-time, and provide recommendations to management and decision-making levels based on practical experience.

In 2022, the Company achieved significant results in energy saving and carbon reduction through various measures, such as co-building and co-sharing, renovation of old facility rooms, retirement of obsolete equipment, and AI energy saving, resulting in a reduction of over 13 million tons of greenhouse gas emissions for the year, as well as a 21.5% year-on-year decrease in comprehensive energy consumption per unit of information flow and a 20.6% year-on-year decrease in greenhouse gas emissions per unit of information flow. The Company has set a clear target for 2023 to maintain a double-digit reduction in greenhouse gas emissions per unit of information flow, and aims to reduce greenhouse gas emissions by at least 27 million tons during the 14th Five-Year period through co-building and co-sharing as well as various energy-saving measures.

The Company proactively responds to climate change by integrating climate-related risk management into its overall risk management system, enabling a closed-loop management process for risk identification, risk assessment, analysis of key risks, risk response, and risk monitoring and tracking. The Company considers multiple factors in analysing the identified risks, including the strategic and financial impact, and proposes response measures accordingly.

Climate change-related risks faced by China Telecom and its corresponding response measures

Risk	Type of risks	Risk description	Major financial impacts	Time frame	Degree of impact	Response measures
Transformation risk	Emerging regulatory risks	Since its commitment to "carbon dioxide peaking and carbon neutrality", China has been actively promoting "dual carbon" work, and more industry policies are expected to be introduced in the future. As a large-scale central enterprise and a leading company in the information and communications industry, China Telecom will face stricter regulatory requirements and policies in the future. Currently, China Telecom Beijing branch has been included in the carbon emissions trading pilot program in Beijing, and it is expected that in the future, with the maturation of the national carbon market and more industries included, China Telecom may be required to comply with relevant policies and regulations of the national carbon market. As a leading company in the industry, China Telecom may face potential assessments of its green energy consumption in the future, as the primary regulatory authorities are imposing increasingly high energy efficiency requirements on datacentres. All of these may result in additional compliance costs.	Higher operating costs	Long-term	Medium	• Regularly track and analyse relevant policies, evaluate the extent of China Telecom's compliance with emerging regulations and policies on a monthly basis, study the impact of emerging policies on China Telecom, and alert relevant risks. • Conduct a carbon inventory audit to understand the carbon footprint and evaluating any potential compliance risks. • Conduct green power research to assess the feasibility and cost of green power acquisition.
	Technology risks	In the short term, significant investment of time and resources is required for sci-tech innovation, especially in the area of green and low-carbon frontier technologies, which demands that we increase our resource investment. This situation puts a higher demand on our innovation capability and requires China Telecom to fully analyse the current application and development of green and low carbon technologies for new technology development and application.	Higher operating costs	Short-term	Medium	• Financial evaluation of various energy saving and carbon reduction technologies. • A dedicated team takes the lead in developing the overall technical system for energy saving and carbon reduction, as well as research and development of energy saving and carbon reduction technologies.
Physical risks	Acute risks	Extreme weather such as flooding may damage our infrastructure and equipment, resulting in asset write-off losses. Additionally, extreme weather would cause communication interruptions, resulting in additional operating costs such as repair fees, energy costs, and labour costs to ensure smooth communication. The emergency repairs during extreme weather and subsequent restoration efforts of infrastructure and equipment will result in a significant increase in operating expenses and place higher demands on China Telecom's ability to respond quickly.	Higher capital expenditures	Medium-term	High	• Actively strengthen the advanced warning and risk prevention and control of meteorological disasters and their secondary hazards, regularly assess the impact of extreme weather by the Cloud Network Operations Department, formulate a sound plan to tackle extreme weather, reinforce the resilience of infrastructure facilities, and improve communication security measures. • Study and establish an annual budget to address risks posed by extreme weather.
	Chronic risks	Climate change will result in more frequent extreme heat waves and longer summers in the future. As a telecom operator, China Telecom's equipment is sensitive to temperature and may be affected by high temperatures, leading to increased costs for air conditioning, cooling, and equipment maintenance in the future.	Higher capital expenditures/ operating costs	Long-term	Medium	• Regularly analyse and monitor energy consumption-related indicators and provide risk alerts.

Promoting low-carbon operation

Under the guidance of the national "Dual Carbon" goal, the Company has been actively promoting low-carbon operations by building a green cloud-network, promoting green offices, green procurement, recycling, and optimising energy structures, and taking multiple measures to increase energy efficiency and reduce carbon emissions.

Green cloud-network

The Company continues to build green and innovative datacentres. Taking into full consideration factors such as layout and site selection, PUE design, energy-saving technology applications, and green energy utilisation, the Company built the country's first "zero-carbon datacentre" in Qinghai, actively introduced green elements, utilised a combination of grid power and high-voltage DC, took advantage of natural cooling sources to deploy chilled water and indirect evaporative water cooling, as well as applied advanced technologies such as AI intelligent operation to achieve a PUE lower than 1.2. The project was recognised as a high-quality development case of big data centres by the China Association of Communication Enterprises and an excellent case of green "dual carbon" technology application in the digital industry by the China Communications Industry Association.

**[China Telecom Digital Qinghai Green Big Data Centre put into operation]**
On 14 July 2022, the Digital Economy and Clean Energy Deep Integration Development Summit Forum cum China Telecom Digital Qinghai Green Big Data Centre Launching Ceremony were held in Qinghai. The "China Telecom – Zero Carbon Qinghai" initiative was launched at the ceremony, which proposed the establishment of an industrial alliance for the integration and development of the digital economy and clean energy, to accelerate the implementation of the "East-to-West Computing Resource Transfer" project, fulfil Qinghai Province's "dual carbon" goal, establish a "dual carbon" example, and construct a green and low-carbon circular economic development system.

Achieving Sustainability through Green and Security Development

The Company continues to promote the use of advanced energy-saving technologies in datacentres. The Beijing Yizhuang Cloud Computing Hub Building has undergone comprehensive energy-saving renovations through the application of indirect evaporative cooling technology, CO_2 cold storage technology, and waste heat recovery technology, reducing the PUE from 1.4 to 1.3, achieving a significant reduction in overall energy consumption of the cooling system. To address the challenges of few choices of energy-saving methods and high operation and maintenance costs for traditional facility rooms, the Company has introduced new technologies such as AI, Big Data, and IoT, which integrated with the business scenes of facility room energy consumption, and independently developed a nationwide standardised intelligent energy saving system for facility rooms, with cooling energy-saving rate exceeding 15%.

The Company continues to promote base station energy-saving efforts and has proprietarily researched and developed a 4/5G base station smart energy-saving system based on Big Data and AI technologies, forming a network-wide, depth-aware AI real-time energy-saving decision-making brain and control network, achieving secured, automatic, and optimal precision energy-saving for 4/5G base stations, saving costs while increasing efficiency. In 2022, the base station smart energy saving system has covered 31 provinces, with 5G energy saving efficiency of no less than 16%, annualised electricity saving of 600 million kWh, resulting in a direct reduction of over 300,000 tons of carbon dioxide emissions per year.
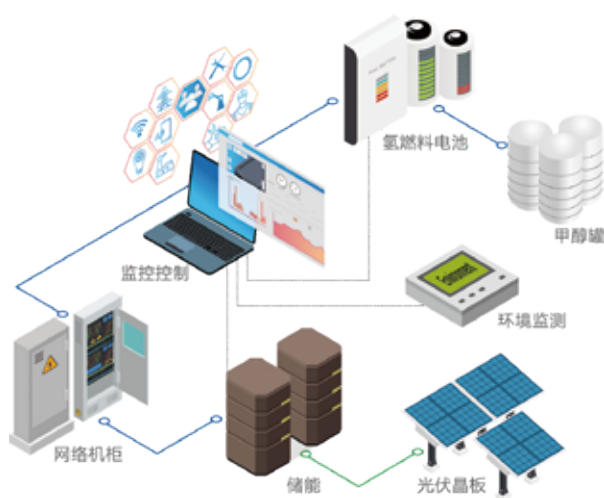
[Constructed the first integrated "photovoltaic and hydrogen" power system in China]

On 9 December 2022, the first communications base station in China to adopt an integrated "photovoltaic and hydrogen" zero-emission and pollution-free power source was completed and put into operation on Butterfly Island in Fangchenggang City, Guangxi (廣西防城港市蝴蝶島). Butterfly Hill Island (蝴蝶嶺島) base station is one of the pilot projects for universal telecommunications services. Based on the resource characteristics and base station coverage requirements of the island, China Telecom Research Institute combined its resources and technical advantages to not only avoid the difficulties of building new cross-sea power lines and subsequent high maintenance costs but also effectively protect the island's environment. This project provided new ideas for communications power supply scenes for islands and other regions.

[Implemented the innovative 5G automatic on/off energy-saving technology pilot project]

Hunan branch has collaborated with ZTE Corporation to deploy 100 base stations equipped with 5G AAU automatic on/off energy-saving innovative technology in Zhangjiajie, resulting in a reduction of the power consumption to less than 5W for on/off status during the idle period. The Zhangjiajie scenic area experiences significant fluctuations in call volume, with the night time period being non-operational. It is estimated that the application of the automatic on/off technology can reduce carbon dioxide emissions in Zhangjiajie by nearly 300 tons annually.

The Company has comprehensively deepened its co-building and co-sharing cooperation with China Unicom, reducing the duplicated construction of 4/5G base stations and significantly enhancing the utilisation rate of existing base stations, while protecting the natural environment and landscape, and saving land, energy, and raw material consumption. Meanwhile, The Company continues to deepen its co-building and co-sharing of infrastructure such as pole lines, pipelines, and optical cables. In 2022, over 300,000 5G base stations were newly activated for the two parties, with the cumulative number of activated co-shared 5G base stations exceeding one million. The number of co-shared 4G base stations exceeded 440,000, with the cumulative number of activated co-shared 4G base stations exceeding 1.1 million. The Company provided more than 13,500 kilometres of co-shared pole line and more than 800 kilometres of co-shared pipeline. 4/5G co-building and co-sharing has led to over RMB270 billion savings in network construction investment, over RMB30 billion in annualised operating cost savings, and over 17.5 billion kWh in annual electricity savings for the two companies.

The Company has formulated the *Administrative Measures for China Telecom on Electromagnetic Environmental Protection of Telecommunications Base Stations (Trial Version)*, established a sound electromagnetic radiation management system and risk prevention mechanism, taken various proactive environmental protection measures such as environmental assessment and consolidated the foundation for environmental protection in response to concerns in telecommunications engineering construction from the government and the public, such as farmland protection, equipment pollution, construction impact and electromagnetic radiation to ensure compliance with the government's regulatory requirements and to actively communicate with the public.

[China Telecom and China Unicom fully deepened co-building and co-sharing work]
On 5 January 2022, China Telecom and China Unicom fully deepened their co-building and co-sharing work to promote the deployment, with the participation of the management and key persons in charge of relevant departments of both parties.

[China Telecom and China Unicom jointly built a cross-operator 5G operation and channelling system]
China Telecom, together with China Unicom, takes blockchain as the technical foundation and adopts a fully proprietary approach to fully leverage the cloud, Big Data and existing system capabilities of both parties to achieve unified deployment, cross-cloud chain integration, and jointly build a secure, trustworthy, efficient and intelligent co-built and co-shared blockchain channelling platform, realising the 4/5G co-built and co-shared network data visualisation and manageability and efficient channelling of operation resources of China Telecom and China Unicom.
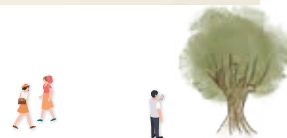
[Actively carried out electromagnetic environmental monitoring and popular science promotion]

China Telecom has implemented nationwide 5G electromagnetic radiation monitoring to ensure that the level of electromagnetic radiation in residential areas, school, hospital, office and other places complies with the national standard *Electromagnetic Environment Control Limits* (GB8702-2014) to continuously improve the quality of electromagnetic environment. At the same time, the Company actively carried out electromagnetic environmental popular science promotion and information disclosure, to strengthen community communications and new media publicity, and accept public supervision.

Green Office

The Company promotes water conservation, strives to reduce the water consumption per unit operating revenue, actively promotes and advocates water conservation by posting reminders regarding water conservation near water facilities and appliances. The Company continually strengthens the management on water usage, carries out sewage disposal and treatment, promotes the reuse of water in production, actively uses reclaimed water as an alternative source of water in place of tap water while meeting the requirements on the use of water. The Company promotes and popularises the use of water-saving appliances and performs regular checks and repairs on each part of the water supply system to prevent water leakage and wastage. In 2022, the water consumption per unit operating revenue decreased by 11.3% compared to last year. The Company sets the target of total water consumption for 2023 to be no more than the annual average water consumption for the years of 2017 to 2019.

The Company encourages paper saving by actively promoting reduction of paper use in operation and office facilities sites. The Company encourages paper saving and reduces paper use through adopting technological and systematic measures. We actively promote double-sided printing of documents, reduce colour printing, accelerate the digital transformation of the procurement supply chain, vigorously promote the application of electronic procurement and electronic orders to realise the paperless operation of the whole process of the supply chain. We also continually promote electronic accounting files management, VAT electronic invoice, e-reimbursement and filing of e-invoice and paperless operation, and promote automatic process of tax declaration in order to reduce paper usage. The annual office paper usage dropped 10.7% year-on-year.
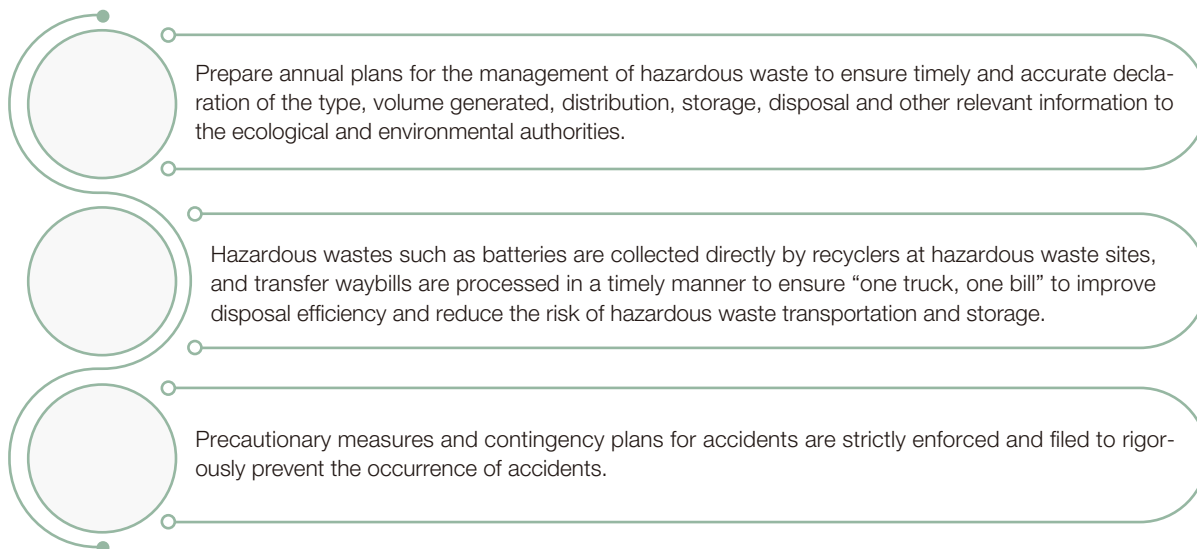
Green Procurement

The Company has encouraged suppliers to jointly respond to climate change by preferentially purchasing resource-saving and environmental-friendly products. To actively build a green supply chain, the Company incorporates green and low-carbon factors into the supplier evaluation system, carries out full life cycle cost management of the supply chain, and increases the application of energy-saving and low-carbon products. The Company promotes the application of green procurement indicators in the procurement process and includes environmental impact factors into the procurement evaluation scoring, so as to encourage suppliers to enhance their awareness and capability in environmental protection. For products that may have environmental risks in the production process, we included ISO 14000 environmental management system certification, government environmental assessment reports, the "Green Factories" list of the Ministry of Industry and Information Technology and other environmental evaluation criteria into the procurement evaluation scoring. Whether the production waste is treated in a green manner to meet emission standards, environmental assessment reports, environmental monitoring reports, green packaging, green processes, etc. are mandatory areas of inspection of suppliers. In 2022, China Telecom issued the *China Telecom Procurement Supply Chain Green Packaging Evaluation Standards (Trial)* to actively advocate the use of green packaging by suppliers and gradually promote the use of green packaging as a commitment standard by suppliers.

Recycling

The Company enhances the recycling, disposal and utilisation of waste and used materials to conserve resources as much as possible and reduce environmental pollution. During the year, we revised the *Administrative Measures on Waste and Idle Materials Recycling and Disposal*, further clarified the requirements for environmental protection compliance in the disposal of used and waste materials, specified the guidelines, division of responsibilities and management of the recycling and disposal of used and waste materials and the qualifications of recyclers, standardised the forms and procedures of disposal, and refined the approval authority and process of disposal decisions. The Company carried out clean-up of hazardous and non-hazardous wastes and exchange of experience in this respect in an efficient manner, to effectively prevent disposal risks.

Prepare annual plans for the management of hazardous waste to ensure timely and accurate declaration of the type, volume generated, distribution, storage, disposal and other relevant information to the ecological and environmental authorities.

Hazardous wastes such as batteries are collected directly by recyclers at hazardous waste sites, and transfer waybills are processed in a timely manner to ensure "one truck, one bill" to improve disposal efficiency and reduce the risk of hazardous waste transportation and storage.

Precautionary measures and contingency plans for accidents are strictly enforced and filed to rigorously prevent the occurrence of accidents.

In 2023, the Company will continue to strengthen the professional management of waste, adhere to the principle of "recycling as much as possible", further establish and enhance the system of recycling and disposal of waste and old idle materials, implement public auction and disposal of waste and old cables, waste and old batteries, etc., strengthen the management of environmental protection compliance, enhance the disposal revenue, and build a module for the disposal of waste and old idle materials, so as to integrate fixed asset management, material use, scrapping, recycling, disposal and other related sections, and realise the closed-loop management of the disposal of the Company's waste and old idle materials.

Optimise the energy structure

The Company continues to enhance the efficient and clean use of energy and accelerate the transformation and optimisation of its energy structure. In 2022, the Company expanded the scale of distributed energy construction in datacentre parks, communications facility rooms and base stations, and promoted the pilot application of new technologies such as proprietary safe lithium and hydrogen energy storage to maximise energy utilisation efficiency. At the same time, the Company actively participated in the market-oriented trading of renewable energy, and achieved breakthroughs in the cross-province trading of green power with "license and power in one", and the consumption ratio of green power doubled year-on-year.

Empowering green development

The Company accelerates the green and low-carbon transformation of its business development mode, advocates green consumption by launching products and services such as cloud computers, cloud mobile phones, smart energy-saving applications and green IoT. The Company creates green IDC, green cloud hosts, smart cities and other products and services, accelerates the promotion and application of energy-saving and carbon-reducing technologies, and facilitates the formation of a green and low-carbon information and communication lifestyle.

[Launching a green score system for carbon reduction behaviours]

In order to further encourage the public to participate in green and low-carbon actions, China Telecom launched a green score system for carbon reduction behaviours, where users get virtual "green energy" for public transportation, online subscriptions, online payments, etc. which can be exchanged for rural agricultural products, green data packages, etc.

The Company actively empowers the green development of the economy and society, continues to promote digital technology innovation, and provides customers with new digital solutions for energy saving, carbon reduction, pollution prevention and ecological system protection.

[Supporting Jiangxi Jinghao Salt Chemical to build an intelligent factory]

By constructing "one cloud, one network, one platform + eight intelligent applications", Jiangxi branch supported Jiangxi Jinghao Salt Chemical Co., Ltd. (江西晶昊鹽化有限公司) to build a smart factory, which reduced maintenance costs, coal consumption, steam consumption and ammonia consumption by 15%, 20,905 tons/year, 28,500 tons/year, and 271 tons/year, respectively, resulting in direct economic benefits of about RMB13.86 million/year. The smart factory has won several recognitions from the Ministry of Industry and Information Technology and Jiangxi Province for its strength in driving traditional enterprises with high energy consumption and high labour intensity to achieve a great leap towards green development, low carbonisation and intelligence.

Achieving Sustainability through Green and Security Development

[Digital "intelligence" to protect the green mountains and rivers of Qinling Mountain]

Shaanxi branch takes advantage of its "cloud, network, Big Data, business, security and terminal" strengths to construct a "smart mountain management" system in cooperation with the Qinling Ecological Environment Protection Bureau (秦嶺生態環境保護管理局), leveraging intelligent networks, drones, night vision cameras and other IoT equipment to monitor key areas, realising full-process checking, visualisation and control, thus building a safety "protection network" for the daily conservation and management, flood prevention and safety management and emergency management of Qinling Mountain.

["Intelligent sky dome" safeguarding the Yangtze River]

Nantong branch, in conjunction with Nantong Agriculture and Rural Bureau (南通市農業農村局), has constructed the "intelligent sky dome" information system to enable intelligent identification of vessel information, accurate identification of vessel actions, rapid delivery of alerts, automatic capture and uploading of photos to the intelligent application platform. With the information tools, a "tight encirclement" by technical defence and human defence covering over 600 square kilometres of the Yangtze River estuary was built, contributing to the realisation of the Yangtze River fishing ban source management, multi-governance and long-term supervision.

ENSURING SECURED AND SMOOTH COMMUNICATIONS

China Telecom strove to strengthen the security foundation for high-quality development, firmly maintaining network and information security, ensuring emergency communications, advancing supply chain management, strengthening compliance and risk management, and taking multiple measures to prevent and resolve major risks.

Maintaining network and information security

The Company has strictly complied with laws and administrative regulations relevant to network and information security, enhanced network and information security mechanisms, and strove to become a secured enterprise.

[Held a network and information security ecological cooperation forum]

On 30 December 2022, China Telecom Digital Technology Ecosystem Conference – Network and Information Security Ecological Cooperation Forum was held online with the objective of conducting in-depth exchanges and discussions with various partners in the industry chain on hot topics such as network and information security industry, product and service capabilities, to further strengthen the collaboration of multiple parties and jointly create a good security environment, thus promoting the high-quality development of the network and information security industry. The *China Telecom Cloud Security White Paper* was released during the forum, which fully explained the security development vision of the Company's China Telecom Cloud.

Achieving Sustainability through Green and Security Development

The Company has built a "VCERT (Virtual Community Emergency Response Team) + two-level SOC (Security Operation Centre)" security operation system and formed a "headquarters – provincial branches" two-level information content release audit and control system from. The Company continued to enhance the integrated security capability system of the cloud, network, edge and terminal, with a security capability pool of 194 nodes covering 150 key cities across China and an anti-DDoS capability of 9.7T, maintaining its position in the first-tier camp in the country. The Company also built a network-wide integrated security datacentre and situation awareness system, and preliminarily built a security core platform, which significantly enhanced the detection, analysis and disposal capabilities of security incidents.

The Company has launched the Cloud Dam platform for government and enterprise customers covering more than 10 industries such as government administration, finance, education, energy, transportation and logistics, and commerce, etc., with the Security Brain serving tens of thousands of customers in education, government administration, finance, healthcare and other industries. For individual customers, e-Surfing Anti-harassment business provides professional services in blocking harassment calls, marketing calls and customised numbers. For household customers, the security butler business focuses on Internet security protection for household broadband.

The Company proactively implemented the requirements of laws and regulations including the *Data Security Law of the People's Republic of China* and the *Personal Information Protection Law of the People's Republic of China,* optimised the *Administrative Measures of China Telecom on the Protection of Personal Information of Users*, safeguarded the security and rights of users in their personal information processing activities, deeply promoted the governance of app infringement on users' rights, proactively explored the ability to protect personal information of users based on different scenes. The Company established a catalogue of important data and core data of enterprises, enhanced the ability to independently discover risks, with data security risk self-discovery rate reaching 99.9%. The Company has taken active action to protect personal information and developed functional products related to personal information protection to serve the people well.

[Launched Privacy Guard product]

Based on mobile application fingerprint database and automated detection technology, China Telecom's Privacy Guard product deeply digs into the privacy risks of apps in mobile phones, generates visualised personal privacy detection reports, provides risk disposal capabilities such as excessive seeking of authorisation, and enables users to accurately prevent, identify and dispose app privacy risks.

Emergency communications assurance

The Company faithfully fulfilled its mission of ensuring secured and smooth communications, made every effort to fight against natural disasters such as earthquakes, typhoons, floods and landslides and provided communications assurance for major activities. China Telecom provided disaster relief and communications assurance for the 6.8 magnitude earthquake in Luding, Sichuan; and provided disaster relief and communications assurance against floods and typhoons in Zhejiang, Fujian, Liaoning, Guangdong, Guangxi, Gansu and other provinces. The Company focused on key regions and coordinated the whole network, and conducted online and offline coordination. Communications assurance work for 11 major events including Beijing Winter Olympics and the 20th National Congress of the CPC was successfully completed. In 2022, more than 800,000 person-times, 270,000 vehicle-times, and 100,000 sets of communications equipment were dispatched for emergency communications.

[All-out effort to assure smooth network for the Winter Olympics]

During the 2022 Winter Olympic Games, Beijing branch set up 10 professional assurance teams, a 24/7 on-call team and a communications technology operation expert team consisting of 114 people, and made every effort to the network assurance work for the Winter Sports Event. During the period, the Company provided communications assurance services to more than 200 critical protection areas, with a total dispatch of nearly 13,000 person-times, over 2,000 supporting vehicle-times, and 20 emergency communications vehicle-times.

[Safeguarded communications lifeline in disaster areas]

An earthquake of magnitude 6.8 struck Luding County, Ganzi Prefecture, Sichuan at 12:52 p.m. on 5 September 2022, causing partial damage to communications in Luding County, Ganzi Prefecture and Shimian County, Ya'an City. After the earthquake, Sichuan branch insisted on life first and demonstrated the taking up of responsibilities as a central enterprise. It immediately initiated emergency plans, set up an emergency communications command centre, fully leveraged the advantages of satellite communications, aerial base stations and other information technologies, and dispatched multiple emergency rescue teams to the disaster area to protect the communications lifeline in the disaster area.

[Fully ensured the success of the Party's 20th Session of National Congress]

From 16 to 22 October 2022, the 20th National Congress of the CPC was successfully held in Beijing. China Telecom firmly implemented the deployment of the higher authorities and successfully completed the communications assurance task with the highest standards, strictest requirements and most practical measures to ensure smooth communications network, secure and reliable network, no incident in safety production, no major complaints in customer services and no major public opinion incidents.

Promoting supply chain management

The Company consistently adhered to supply chain management concepts focusing on value-added, transparent and green procurement, committed to building trusted relationships with suppliers to achieve win-win situations and proactively communicated with and encouraged its suppliers to fulfil social responsibilities together. The Company strictly followed the *Bidding Law of the People's Republic of China* and other procurement-related laws and regulations, implemented regulations and systems such as the *Administrative Measures for China Telecommunications Corporation on Procurement*, proactively responded to the adjustment of national policies, and continuously enhanced the construction of supply chain system. In 2022, the parent company formulated regulations such as *China Telecom Supply Chain System Management Measures* and the *China Telecommunications Corporation Procurement Disagreement Handling Measures (Trial)* to continuously enhance the construction of the procurement system and revised and issued the *China Telecommunications Corporation Supplier Management and Assessment Measures*, which systematically regulate supplier selection, performance assessment and evaluation, supplier security management, classification and grading management, supplier eco-cooperation, malpractice and exit management, and supplier basic management.

Facing the complex business environment, the Company attached great importance to the safety of its supply chain and formulated systems such as the *China Telecom Supply Chain Risk Prevention, Control and Emergency Management Measures, China Telecom Supply Chain Safety Management Measures* and *China Telecom Supply Chain System Management Measures* to strengthen the early warning and response to supply chain risks, enhanced risk response strategies and strove to enhance the resilience of the supply chain. The Company strengthened business continuity management (BCM) for suppliers and implemented application software security testing and certification and intellectual property audits.

The Company continues to carry out supplier assessments as a routine task. Through on-site inspections of the overall situation, production equipment, testing equipment, raw materials, quality control, green energy conservation and environmental protection, and supply safety of our suppliers, the Company obtained multi-dimensional production management information of suppliers and put emphasis on and evaluated the risk resistance capabilities of various critical devices and software, which helped to enhance the support for cloud-network integration services. Through supplier assessments, the Company elevated the objectivity of its procurement evaluation criteria.

[Cloud-based supplier assessment]
China Telecom proactively applied digital technologies to its assessment work and explored the implementation of cloud-based supplier assessments, which allowed the Company to remotely check and confirm various information about suppliers, reducing assessment costs, and improving work efficiency.

In 2022, the Company constantly promoted open procurement and tendering, and took multiple measures according to the internal management system requirements to encourage the suppliers to enhance their performance and services. Positive incentives were introduced to recognise outstanding suppliers by setting up honorary awards, with 187 supplier-times receiving awards. For all suppliers, we strictly implemented the misconduct management system, with 129 cases of misconduct handled during the year, and took measures to prohibit or restrict the procurement from suppliers involved in accordance with the rules, effectively penalising misconduct. The Company optimised the misconduct management process, strengthened the notification of supplier accreditation and supplemented the relevant objection management mechanism, and continued to carry out information sharing of illegal and discredited suppliers with major domestic fundamental telecommunications operators.

Risk prevention in compliance with laws and regulations

The Company persists in operating in accordance with laws and integrity and complies with relevant national laws and regulations, regulatory requirements, industry regulations, as well as the requirements of the *Articles of Association* and relevant rules and regulations. The Company has comprehensively strengthened its compliance management, enhanced its risk prevention capability, and integrated compliance management, safety production, integrity development and anti-corruption, financial and audit supervision with corporate operation and reform to ensure high-quality corporate development. The Company comprehensively carried out risk identification and assessment, and strengthened risk tracking and control. During the year, the Company maintained a development trend with stable operation and controllable risks, and no major risk incidents occurred.

The Company continued to promote operation in accordance with laws and regulations and enhanced the compliance management capability and level. The Company strove to practise the concept of "compliance by everyone, in everything and every moment", thoroughly carried out the work of "Year of Strengthening Compliance Management", continuously enhanced the compliance management system, strengthened organisational leadership, enhanced system construction, optimised the operation mechanism, gave full play to the role of "three defence lines", strengthened team construction and continuously cultivated a compliance culture. At the same time, the Company focused on compliance management in key areas, focused on the "Cloudification and Digital Transformation" strategy, continued to strengthen compliance management in the fields of network and information security, anti-monopoly and overseas operations, and promoted the integration of compliance management into the Company's production and operation, so as to provide the Company with "safety belts" and "protective clothing" and ensure sustainable and healthy corporate development.

The Company conscientiously and strictly implemented the *Work Safety Law of the People's Republic of China* and other laws and regulations on production safety, and formulated internal systems such as the *Implementation Opinions on the Standardisation of Production Safety for China Telecom (Trial)* and the *Measures for Reporting and Rewarding Production Safety for China Telecom (Trial)* during the year. The Company has further strengthened the organisational management system for production safety, with a focus on centralised and unified leadership, as well as established a dual-director system for production safety committee, and refined and enhanced the responsibility system for production safety. The Company has concluded and established the overall principles of "managing safety with business, managing safety with production and operation, and managing safety with assets," as well as the principle of "whoever appoints people is responsible for safety, whoever constructs is responsible for safety, whoever uses is responsible for safety, whoever operates is responsible for safety, and whoever outsources is responsible for safety." The Company has established a building safety management system with building managers taking responsibility, and strictly enforces production safety responsibility level-by-level, profession-by-profession and zone-by-zone. The Company has also enhanced the dual prevention mechanism of safety risk classification and control, and hidden danger investigation and rectification. The Company carried out safety risk and hidden danger thorough investigation and rectification, to comprehensively prevent and resolve major safety risks and ensure the safety of employees' lives and property.

Publicity and education

- Carry out production safety knowledge publicity, education and training and emergency drills to continuously enhance staff safety awareness and emergency response capabilities.

Supervision and inspection

- Conduct safety hazard investigation and rectification, 100 days of special rectification action, special action to comprehensively prevent and resolve major safety risks, and special action to investigate and rectify fire safety hazards in high-rise buildings and key buildings, establish a risk and hazard ledger, and timely implement closed-loop rectification of hazards.
- Strengthen the management of engineering construction and comprehensive maintenance operations cooperation units, strictly implement regulatory responsibilities to curb the occurrence of major accidents and ensure safety and stability.

Digital empowerment

- Launch a pilot construction of a "fire safety cloud platform", leverage digital empowerment to enhance the technical defence networking capability of communications facility rooms.

Standardisation

- Carry out China Telecom pilot work on the standardisation of production safety to strengthen the basic management of production safety.

Achieving Sustainability through Green and Security Development

The Company firmly adheres to integrity governance and anti-corruption. The Company has earnestly complied with the laws and regulations on integrity governance and anti-corruption such as the *Supervision Law of the People's Republic of China*, and its parent company has formulated internal systems such as the implementation measures for strengthening the culture of integrity, so as to establish and optimise five major mechanisms including anti-corruption education and prevention, system monitoring, discipline and accountability, fault tolerance and correction, and inspection and check. The Company strictly prohibits any form of corruption such as bribery, extortion, fraud and money laundering. During the year, the Company continued to create the public account called "China Telecom with Integrity" on new media platform to create an atmosphere of carrying out business with integrity. The Company also launched a "China Telecom with Integrity" micro videos collection and promotion campaign to promote the building of a corporate integrity culture. The Company carried out integrity education and legal education for its management and employees, and distributed relevant training materials, such as the *Toolkit on Directors' Ethics* and the *Anti-Corruption Programme – A Guide for Listed Companies* prepared by The Hong Kong Independent Commission Against Corruption (ICAC), to all directors. The Company continued to consolidate and deepen the rectification achievements from the central inspection and internal inspection, guided and supervised the subordinate enterprises to achieve full coverage of inspection, and continued to push forward the special rectification of exploiting the Company for his/her own personal gain. The Company set up a whistleblowing postal mailbox and hotline to address any whistleblowing, allegations and relevant complaints against its employees as well as relevant criticism, opinions and recommendations on integrity construction and anti-corruption work. The Company strictly implemented the *Work Rules for Discipline and Supervision Organs in Handling of Reports and Accusations*, handled related accusations and charges in accordance with the rules, disciplines and regulations and strictly put the confidentiality requirements into effect, so as to effectively safeguard the rights of accusers.

The Company practically strengthened its financial and audit supervision. The Company continuously enhanced the internal control system and revised the internal control processes in a timely manner according to changes in the internal and external environment and the management requirements of the Company. The Company also enhanced the internal control system to match the corporate governance structure and strengthened the effectiveness of internal control construction. Leveraging a financial risk prevention and control system based on Big Data, the Company established a financial risk prevention and control system through the building and optimisation of financial risk control models, cross scanning of Big Data and intelligent multi-dimensional analysis. The Company continued to promote the digitalisation of financial operations and enhanced its management capabilities through the use of digital tools. The Company sincerely implemented the new requirements of the Central Government and the State on internal audit work, with the objective of "preventing risks, ensuring implementation, promoting development and enhancing value", and gave full play to the "economic inspection" function of auditing to ensure that enterprises operate in compliance with the law and contribute to their high-quality development. In 2022, the Company launched 246,000 audit projects, proposed 3,468 management suggestions, and promoted the enhancement of 3,981 systems.

Strengthen the construction of internal audit system

- Establish a sound internal audit leadership system, strengthen company-wide consistent management and control of audit work, and enhance synergy with professional departments and corporate internal supervision efforts to enhance supervision effectiveness.

Strengthen audit monitoring and rectification

- Ongoing enhancement of audit monitoring of the effectiveness of internal control, compliance and risk management systems.
- Ensure full audit coverage for three years while strengthening inspections of key units and key fields.
- Strengthen the rectification of audit findings, consolidate the rectification responsibility, promote the substantial rectification of key issues, and transform the results of audit rectification into governance effectiveness.

Advance the digital transformation of auditing

- Proactively utilise new technologies such as AI and Big Data to gradually develop a routine risk monitoring capability and promote quality and efficiency in audit work.

Enhance accountability system

- Enhance the non-compliant operation and investment accountability system, carry out account-ability investigations in accordance with laws and regulations, as well as common problem inspections to enhance the compliance operation awareness and bottom-line awareness of management at all levels.