

**About the Report** 

#### Introduction

This Report seeks to disclose information regarding the environmental, social and governance (ESG) performance of China Tower Corporation Limited (hereinafter referred to as "China Tower", "Company", "we" or "us") in 2024.

#### Scope of Report

The organizations covered by this Report include China Tower Corporation Limited, as well as its subordinate companies. Compared with the ESG reports of the Company in previous years, this Report made no major adjustment to the scope of disclosure. The statistical scope of the data covered by the report is indicated herein, and the data calculation is performed according to national regulations or international standards. The amounts reported in this report are denominated in Renminbi unless otherwise indicated.

#### Scope of Timing

The reporting period of this Report is from 1 January 2024 to 31 December 2024 (hereinafter referred to as "this Year"). Certain information contained herein may concern events, etc. occurred before or after the reporting period to make this Report more relevant and complete.

#### Reference Guide

The content of this Report conforms to Appendix C2 "the Environmental, Social and Governance Reporting Code" to the Listing Rules issued by the Hong Kong Stock Exchange, and is with reference to the GRI Standards issued by the Global Sustainability Standards Board (GSSB), the contents of which are indexed in the Appendix of this Report.

#### **Reporting Principles**

This Report is compiled in accordance with the principles of materiality, quantification, balance and consistency



### "Materiality" principle

During the preparation of this Report, major stakeholders and materiality issues of concern have been identified, and targeted disclosures have been made in this Report according to the importance of issues.



### "Quantitative" principle

This Report uses quantitative data to present key performance indicators at the environmental and social level of the Company. The measurement standards, methods, assumptions, calculation tools for the key performance indicators in this Report, as well as the sources of conversion coefficients used, have been explained in the Report correspondingly.



### "Balance" principle

This Report is in compliance with balance principle to present the ESG performance and management status of the Company objectively.



### "Consistency" principle

Unless otherwise stated, this Report applies the same statistical method as the 2023 Environmental, Social and Governance Report of the Company.

### **Contents**

**IV.JOINING HANDS FOR WIN-WIN RESULTS** AND STRIVING FOR A BETTER LIFE Providing High-quality Customer Service Strengthening Work Safety Management Growing Together with Employees



2	CHAIRMAN'S STATEMENT	68
5	STATEMENT OF THE BOARD	
		70
6	WALKING INTO CHINA TOWER	72
6	Company Profile	74
7	Honors and Recognition	80
		81
8	SUSTAINABILITY MANAGEMENT	
8	Philosophy of Sustainability	90
9	Sustainability Management	92
10	Materiality Issues Analysis	94
12	Stakeholder Communication	98
		99
14	I. SHARING RESPONSIBILITIES, SERVING NATIONAL	

### STRATEGY

16	Building a	a Strong	Foundation	for	Cyberpower

- 21 Serving the Construction of "Digital China"
- 25 Providing Comprehensive Support for Emergency Disaster Relief

31 Improving the People's Wellbeing

#### **II. JOINTLY PROTECTING THE ECOSYSTEM** TO SAFEGUARD OUR GREEN HOME

- 40 Providing Multidimensional Support for Ecological Protection
- Promoting Green Transformation and Development 46
- Practicing Green and Low-carbon Operation
- 54 Actively Responding to Climate Change

#### **III. INNOVATING AND ADVANCING TOGETHER** TO CULTIVATE NEW-QUALITY MOMENTUM

63

65

58

Optimizing the Scientific and Technological Innovation System Strategic Deployment in Frontier Innovation Domains Deepening Digital Transformation and Upgrading Strengthening the Network Security Defense Line

Jointly Promoting Industry Development
Supporting Social Welfare Undertakings
V. JOINT GOVERNANCE BASED ON INTEGRITY TO

BUILD A SOLID DEVELOPMENT FOUNDATION
Improving Corporate Governance
Ensuring Integrity and Compliance in Operations
Implementing Comprehensive Risk Management
Strengthening Supply Chain Management
DEMONSTRATION OF ESG PERFORMANCE

<sup>1</sup> 0

0111

0 0

0 <sub>0</sub>

0 0

n 0

n

0

0

0

001 **0** 0 1

0

11010

0

0 0 <sub>0</sub>

Ο

n

10

102

108

APPENDIX

## Chairman's Statement



The year 2024 marks the tenth anniversary of China Tower's establishment and represents a pivotal year in the implementation of the "14th Five-Year Plan." This year, building on our positioning as the "world-class information and communications infrastructure service provider, and a highly competitive information and new energy applications provider," we have continued to deepen our "One Core and Two Wings" strategy, proudly shouldering our responsibilities as the "National Team" and "Main Force" in the construction of information, communication and infrastructure, and 5G infrastructure. We remain fully committed to supporting national strategies, including Cyberpower, Digital China, the "Dual Carbon" goals, and Quality Power. Through these efforts, we have consistently strengthened our core functions, enhanced our competitive edge, and actively contributed to the high-quality, sustainable development of the economy, society, and environment.

#### **Unwavering Support for National Strategies**

Guided by our mission of "co-building and sharing," we have continued to deepen industry-wide sharing, optimize resource coordination, and promote intensive development and infrastructure sharing to provide essential support for the digital economy and emerging industries. As of the end of 2024, we have contracted 2.759 million 5G base stations in total. Our in-building distributed antenna systems (DAS) now cover a cumulative area exceeding 12.6 billion square meters, spanning more than 29,000 kilometers of high-speed railways and subway networks – contributing to the construction of the world's largest and highest-quality mobile broadband network. Additionally, by leveraging our resource advantages, we have expanded social sharing initiatives, empowering social governance and public services through technology. By transforming 230,000 "telecommunication towers" into "digital towers" and launching the industry-specific large-scale model, we have supported the digital transformation of spatial governance across mountains, rivers, forests, farmlands, lakes, grasslands, and deserts.

#### **Unwavering Commitment to Public Welfare**

We remain dedicated to safeguarding the lifeline of fundamental network operations, delivering high-quality support for major communication initiatives and emergency disaster relief efforts. Actively assuming a leading role in communication support for major events and disaster response, we have reinforced the "lifeline," "support line," and "command line" of national emergency networks. In 2024, we successfully completed 315 critical communication and emergency support tasks, including 179 major communication missions and 136 emergency response operations. We have also actively participated in pilot programs for universal telecom services, advancing the coverage and balanced development of mobile communication networks.

#### **Unwavering Dedication to Green Transformation**

In active response to climate change, we have upheld the "Dual Carbon" development philosophy and continuously deepened our "Two Priorities and Four Greens" approach – prioritizing sharing, prioritizing energy saving, green energy consumption, green empowerment, green industry, and green production. By adhering to the principle of "prioritizing co-location and sticking to sharing philosophy in building up new sites," we have thoroughly promoted the conservation of site resources and energy sharing. As of the end of 2024, the sharing rate of newly built towers has increased from 14.3% at the Company's inception to 86.2%, effectively reducing carbon emissions by 33 million tons. We have also accelerated energy-saving technological upgrades and expanded green energy deployments, with photovoltaic systems now operational at 45,000 sites. Our efforts in building a smart energy service ecosystem have extended power assurance capabilities beyond communication base stations, supporting broader societal applications. Additionally, we have established 77,000 battery swapping stations nationwide, facilitating over 1.9 billion battery swaps, enabling electric vehicles to travel more than 99.7 billion kilometers, and reducing carbon emissions by over 3.3 million tons.

#### **Unwavering Focus on Technological Innovation**

Amidst a new wave of technological revolution and industrial transformation, we have deepened our innovation-driven development strategy, continuously refining our technological innovation systems and fostering a collaborative ecosystem that integrates industry, academia, and research. Through our "four lists" mechanism – ability level list, task items list, resource allocation list, and achievement transformation list – we have accelerated breakthroughs in original and critical technologies, driving new productivity growth. In support of our long-term innovation strategy, we established the China Tower Science and Technology Association to continuously strengthen our technical talent pipeline and bolster research and development (R&D) investments. In 2024, our R&D expenditure increased by 40% year-on-year, while the number of invention patent applications surged by 58% compared to the previous year.

#### **Unwavering Fulfillment of Social Responsibilities**

We uphold a customer-centered and service-oriented development philosophy, and have actively carried out targeted initiatives to enhance service quality, striving to create value for our customers and the industry. Upholding our "Talents Make Business Strong" strategy, we prioritize employee well-being, rights protection, and talent acquisition, fostering a culture of growth and progress. We have also actively contributed to the rural revitalization initiative, promoting the development of distinctive industries in assisted areas to drive industrial, talent, cultural, and ecological revitalization. In addition, we have established over 600 "The Riders' Home" service stations nationwide, organizing a diverse range of care programs to support outdoor workers – continuously fostering social goodwill and inclusivity.

#### **Unwavering Commitment to Sound Corporate Governance**

We remain steadfast in our commitment to integrity and compliance, relentlessly advancing the construction of a law-based and compliant framework. By optimizing our risk governance system, strengthening internal control mechanisms, and establishing long-term anti-corruption safeguards, we have fostered a clean and transparent corporate culture. We have also integrated development with safety, actively advancing the "0361" safety production responsibility system. By reinforcing our safety management framework, and ensuring the effective implementation of safety responsibilities at all levels, we have consistently improved the overall effectiveness of our safety operations.

As we reflect on our journey, we remain true to our original aspirations. Looking forward, our resolve remains unshaken. In the coming year, China Tower will continue to align with national priorities, comprehensively deepen reform and innovation, persistently drive high-quality development, and accelerate the construction of next-generation information and communications infrastructure. We will "lay the groundwork" for the digital economy, "contribute" to the green and low-carbon transition, and "spare no effort" in enhancing public well-being. By further strengthening our sustainability management and practices, we will work closely with our stakeholders to build a better future and share the rewards of progress together.



### Statement of the Board

The Board of Directors of the Company has always placed great emphasis on the ESG work and continues to optimize a management system headed by the Board of Directors and led by the management, for cross-departmental and top-down collaboration. As the highest responsible and decision-making body for ESG matters, the Board of Directors of the Company holds at least one meeting a year to discuss management strategies of ESG and important matters, simultaneously integrates the philosophy of sustainability into the consideration and decision-making of important events of the Company, and supervises the relevant ESG matters which may influence the Company's business, shareholders and other stakeholders, to ensure the integration of ESG concept and the Company's strategy.

The Company regularly evaluates the materiality of environmental, social and governance issues, and the specific evaluation process and results are detailed in the section headed "Sustainability Management" of the annual ESG report and reviewed by the Board of Directors.

During the Reporting Year, the Company has established environmental objectives associated with its business operations and conducted a review on the completion of the objectives set in the previous year, as detailed in the section headed "Common Protection of Ecology, Guarding the Green Home" of the annual ESG report and reviewed and discussed by the Board of Directors.

Progresses and achievements on ESG work of China Tower in 2024 are disclosed in this Report in detail, and have been considered and passed by the Board of Directors on 17 March 2025.



## Walking into China Tower

#### **Company Profile**

China Tower Corporation Limited, a large state-owned enterprise that provides telecommunications infrastructure services, was founded with the support from the State Council, against the backdrop of implementing the Cyberpower strategy, and promoting the sharing of telecommunications infrastructure resources. Established on 18 July 2014, successfully listed on the main board of the Hong Kong Stock Exchange (stock code: 0788.HK) on 8 August 2018, and headquartered in Beijing, the Company has simultaneously established branches in 31 provinces and prefecture-level cities across China. As of the end of 2024, the scale of China Tower's sites was more than 2.09 million, and its total assets amounted to over RMB320 billion, making it the largest telecommunications infrastructure service provider around the globe.

In this new era and on this new journey, the Company is committed to fully implementing the new development concept and actively serving and engaging with the new development pattern while fulfilling its political, economic and social responsibilities. We will prioritize technological innovation, industrial control and security support, focusing on enhancing our core capabilities and strengthening our core competitive edge. With an aim to establish ourselves as "a world-class integrated information and communications infrastructure service provider and a highly competitive information and new energy applications provider", we will rigorously implement our "One Core and Two Wings" strategy and work towards developing an "operating system that is professional, intensive, delicate, efficient and digitalized" and building an "enterprise centered around technology, innovation, service, sharing and value creation", making new and greater contributions to building China into a great country in all respects and advancing the rejuvenation of the Chinese nation on all fronts through a Chinese path to modernization.



### Honors and Recognition

Awarded "Listed Enterprises of the Year" by Bloomberg Businessweek

 Granted "Best ESG Practice Award (最佳ESG實踐 獎)" and "Best ESG Practice Case Award (最佳ESG 實踐案例)" at the Hong Kong International ESG List Selection (香港國際ESG榜單評選)

> Awarded "Best Investment Value for Listed Companies (最具投資價值上市公司)" in the 14th China Securities Golden Bauhinia Awards (第十四屆中國證券金紫荊獎)

Granted "2024 Corporate ESG Excellence Case Award (2024 企業 ESG 優秀案例獎)" at the 2024 Corporate ESG Sustainability Conference (2024 企業 ESG 可持續 發展大會) jointly hosted by China Enterprise Reform and Development Society and China Comment

中国铁塔取货有限公司 中国企业ESG优秀案例 чикка солина

Granted "Excellent Sustainability Practice Case Award of Listed Companies in 2024 (2024 年上市公司可持續 發展實踐優秀案例獎)" by China Association for Public Companies

Granted "Outstanding ESG Performance of H-Share Companies Award (ESG突出表現大獎-H股公司)" of the 6th BDO ESG Awards





### **Sustainability Management**

### Philosophy of Sustainability

Recognized as the "National Team" for the construction of telecommunications infrastructure and "Main Force" for 5G infrastructure, China Tower fully embraces the spirit of the 20th National Congress of the Communist Party of China. Guided by the "One Core and Two Wings" strategy, the Company continually deepened the "Two Priorities and Four Greens" concept of prioritizing sharing, prioritizing energy saving, green energy consumption, green empowerment, green industry and green production, and kept making efforts in aspects such as co-building and sharing infrastructure, as well as empowering diverse key sectors with digital solutions, thereby contributing to the realization of green, low-carbon and high-quality development.



a highly competitive information and new energy applications provider

### **Sustainability Management**

The Company has established an ESG management system headed by the Board of Directors and led by the management, for cross-departmental and top-down collaboration, to ensure that the environmental and social risks involved in various business lines are properly managed, and that the ESG philosophy and strategies are effectively implemented.



Diagram of our ESG management system

The Company regularly releases ESG reports that offer detailed disclosures about its activities in environmental, social and governance areas for the year. Moreover, the Company strives to enhance the quality of ESG information disclosure each year, considering both internal and external factors, while actively addressing the concerns of stakeholders. All disclosed information is reviewed and approved by the Board of Directors.

### **Materiality Issues Analysis**

In 2024, based on macro policies and industry trends, ESG disclosure guidelines, its own ESG development philosophy and stakeholders' concerns, China Tower sorted out a total of 24 materiality issues, and ranked the importance of issues in terms of two dimensions, namely "importance to stakeholders" and "importance to the sustainability of the Company", by distributing questionnaires to representatives of key stakeholders, supplemented by external information collection and interviews and other methods.





### **Stakeholder Communication**

China Tower established a routinized communication mechanism with stakeholders. With reference to the requirements of the ESG Reporting Code of the Hong Kong Stock Exchange, the Company actively understood and responded to stakeholders' concerns on the ESG issues of the Company through exchange meetings, questionnaires, reviews and summaries, and integrated them into the Company's relevant decisions. The main stakeholders that the Company has identified based on the actual situation of the enterprise, their major ESG concerns, and the main communication channels are listed in the table below.

8			
Main stakeholders	Communication mechanisms and methods	Expectation on China Tower	Our response
Government and regulatory authorities	<ul> <li>Meetings</li> <li>Disclosure of compliance reports</li> <li>Reports and visits</li> </ul>	<ul> <li>Compliance with laws and regulations</li> <li>Regulatory requirement implementation</li> <li>Facilitation of industry development</li> <li>"Dual carbon" goal implementation</li> </ul>	<ul> <li>Govern the enterprise in accordance with laws, and operate with integrity</li> <li>Strictly comply with the disclosure requirements of corporate information</li> <li>Innovate products and services and promote industry development</li> </ul>
Investors	<ul> <li>Annual reports and announcements</li> <li>Investor meetings</li> <li>Daily communications</li> </ul>	<ul> <li>Ensuring service quality</li> <li>Regulating information disclosure</li> <li>Creating corporate value</li> <li>Regulating corporate governance</li> <li>Preventing operational risk</li> </ul>	<ul> <li>Improve service process and enhance quality management</li> <li>Comply with the disclosure requirements of corporate information</li> <li>Operate steadily and continue to create value</li> <li>Enhance governance level and internal control system</li> <li>Protect the rights of investors in accordance with laws</li> </ul>
Customers	<ul> <li>Strategic cooperation</li> <li>Satisfaction survey</li> <li>Electronic communication channels (WeChat Service, 10096 service hotline)</li> <li>Customer manager's visits</li> <li>Questionnaires</li> </ul>	<ul> <li>Guaranteeing service quality</li> <li>Customer privacy and information security</li> <li>Emergency communication supports</li> </ul>	<ul> <li>Improve service process and enhance quality management</li> <li>Innovate products and services</li> <li>Protect customer information in accordance with laws</li> <li>Improve emergency response capabilities</li> </ul>
Suppliers	<ul> <li>Purchasing</li> <li>Supplier evaluation</li> <li>Supplier portal websites</li> <li>Supplier telephone communication</li> <li>Questionnaires</li> </ul>	<ul> <li>Sustainable supply chain</li> <li>Equal and mutually beneficial cooperation</li> </ul>	<ul> <li>Cooperate with integrity, create mutual benefit and achieve a win-win situation</li> <li>Actively create an industrial ecosphere</li> </ul>

8		00	
Main stakeholders	Communication mechanisms and methods	Expectation on China Tower	Our response
Communities	<ul> <li>Community communications activities</li> <li>Volunteer activities</li> <li>Rural revitalization activities</li> <li>Questionnaires</li> </ul>	<ul> <li>Ecology and natural resources conservation</li> <li>Emergency communication supports</li> <li>Community investment and engagement</li> <li>Narrowing the digital divide</li> </ul>	<ul> <li>Implement energy conservation and carbon reduction as well as environmental protection measures</li> <li>Improve emergency response capabilities</li> <li>Promote alleviation jobs and participate in community construction</li> <li>Promote universal telecommunications services</li> </ul>
News media	<ul> <li>Media interviews</li> <li>News releases and announcements</li> <li>Questionnaires</li> </ul>	<ul> <li>Guaranteeing service quality</li> <li>Investment in scientific and technological innovation and research and development</li> <li>Emergency communication supports</li> <li>Narrowing the digital divide</li> <li>"Dual carbon" goal implementation</li> </ul>	<ul> <li>Improve service process and enhance quality monitoring</li> <li>Promote business and product innovation</li> <li>Improve emergency response capabilities</li> <li>Promote universal telecommunications services</li> <li>Implement energy conservation and carbon reduction as well as environmental protection measures</li> </ul>
Employees	<ul> <li>Employee representative conferences</li> <li>Employee activities</li> <li>Employee training</li> <li>"Secretary Communication Day" and "Through Train" of popular will</li> <li>Questionnaires</li> </ul>	<ul> <li>Employee rights protection</li> <li>Employees' career development and training</li> <li>Employees' career health and safety</li> <li>Employees' participation</li> </ul>	<ul> <li>Regulate labor management</li> <li>Improve income distribution and welfar protection mechanism</li> <li>Enhance employee training and optimize career development</li> <li>Strictly implement safety responsibilitie and increase safety production level</li> <li>Conduct democratic communication jobs</li> </ul>

# Sharing Responsibilities, Serving National Strategy

Digital infrastructure is the cornerstone for constructing Cyberpower and Digital China, and is a strategic public infrastructure for promoting high-quality economic and social development. China Tower firmly implements the mission of "co-construction and sharing", continuously, strengthens the ability of resource coordination and sharing, actively provides basic support for the development of the digital economy and emerging industries, provides technical empowerment for social governance and public service improvement, and strives to play a greate role in serving the national strategy, serving the economy and society, serving the national economy and people's livelihood.



Building a Strong
 Foundation for Cyberpower
 Serving the Construction of

- 21 Serving the Construction of "Digital China"
- 25 Providing Comprehensive Support for Emergency Disaster Relief
  - Improving the People's Wellbeing

#### Highlights in 2024

- Accumulated coverage area of buildings of distributed antenna systems was over 12.6 billion square meters, and the accumulated coverage of high-speed railway and subways mileage of distributed antenna systems was over 29,000 kilometers
- Tenancy ratio was 1.81 households/station, reflecting the continuous improvement in the results of coconstruction and sharing
- Completed **315** important communication and emergency communication assurance tasks accumulatively in the year, including **179** important communication assurance tasks and **136** emergency communication assurance tasks
- Utilizing more than 65,000 points to provide early warning services for natural disasters, such as forest fire prevention, flood prevention, anti-typhoon and others
- Deployed 77,000 battery exchange networks across
   China, and served more than 1.3 million food and parcel delivery drivers, with a cumulative number of battery exchanges of over 1.9 billion, enabling electric vehicles to travel more than 99.7 billion kilometers

United Nations' Sustainable Development Goals (SDG





### I. Sharing Responsibilities, Serving National Strategy

### **Building a Strong Foundation for Cyberpower**

Closely aligned with major strategies such as "Cyberpower", "Digital China" and "5G Infrastructure", China Tower assumes the role of the "National Team" for the construction of telecommunications infrastructure and "Main Force" for 5G infrastructure, actively supports the strategy for establishing Cyberpower, continuously facilitates the sharing, intensive construction and deployment with respect to telecommunications infrastructure resources, and collaborates with various industry stakeholders to advance initiatives like "Signal Upgrade" and "Broadband Frontier" in a down to earth manner. These efforts are conducive to fostering the high-quality development of "Dual Gigabit" network, thereby continuously reinforcing the digital foundation and deepening the integration of physical and digital realms.

#### Accelerating Connectivity of Information Arteries

In 2024, China Tower worked in collaboration with operators to further advance the construction of 5G networks, consistently enhancing both the breadth and depth of network coverage and expediting the construction of comprehensive information infrastructure that is high-speed and ubiquitous, cloudnetwork integrated, intelligent and agile, green and low-carbon, secure and controllable. This helped to create an unobstructed information channel for economic and social development.

As of the end of 2024, China Tower has accomplished:



**2.759** million 5G base station construction projects A tenancy ratio of **1.81** households/station

Under DAS business, a cumulative coverage area of buildings exceeding **12.6** billion square meters, with length of subways and high-speed railway tunnels reaching **13,000** kilometers and **16,000** kilometers.





### Case: Enhanced industry collaboration to ensure seamless signal coverage in the Shenzhen-Zhongshan Link

The Shenzhen-Zhongshan Link is a world-class mega cross-sea passage that features "two bridges, two artificial islands, and an underwater tunnel", and also serves as a crucial transportation hub for the development of a comprehensive transport system in the Guangdong-Hong Kong-Macao Greater Bay Area. As the principal entity responsible for constructing the public communication network, the Company has effectively coordinated and shared facility resources related to the main project, innovatively established a cross-industry collaboration mechanism and introduced new technological products and services, successfully overcoming multiple challenges, such as complex construction scenarios and significant technical difficulties. This effort has resulted in a comprehensive 5G network that spans "land, sea and air" for the Shenzhen-Zhongshan Link, supporting the construction of a highquality "transportation backbone" for the Greater Bay Area.



 The Company's efforts on establishing a comprehensive 5G network for the Shenzhen-Zhongshan Link, supporting the construction of a "transportation backbone" for the Greater Bay Area



### Case: Assumed the role of "National Team" in communication by successfully delivering the 5G project for the Weifang-Yantai High-speed Railway

The Weifang-Yantai High-speed Railway is a vital part of China's eight vertical and eight horizontal high-speed rail network, particularly within the Bohai Rim region. During the construction process, the Company partnered with telecommunications operators and fully capitalized on the advantages of sharing and advanced technology. We advanced the development of 5G communication infrastructure for high-speed railways using a model of "city-level coordination and implementation at the town and street levels", and creatively implemented a comprehensive 5G coverage solution that includes "outdoor macro base stations, leakage cable fixture in tunnels and DAS solutions for stations," achieving full synchronization in planning, design, construction, and commissioning with the railway project. The site sharing rate reached 100%, guaranteeing a seamless integration between the 5G network and high-speed railway projects, thereby establishing a new benchmark for shared construction within the industry.



 Shandong Branch's efforts on the 5G project for the Weifang-Yantai High-speed Railway



### Case: Contributed to comprehensive 5G coverage at the aviation logistics hub for the "Belt and Road" Initiative"

The Xi'an Xianyang International Airport Phase III Expansion Project is designed to establish a large international hub that facilitates western transportation, an aviation logistics hub for the "Belt and Road" Initiative as well as a national comprehensive transportation hub in the western region. Its civil communication network coverage project encompasses 13 single buildings, including Terminal 5 and the Ground Transportation Center (GTC), with a total coverage area exceeding 1.7 million square meters. As the coordinator and primary builder for the public network coverage project, the Company is responsible for a range of essential supporting construction tasks, involving macro base stations, DAS, micro base stations, power supply infrastructure, cable trays, and electrical connections, ensuring the stable and efficient operation of the public communication network after Phase III of the airport is officially put into operation.



### Case: Comprehensive support for advancing Heilongjiang's cultural tourism industry

The 9th Asian Winter Games in 2025 is another major international ice and snow sports event hosted in China, following the Beijing Olympics Winter Games. As the event approached, the Company completed the construction of 1,995 base stations in Harbin in 2024 for key scenarios of the "Asian Winter Games", including the full delivery of 20 new station sites in Yabuli Town and along Yaxue Highway, making a positive contribution to the comprehensive communication network coverage at the event venues.





 Heilongjiang Branch's support for the construction of base stations for the "Asian Winter Games"

#### Thoroughly Implementing Signal Upgrade

Focusing on enhancing the mobile network experience for the general public, China Tower is dedicated to continually advancing comprehensive coverage of mobile networks, improving network quality, and optimizing user awareness. In response to the Notice on Carrying Out the Special Action of "Signal Upgrade" 《關於開展 "信號升格" 專項行動的通知》 jointly issued by 11 departments including the Ministry of Industry and Information Technology, the Company made efforts to tackle challenges related to mobile network coverage and service quality in critical scenarios such as government affairs centers, cultural tourism, healthcare, universities, transportation hubs, urban subways, railways & highways, and rural towns, and assisted telecommunication operators in swiftly and effectively enhancing network coverage in public welfare settings, continually meeting the increasing demand for a better quality of life and aiding the digital transformation of key industries.



#### Case: Enhance public network coverage for the Shanghai-Suzhou-Huzhou High-speed Railway through the signal upgrade initiative

In December 2024, the Shanghai-Suzhou-Huzhou Highspeed Railway (linking Shanghai, Suzhou in Jiangsu Province and Huzhou in Zhejiang Province in the "Yangtze River Delta" region) officially commenced operations. To address the challenges and gaps in 5G infrastructure along this railway, China Tower conducted thorough on-site evaluations, implemented targeted strategies, and developed innovative and customized solutions. Consequently, the Company satisfactorily completed the construction of over 400 5G base stations along the railway route on time, improving the railway signal quality in the Yangtze River Delta. This achievement has resulted in extensive 5G coverage along the Shanghai-Suzhou-Huzhou High-speed Railway and superior network experience for passengers.



 The Company's support for establishing the Shanghai-Suzhou-Huzhou Highspeed Railway as a benchmark for smart high-speed railways in the 5G era



#### Case: Ensured full signal along the Chizhou-Huangshan High-speed Railway known as the "most beautiful high-speed railway"

Today, as passengers travel on high-speed trains and enjoy the stunning scenery along the route, many take out their phones to capture the vibrant moments, and the Chizhou-Huangshan High-speed Railway (Chizhou-Huangshan) serves as a key tourist corridor linking the prominent attractions of "two mountains and one lake" in southern Anhui. Dedicated to ensuring full signal along the Chizhou-Huangshan High-speed Railway, the Company completed the construction of 87 macro base stations, 50 tunnel portal stations, 74 kilometers of leakage cable in tunnels, and DASs at two stations within the year, guaranteeing that "the day the high-speed railway is put into operation is the day communication becomes seamless".



 Anhui Branch's contributions to ensuring "full signal" along the Chizhou-Huangshan High-speed Railway

#### Promoting Comprehensive Network Coverage

Devoted to providing universal telecommunications services, China Tower consistently enhanced the communication infrastructure in remote areas and towns and fully carried out the "Broadband Frontier" initiative to achieve extensive coverage and balanced development of mobile communication networks. In 2024, the Company actively engaged in pilot projects for universal telecommunications services and continued to advance the construction of border stations, effectively bridging the digital divide. These efforts enabled more administrative villages across the country to access the high-speed information network, fulfilling the goal that "wherever there are people, there are telecommunication towers".

To establish connections for information exchange and stimulate regional economic development, the Company determined the optimal station location after conducting several on-site surveys, and built the Enhehada Station by utilizing reinforced tower structures and equipment designed to withstand cold and wind, effectively addressing the long-standing communication challenges in the northernmost region of Inner Mongolia.



Inner Mongolia Branch's efforts on tower operation and maintenance on the Xilin Gol Grassland

In Xinjiang

In Inner Mongolia

The Company actively undertook universal telecommunications service tasks in the Turpan region. By addressing the challenges posed by complex geographical conditions in high-altitude mountainous areas, 74 base stations have been built in remote rural regions, along roadways and at scenic sites in Turpan, eliminating the issue of no signal coverage along certain roads for up to 20 kilometers.

In Jilin	The Company executed communication network coverage projects for three high-speed railways, namely, Jilin-Tumen- Huichun, Dunhua-Changbaishan and Shenyang-Changbaishan, as well as the "most beautiful border road" (G331) and the Ring Changbai Mountain Scenic Highway. In total, 353 communication base stations have been established, covering a distance of 366.46 kilometers. This initiative has ensured comprehensive signal coverage along the Yanbian section of Highway G331 and the Changbai Mountain North Slope Expressway and significantly improved communication network access for various tourist attractions.
In Chongqing	<text></text>
In Zhejiang	The Company is fully committed to implementing the "Broadband Sea Frontier (寬帶海疆)" initiative. Based on the distribution of islands and the characteristics of basic resources in Zhoushan City, the Company has developed 5G signal coverage strategies for the coastal areas surrounding each island. Several base stations on islands such as Huangxing Island, Donglvhua Island and Dapan Island have gained access to 5G network, and 5G signals have been deployed on multiple uninhabited islands, fully addressing the communication needs of traveling crew members and fishermen in the surrounding maritime areas.
In Fujian	<text></text>



### Case: Achieved comprehensive communication coverage along the Tianshan Scenic Corridor

Known as the "Tianshan Scenic Corridor", Provincial Highway S101 in Xinjiang begins in Urumqi in the east and stretches westward to Bayin Valley in Wusu, covering a total length of 301.6 kilometers. In response to the "Boosting Xinjiang's Development via Tourism (旅遊興圖)" strategy, the Company overcame challenges during construction, such as "site selection, power access, and construction difficulties", and employed solutions like material transportation by drones, manual carrying with horse assistance, and power supply by generator sets to achieve signal coverage along approximately 300 kilometers of this scenic highway, allowing tourists to enjoy seamless communication as they journey through this area.



### Serving the Construction of "Digital China"

China Tower makes every effort to empower the digital intelligence governance for thousands of industries, transform "telecommunication towers" into "digital towers" and "communication room" into "digital room", build the "space, sky, ground" full-domain perception network, and help the government improve its comprehensive management level. As of the end of 2024, China Tower has 230,000 "digital towers", which are widely used in disaster early warning, forest fire prevention, farmland protection, straw-burning prohibition, fishing law enforcement and other industry application scenarios, and have played an active role in digital governance across all fields, including mountains, waters, lakes, fields, forests, grasslands, and deserts.

#### Serving the Development of Thousands of Industries

China Tower combines its own advantages with serving the society, and provides digital intelligence solutions for various industries using "towers backed by big data, Al and edge computing power" to support the realization of the strategic blueprint of "Digital China".



The Company relies on site resources to empower digital intelligence governance





### Case: Assisting the reconstruction of meteorological observation stations and improvement of meteorological business capabilities in Beijing

In Beijing, the Company actively participates in the construction of Beijing Smart City and Resilient City. In order to help improve the meteorological observation capacity of Beijing, the capital, the Company utilizes 2,372 existing tower sites to mount different meteorological detection equipment such as wind direction and speed sensors, temperature and humidity sensors, visibility sensors, etc., which helps the meteorological comprehensive observation technology system under complex terrain, and to improve the density of meteorological monitoring and prediction accuracy.



Beijing Branch helps build a meteorological observation system

#### Serving Spatial Governance with Digital-intelligent Solutions

China Tower actively implemented the "AI+" initiative by developing a "large model for the digital-intelligent spatial governance industry" and building versatile intelligent towers with autonomous learning capabilities to foster the integrated development of "AI+" and enhance support for the strategies of Digital China and Beautiful China.

In November 2024, the Company unveiled the large model for spatial governance which comprises two key components: a large visual model and a large multimodal model. The large visual model is based on the self-supervised learning of 270 million unlabeled images at mid and high points, and precision tuning of 229,000 labeled images at mid and high points, with 18-billion parameters. Compared to smaller models, this model achieves over a 16% improvement in average precision and over a 13% improvement in average recall for object detection. The large multimodal model, featuring 200-billion parameters, offers capabilities for object detection, zero-shot open detection, and image-text question answering & inference, making it highly applicable across various spatial governance fields, including "mountains, rivers, forests, fields, lakes, grasslands, and deserts".

Empowering the spatial governance sector		Facilitating intelligent upgrades in the industry		Supporting infrastructure construction and maintenance	
•	Emergency management	•	Improving data processing and analysis efficiency	•	Infrastructure monitoring
•	Forestry and grassland conservation	•	Empowering intelligent decision-making	•	Construction planning support
•	Land resource management	•	Optimizing resource allocation		
•	Water conservancy monitoring				
•	Environmental protection				
•	Agricultural applications				

#### Serving New Scenarios and Businesses

Leveraging its extensive digital infrastructure and technological innovation capabilities, China Tower actively fostered digital innovation outcomes, contributed to the development of new digital scenarios and businesses and fulfilled the mission of establishing a strong foundation for Digital China and paving the way for the digital economy.

#### Improving the edge computing power architecture

As the digital economy thrives, computing power is increasingly becoming diverse and pervasive. By utilizing our distributed computing power resources, we have transformed "communication rooms" into "data centers" and begun constructing distributed computing power pools, laying the groundwork for a nationwide, multi-level interactive, network-wide and independently controllable distributed computing power architecture. Moreover, we actively integrated into the public computing power system to promote widespread, on-demand, and inclusive access to computing power resources.



In 2024, the Company partnered with the China Academy of Information and Communications Technology, telecommunications operators, and communication equipment manufacturers to release the industry's first research report on edge computing power, titled Blue Book on Edge Computing Power, at the PT EXPO 2024. Additionally, the Company took the initiative to apply for three industry standards, fostering a broad consensus on the development of edge computing power within the industry and speeding up its integration with the real economy.



 The Company released the Blue Book on Edge Computing Power through collaboration with various parties

#### Developing low-altitude economy scenarios

By leveraging its core resource capabilities in "location, perception, and computing", the Company actively explored new scenarios and applications in the low-altitude economy. By the end of 2024, we have established a low-altitude infrastructure network, an intelligent networking system, and a service network, utilizing over 2.1 million towers and nearly 1 million machine rooms nationwide. These platforms integrate a wide range of full-field sensing equipment, including video terminals, IoT devices, radar, drones, and satellite remote sensing, thus empowering diverse industries such as emergency response, environmental protection, water conservancy, and land administration.

#### Aviation big data platform

The Company has developed and launched an "ADS-B Based Aviation Big Data Platform", which provides essential functions such as tracking the trajectories of major domestic flights, managing flight safety, optimizing flight routes, querying flight routes, querying flight statuses and monitoring remote equipment malfunctions, significantly enhancing safety in low-altitude airspace.



#### Drone flight control platform

The drone flight control platform developed by the Company allows for a seamless transition from video input to flight control and management of drones, enabling centralized management and unified scheduling for drones, airports and mounted equipment across the country. By leveraging our core tower resource advantages, we have established capabilities for drone operation and control, empowering higher-level government industry applications and promoting the high-quality development of the low-altitude economy.



#### Expanding navigation in covered spaces

Covered spaces, such as underground parking lots, underground utility tunnels, and indoor spaces within buildings, commonly face navigation errors and delays caused by the obstruction of satellite navigation signals. In response, the Company has innovatively developed the "DAS + BeiDou" navigation system tailored for these environments. By integrating "algorithms, platforms, and applications", the Company has created a high-precision positioning and navigation technology for underground spaces that combines BeiDou technology with core DAS resources, enabling seamless navigation both indoors and outdoors while effectively addressing the disconnection issues typical of traditional indoor navigation systems.

Algorithm	The "DAS + BeiDou" positioning and navigation algorithms capitalize on existing DAS equipment and maintenance teams, resulting in reduced maintenance costs. The single-frequency algorithm boasts positioning accuracy of 2 to 6 meters, while the dual-frequency algorithm achieves accuracy of 3 to 5 meters.
Platform	The "DAS + BeiDou" spatiotemporal service operation platform integrates diverse positioning technologies and advanced navigation algorithms, providing integrated precise positioning and intelligent navigation services for both indoor and outdoor settings.
Application	The Tower Map App has been implemented for demonstration projects in a 1.5 million square meter underground parking lot in Xiong'an New Area, achieving accuracy at the parking space level. Practical features such as real-time monitoring of parking spaces, reverse car locating, and navigation to charging stations are now fully operational.





Underground BeiDou spatiotemporal information platform



### Providing Comprehensive Support for Emergency Disaster Relief

Emergency communication is the premise and foundation for the government and various sectors of society to execute emergency management operations and plays a vital role in safeguarding the lives and property of the public. Committed to the principles of "bottom-line thinking, extreme-case thinking", China Tower took a proactive role in providing essential/emergency communication support during significant events and natural disasters by establishing a professional emergency team, equipping specialized support resources, and enhancing emergency response capabilities, with the aim of protecting the "lifeline", "supply line" and "command line".

#### **Ensuring Communication to Support Emergency Disaster Relief**

In response to the frequent extreme natural disasters, the Company ensures a coordinated national response. By improving systems and mechanisms, enhancing hazard identification and communication coordination, and ensuring the effective implementation of emergency plans and deployment of support personnel, the Company has made a significant contribution to restoring communication and ensuring a stable power supply in the aftermath of disasters. In 2024, the Company optimized and improved 291 different emergency plans, conducted 951 emergency drills and completed 136 emergency communication support tasks. Throughout our responses to various natural disasters, we invested the following support resources: 564,000 personnel, 253,000 vehicles, 647,000 generator sets, 1,000 satellite phones, one mid-sized to large drone and 46 sets of large specialized equipment, providing 362,000 power support services.



Case: Fully restored communication services in the earthquake-hit area in Shigatse to fulfill the mission of protecting the "lifeline"

On 7 January 2025, a 6.8 magnitude earthquake struck Dingri County in Shigatse, Xizang, severely threatening the lives and property of the local population. The Company swiftly activated the earthquake emergency communication support plan and collaborated with telecommunication operators to repair damaged base station sites. Tibet Autonomous Region Branch mobilized 12 emergency teams, equipped with essential supplies such as oil lamps, satellite phones, tents, and food, to aid the disaster area and restore communication. Moreover, the Company effectively utilized the "general stations" for earthquake monitoring and early warning in the affected region to provide data support for earthquake data monitoring.



Xizang Branch quickly went to the Shigatse site following the earthquake to provide communication support



### Case: Fully committed to combating Typhoon "Mokha" in Hainan, demonstrating our commitment to the people

On 6 September 2024, the super typhoon "Mokha" made landfall in Wenchang, Hainan, resulting in unprecedented widespread destruction. In response to this disaster, we promptly established a frontline command division and issued emergency command and dispatch guidelines to expedite assistance to the impacted areas of Hainan. We partnered with government agencies, power companies, and telecommunications operators to ensure the provision of emergency power supply and repair services in the most severely affected areas. During the support operations, we deployed a total of 18,903 personnel, 7,435 vehicles, 19,805 generator sets, and 2,613 satellite phones. Thanks to our relentless efforts, we successfully restored signal communication in 1,114 administrative villages in five severely impacted cities and counties, including Haikou and Wenchang by 17 September, just in time for the Mid-Autumn Festival.



Staff from Hainan Branch are transporting relief equipment



### Case: Ensured emergency communication during extreme heavy rainfall in Jianchang, Liaoning

In August 2024, Jianchang County in Huludao City, Liaoning, faced relentless heavy rainfall, which led to severe flooding and geological disasters. In response, we immediately activated our emergency response plan and established a "Temporary Emergency Communication Support Command Center" while forming four-tiered support teams in 13 other cities in Liaoning to efficiently deploy support resources, successfully restoring essential services, including power supply to base stations in the affected areas.

Over this period, we mobilized a total of **1,998** personnel, **898** repair vehicles, **3,260** generator sets, and **142** satellite phones, thereby ensuring effective emergency communication support during this major natural disaster. Additionally, we received letters of appreciation from the Liaoning Provincial Party Committee and Government, and three telecommunications operators for our efforts.

### Case: Ensured emergency communication during fire incidents in Ganzi, Sichuan despite challenges



 Sichuan Branch's emergency communication operations in response to the fire incident

From 15 to 16 March 2024, a fire broke out in Yajiang County, Ganzi, Sichuan, resulting in widespread power outages and service suspensions at numerous base stations. The Company swiftly activated a Level II emergency response, rapidly deploying resources to provide emergency communication support. By the early morning of 18 March, a total of 40 emergency support personnel, 20 emergency vehicles, 36 generator sets, and four satellite phones had been dispatched. All 12 communication base stations in the vicinity of the disaster area were staffed around the clock to ensure communication support for the frontline forest fire command center and the disaster relief operations along the route.

### Case: Created a robust defense for communication security by building "fortress base stations"

The new disaster-resistant fortress base stations represent a permanent communication infrastructure designed to enhance communication during disaster recovery in high-risk geological and hydrological areas, and can be utilized for disaster prevention and response in extreme weather conditions. In June 2024, our first "fortress base station" in Beijing was completed in Fozizhuang Township, Fangshan District. Compared to traditional base stations, the "fortress base station" features high-strength equipment rooms and specialized self-starting generator rooms, backed by large-capacity, high-stability battery systems and other supporting power systems. It employs a "structured optical cable + satellite link" transmission system and incorporates innovative technologies such as drones, emergency broadcasting, and BeiDou short message terminals to ensure the stable operation of communication facilities under extreme conditions, thereby strengthening the defense line for communication security.





 Beijing Branch's efforts in building the new disaster-resistant fortress base station



#### Case: Launched a communication defense initiative to support multiple regions nationwide in tackling extreme heat

In the summer of 2024, numerous regions across the country experienced extremely high temperatures, resulting in issues such as equipment failures, battery performance degradation, and safety hazards for various communication base stations. Our employees nationwide took part in the defense initiative to tackle communication disruptions caused by the summer heat.

- Henan Branch took proactive steps to address high-temperature challenges by launching a special campaign titled "Spring Treatments for Summer Illness". Through pre-inspections and pre-repair efforts, potential safety hazards were identified and resolved in a timely manner. Furthermore, a specialized analysis model was created to evaluate irregularities at various sites, providing a robust data foundation for frontline maintenance teams.
- Sichuan Branch successfully fulfilled their support responsibilities during the summer peak season by forming a dedicated working
  group, establishing a 24-hour emergency support team, implementing a 2-hour heat alert monitoring and escalation mechanism,
  developing a specialized emergency plan for extreme heat events, enhancing inspections of peripheral base stations and
  maintaining round-the-clock monitoring shifts.

#### **Providing Robust Communication Support for Major Events**

Efficient and reliable communication services and technical support are crucial for the successful execution of major events. In 2024, China Tower utilized its well-established communication capabilities to deliver communication support for national large-scale events, international conferences, and significant competitions. We successfully completed 179 significant communication support tasks, including events celebrating the 75th anniversary of the founding of the People's Republic of China, the 7th China International Import Expo, the launch of the Shenzhou 19 manned spacecraft, and the International Horticultural Exhibition in Chengdu. A total of 173,000 personnel, 88,000 vehicles, 152,000 generator sets, 1,000 satellite phones, and one mid-sized to large drone were deployed for these events.



### Case: Significant communication support for the 75th anniversary of the founding of the People's Republic of China

The year 2024 marks the 75th anniversary of the founding of the People's Republic of China. To ensure effective communication support during the National Day celebrations in the capital, we collaborated with telecommunication operators to organize joint support operations in key areas, adhering to the requirements of "pursuing further excellence and perfection". We identified 1,164 key support station sites and developed tailored emergency support plans and inspection schedules for each site. Throughout the support period, we deployed a total of 2,142 personnel, 806 vehicles, and 420 emergency generator sets, and conducted 7,317 site inspections, thereby successfully fulfilling the communication and service support requirements for this significant anniversary.



 The Company's contribution to smooth communication for the 75th anniversary of the founding of the People's Republic of China



### Case: Significant communication support for the 7th China International Import Expo

In November 2024, the 7th China International Import Expo was hosted at the National Exhibition and Convention Center (Shanghai). During the expo, we adopted various high-efficient and collaborative strategies, focusing on software innovations and hardware enhancements; for example, we implemented digital modeling technology in high-security support scenarios for the first time and innovatively introduced the "Digital Twin Support Platform for a Smart Expo (智慧進博數字孿生保障平台)". Throughout the support period, we deployed a total of 1,259 personnel, 509 vehicles, and 685 fuel generator sets to ensure the successful execution of the expo.





#### Case: Ensured safety at the drone venue for the "Third National Eco-Environment Monitoring Technical Personnel Competition"

On 27 and 28 October 2024, the national finals of the Third National Eco-Environment Monitoring Technical Personnel Competition took place in Nantong City, Jiangsu Province, and we were tasked with ensuring airspace safety at the emergency monitoring drone venue. Utilizing high-altitude video monitoring and drone management technologies, we established no-fly zones and restricted access to the venue prior to the event. Additionally, we provided panoramic displays of the competition inside the venue and conducted airspace supervision, successfully fulfilling our event support responsibilities.

#### **Promoting Nationwide Disaster Relief and Prevention**

In the realm of disaster prevention and relief, the network signals carried by communication towers play a critical role in command and coordination during rescue operations, acting as an essential "lifeline" during crucial moments of disaster response. China Tower actively participated in the national emergency management strategy by innovating and developing large models for spatial governance and universal intelligent towers, which contributed to the digital and smart advancement of emergency management. By the end of 2024, we have offered early warning services for natural disasters, such as forest fire prevention, flood control, and typhoon relief, through more than 65,000 monitoring points. Furthermore, a national earthquake monitoring and early warning network has been established by utilizing over 15,000 machine room resources, enhancing smart emergency response capabilities and bolstering the nation's disaster prevention and relief information infrastructure.

Earthquake early warning	<ul> <li>We collaborated with the China Earthquake Administration to plan and design the technical framework for general stations for the National Seismic Intensity Rapid Reporting and Early Warning project. By leveraging site machine rooms, communication towers and power supply resources, we have built early warning network facilities that seamlessly integrate into the national earthquake early warning system.</li> <li>In July 2024, the National Seismic Intensity Rapid Reporting and Early Warning project successfully passe its completion acceptance, earning us a collective first prize.</li> <li>At the end of 2024, our Industry Development Department was awarded collective second-class merit by the China Earthquake Administration for their work on the National Seismic Intensity Rapid Reporting and</li> </ul>				
	<ul> <li>Early Warning project.</li> <li>The monitoring, integration, and operation and maintenance technology development project for the network system of the National Seismic Intensity Rapid Reporting and Early Warning project received the third prize in the Quality Technology Award from the China Association for Quality.</li> </ul>				
Flood and drought prevention	We continued to advance the development of our big data disaster monitoring platforms, facilitating the establishment of a rapid identification and analysis mechanism for flood conditions across the nation. In 2024, we provided over 50,000 video feeds to support flood prevention operations by the Ministry of Emergency Management and the Ministry of Water Resources while also monitoring water conditions and urban flooding during peak flood season across seven major river basins: the Yellow River, Yangtze River, Huai River, Hai River, Pearl River, Songhua River, and Taihu Lake, which together span 30 provinces.				
Forest fire prevention	Through the integration of various forest fire early-warning methods, including satellite fire alerts and traditional patrols, the Company has developed a "space-sky-ground integrated three-dimensional monitoring system", and established over 60,000 frontend monitoring points, covering nearly 500,000 square kilometers of forested areas.				
Meteorological monitoring	The Company assisted the Shanghai Meteorological Service in completing China's first vertical temperature fiber optic observation experiment, which achieved precise temperature gradient observations from ground level to 50 meters in height, thus addressing a gap in vertical temperature data in the country.				



### Case: Made every effort for disaster relief at Tuanzhouwan, Huarong County

In July 2024, a levee breach occurred in the Tuanzhouwan area along Dongting Lake in Hunan Province. The Company responded promptly by assisting relevant authorities in activating video signals near the breach site, and our tower monitoring platform was employed to comprehensively and accurately display real-time monitoring condition, capture vital information such as rising water levels and evaluate the direction, speed, and extent of the flooding, providing technical support for improving emergency rescue efforts and ensuring effective command and coordination.

### Improving the People's Wellbeing

China Tower pays close attention to the needs of the people's livelihood and provides diversified new energy application services such as battery exchange, charging, and power backup to the society, so as to bring more convenient new energy travel to the public; empowers and provides intelligence for disaster monitoring and early warning, helping public to "save time" in disaster prevention and mitigation work; relying on the video resource advantages of the tower monitoring platform, allows the general public to experience the spectacular natural scenery and rich cultural heritage from all over the country in the form of slow streaming.

#### Sharing Energy for the Convenience and Benefits of the Public

Based on its resource endowment, abundant site resources, power supply capabilities and localized maintenance capabilities, China Tower has built a distributed power network and energy storage system, and carried out battery exchange and charging network construction across China. It provides more convenient and safe battery exchange and charging services based on the different needs and usage scenarios of food and parcel delivery drivers and community residents, etc. In addition, the Company actively creates a comprehensive power backup solution, deepens the sharing of energy applications, and serves the society for the convenience and benefit of the public.

#### Make battery exchange more convenient

The Company continues to deploy a large-scale battery exchange network, focus on popular areas such as core business districts and food delivery, and provide fast battery exchange services for food and parcel delivery drivers. By replacing "charging" with "exchange", the Company helps solve the problems of slow and unsafe charging of electric vehicles and improves delivery efficiency of the drivers. By the end of 2024, the Company has deployed 77,000 battery exchange stations in 320 cities, serving over 1.3 million food and parcel delivery drivers, achieving battery exchange of over 1.9 billion times and electric vehicles for over 99.7 billion kilometers in total, which is equivalent to reducing carbon emissions by over 3.3 million tons.

Case: Taking the lead in planning and accurately deploying the battery exchange network



considering the layout of urban development, core business districts and commercial resources, the Company optimizes the layout of battery exchange cabinets based on the service needs of local residents and scenarios such as newly opened areas and new stores, and carries out precise deployment based on user needs and regional characteristics. In 2024, the Company built over 700 battery exchange cabinets and deployed over 4,000 battery exchange stations in Shandong Province.

In Shandong, by comprehensively

Food delivery drivers use China Tower battery exchange services

#### Make charging more secure

In order to further solve the charging problem of the public, the Company has made great efforts to create a "charging project for the convenience and benefits of the public". By the end of 2024, there are 2.875 million charging ports have been built and operated, serving over 22 million users. At the same time, the Company has developed and built a centralized supervision platform for electric bicycle charging, which could access the data of charging pile operating companies, effectively monitor their operations and service behaviors, and realize the visualization, management and control of all charging ports and batteries, ensuring the safety of charging facilities and electric bicycles, and escorting residents to travel without worries.



A supervision platform for electric bicycle charging jointly created by the Company and multiple parties



In 2024, the Company was invited to join the "Full-Chain Rectification Working Special Group for National Electric Bicycle Safety Hazards" as an important member unit. As an important member unit, the Company works with the National Fire and Rescue Administration, the Ministry of Industry and Information Technology, the Ministry of Housing and Urban-Rural Development, etc. to jointly promote the rectification of charging safety hazards and carry out relevant policy formulation for the construction of low-speed charging piles, which contributed a solid force for the rectification of charging safety hazards.



#### Case: Supporting Shanghai in carrying out a full-chain rectification for electric bicycle safety hazards

------

In order to reduce safety accidents such as electric bicycle fires, the Company participated in a full-chain rectification for electric bicycle safety hazards in Shanghai, and regarded the health assessment and scrapping and recycling of lithium-ion batteries for electric bicycles as a special key task. Through close collaboration with relevant government departments, the Company has selected a group of qualified and capable battery recycling companies, and combined with high-precision equipment to conduct a comprehensive assessment of the battery health status. The Company has set up formal waste lithium battery recycling points in key locations such as electric bicycle sales stores, repair shops, and community service centers to ensure that the batteries could be recycled and processed in a timely and effective manner. At the same time, the Company also participated in the research and development of network monitoring and safety management technology for electric bicycle charging and battery exchange facilities in Shanghai, and received high recognition from the Shanghai Emergency Management Bureau.

#### Make power backup more reliable

Relying on visual, manageable and controllable intelligent monitoring platform, mature local construction and maintenance capabilities, the Company focuses on typical scenarios of customers in key industries such as finance, transportation and medical care, extends its mature communication base station power backup capability to the society, provides a comprehensive solution for power supply, power generation, monitoring and maintenance, expands the service scope of "tower energy steward", and builds a comprehensive solution for "power backup+" industry. A total of 142,000 backup power points have been developed. In 2024, the Company carried out nearly 1,000 power backup events, providing professional power supply support for numerous large-scale national events.





### Case: Helping enterprises to achieve green transformation and development

In Hebei, the Company cooperates with local postal enterprises to provide them with energy stewardship services such as power backup, power generation, charging, photovoltaic power generation and comprehensive energy conservation. By the end of 2024, 530 power backup points had been deployed in postal financial outlets in Hebei Province, including 3 photovoltaic pilot outlets and 24 comprehensive energy-saving outlets. While ensuring the stable operation of outlets, it helped enterprises to achieve refined energy management and accelerate the process of green transformation of enterprises.



### Case: Supporting the smooth convening of the International Horticultural Exhibition Chengdu

From 26 April to 28 October 2024, the International Horticultural Exhibition Chengdu (the Expo) was grandly held at the main venue of the Expo in Chengdu Eastern New Area. In view of the large scope of protection and relatively scattered equipment at the Expo, the Company has formulated a complete technical solution and emergency plan, and undertaken the power support task for the opening and closing ceremonies of the 38th International Horticultural Exhibition. During the support period, a total of 3 generators, 14 UPS (uninterrupted power supplies), 5 ATS (automatic transfer switches) and 46 related power distribution equipment were put into use, and the acceptance and drills of the onsite power support system were successfully completed, which providing a strong support for the smooth convening of the opening and closing ceremonies of the Expo, and received high praise from the Executive Committee of the Conference.



The Company fully supports the Chengdu Expo's power support
## Case: Supported Chongqing's summer peak power supply

In Chongqing, in response to the electricity supply shortage faced by some enterprises during the summer peak period, the Company developed customized power supply assurance plans for major industrial production enterprises, ensuring stable electricity supply throughout the peak summer season. The Company provided over 150 generator sets and deployed more than 300 power support personnel. The guaranteed power demand capacity reached nearly 80,000 kilowatts, successfully ensuring stable electricity supply for major production enterprises during the summer peak period.

## Shared Appreciation of Magnificent Landscape

"Slow live streaming," with its authentic real-world presentation and extended real-time recording, is increasingly popular among the public. Leveraging its extensive tower-mounted camera resources, China Tower has collaborated with multiple mainstream media outlets and platforms to conduct slow live streaming of tourist attractions, transportation hubs, picturesque villages, cultural events, and more. This initiative enables people to appreciate the country's breathtaking landscapes and experience diverse cultural scenery without leaving their homes.



#### Case: Experiencing the 2024 Yangtze River Cultural and Artistic Season with China Tower's slow live streaming

In September 2024, during the inaugural Yangtze River Cultural and Artistic Season, the Company, in collaboration with the People's Government of Hubei Province, leveraged its "elevated tower vantage points, low-altitude economy (drone patrols), and professional live commentary" to conduct a real-time slow live stream of the light show, fireworks display, and drone performance, presenting the cultural and scenic beauty of Wuhan's four riverfronts in stunning detail. The high-quality, real-time, and immersive footage immediately captured widespread online attention, with a total audience of 239,000 and a peak of 14,000 concurrent viewers on the day of the event.



Hubei Branch presented live images of the Yangtze River Cultural and Artistic Season through slow live streaming



## Case: Traveling through film memories with China Tower's slow live streaming

In October 2024, the Company partnered with China Xinhua News Network Corporation to launch the slow live streaming program "Aerial China: Traveling Through Film Memories." This program provided real-time footage of filming locations from dozens of classic Chinese movies. During the six-hour live broadcast, viewers journeyed from the ancient townscapes of Lijiang in Riding Alone for Thousands of Miles, to the picturesque Jiangnan scenery in A Dream of Splendor, and finally to the magnificent snow-capped plateau in One Mile Above. These breathtaking landscapes, paired with cinematic memories, took online audiences on a soulful journey.

#### Joint Efforts to Preserve Historical and Cultural Heritage

Historical and cultural heritage is an important symbol of a nation's and people's historical and cultural achievements, recording the continuous development of the Chinese nation. Leveraging "Tower + Big Data + Al," China Tower has developed the "China Tower Cultural Relics Intelligent Protection Platform." Through visualization, it integrates key business data such as security equipment and alarm information, enabling real-time remote monitoring, focused surveillance, and unified data analysis by regulatory authorities. At the same time, the Company actively explores the use of drones and collection devices to efficiently and comprehensively gather key cultural relics data in a short period, providing solid support for the protection and research of historical and cultural heritage.



• Comparison of nighttime monitoring effectiveness at Baishi Cliff Monastery, Xiahe, Gannan



## Case: Smart eyes guarding the "Ancient Architecture Treasure Trove"

Shanxi Province boasts a wealth of historical and cultural heritage, with the highest number of national key cultural relics protection units in the country. To enhance cultural relics protection efforts, the Shanxi Branch utilized its highpoint resources, combining video surveillance, IoT sensors, and other technologies to build a cultural relics security monitoring platform. Covering over 1,100 cultural relic sites across the province, this platform strengthens the safety information management, risk monitoring, and early warning capabilities for both the relics themselves and their surrounding environments, making communication towers the "guardians" of historical relics.



Cultural relic safety monitoring platform of Shanxi Province



# Jointly Protecting the Ecosystem to Safeguard our Green Home

A healthy ecological environment is the foundation of a good life and a common aspiration shared by all people for a better future. China Tower actively integrates the concept of green and low-carbon development into its corporate strategy. Aligned with the Company's "One Core and Two Wings" strategy, it continuously deepens its focus on the principles of prioritizing sharing, energy efficiency, and the greening of energy use, empowerment, industries, and production. This strategy, known as "Two Priorities and Four Greens," is centered on ecological environmental protection, infrastructure development, innovative solutions, green energy utilization, and low-carbon office opperations. China Tower strives to be a key driver in the creation of a resourceconserving and environmentally friendly society and aims to play a greater role in the comprehensive green transformation of economic and social development.

40	Providir	ng Multio	dimensic	nal
	Suppor	t for Eco	logical F	rotection
AL SALE	A TANK		19 Barnel	

- 46 Promoting Green Transformation and Development
- 50 Practicing Green and Low-carbon Operation
- 54 Actively Responding to Climate Change

## Highlights in 2024

 The sharing rate of newly built towers increased from 14.3% at the Company's inception to 86.2%, reducing CO2 emissions by 33 million tons with the French

- A total of 45,000 station sites have been equipped with photovoltaic systems, with 14,000 added in 2024, supporting power generation and operation
- In 2024, the photovoltaic systems at base stations provided 200 million kWh of green electricity, reducing CO2 emissions by 112,000 tons
- The automatic energy-saving control rate for base station air conditioning reached 86.0%, enabling Al-based energy-saving control for 615,000 air conditioners based on the equipment room environment. This results in an annual saving of 330 million kWh of electricity

United Nations' Sustainable Development Goals (SDG



# II. Jointly Protecting the Ecosystem to Safeguard our Green Home

## **Providing Multidimensional Support for Ecological Protection**

Leveraging its "extensive nationwide presence, numerous and wide-spread site coverage, and high-point monitoring capacities," China Tower has developed innovative solutions such as blue sky smart protection and river & lake smart protection. These solutions integrate ground-based monitoring stations for ecosystems, environmental conditions, meteorology, hydrology and water resources, soil and water conservation, and marine environments. By harnessing cloud computing, the IoT, and other digital technologies, China Tower enhances the monitoring of comprehensive ecological systems – spanning mountains, rivers, forests, farmlands, lakes, grasslands, and deserts. These efforts support ecological governance and biodiversity conservation, leveraging technology to contribute to the vision of a beautiful China.

## Joint Efforts to Preserve Land Resources

Land resources serve as the cornerstone of national survival and development, providing essential support for economic growth and acting as a spatial carrier for ecological civilization. Protecting land resources is crucial to national security and public well-being. China Tower leverages comprehensive intelligent monitoring technologies to assist law enforcement agencies in addressing challenges such as illegal construction and unauthorized resource extraction. By supporting regulatory authorities in building an integrated natural resource management system – combining aerial surveillance, on-site inspections, video monitoring, and online oversight – the Company enhances land resource protection capabilities. As of the end of 2024, China Tower had established approximately 90,000 monitoring sites for farmland protection, protecting nearly 100 million mu of arable land nationwide.



Case: "Smart Land Management" – empowering natural resource protection through tower infrastructure

To address challenges faced by natural resource management authorities, such as insufficient grassroots manpower and resources, delayed data access, and difficulties in regulatory enforcement, the Jiangxi Branch, in collaboration with the Jiujiang Natural Resources Bureau, launched the "Smart Land Management" pilot project in Duchang, Jiujiang. This project utilizes shared telecom towers to install high-altitude video monitoring points, enabling roundthe-clock surveillance of farmland and mining activities. As of the end of 2024, a total of 4,235 high-altitude monitoring points had been deployed across Jiangxi Province, significantly improving the efficiency of identifying and addressing regulatory violations. The project received the Excellence Award in the national "Guanghua Cup" Gigabit Optical Network Application Innovation Competition and won First Prize in the Natural Resources Industry Category of the Jiangxi regional competition for the "Blossom Cup" 5G Application Collection Competition, as well as Third Prize in the overall regional finals.



Mining protection surveillance footage of Jiangxi Branch



# Case: "Smart Farmland Protection" strengthened Zhejiang's farmland monitoring system



Preserving arable land is fundamental to securing agricultural acreage and ensuring grain production. In 2024, the Zhejiang Branch actively promoted an integrated "human oversight + technological defense" solution for farmland protection. The initiative deployed and activated approximately 15,000 high-altitude video monitoring units on telecom towers across 90 districts and counties in Zhejiang, enabling precise detection of farmland violations. This provided robust technological support for the protection and management of natural resources.

• Real-time monitoring and alert footage for provincial farmland smart protection in Zhejiang Branch

## Joint Efforts to Safeguard Blue Skies and Clear Waters

China Tower leverages its extensive network of tower sites to contribute to innovative models for air pollution prevention and water environment management. By deploying monitoring points for straw burning bans, air pollution hotspots, and sewage discharge supervision, the Company dynamically tracks pollution sources in surrounding areas, supporting the protection of blue skies and clear waters. As of the end of 2024, the Company had established over 32,000 monitoring points, enabling real-time monitoring of straw burning across 480 million mu of farmland nationwide. Additionally, more than 17,000 monitoring points were deployed to support water authorities in river and lake management, water environment pollution prevention, and other regulatory services, covering over 4,900 river sections and more than 3,000 reservoirs.

In Chongqing Supporting Air Quality Monitoring	Leveraging tower base station resources, the Company deployed drone nests equipped with AI recognition technology and air monitoring devices to conduct real-time surveillance of air pollution incidents. The system automatically detects suspected warning signals, enhances tracking, conducts secondary analysis, and pushes automated alerts, assisting local environmental protection departments in strengthening air quality regulation and contributing to the battle for blue skies.
In Jiangxi Safeguarding Drinking Water Safety	The Company supported the development of an intelligent regulatory project for water source protection. By integrating "towers + big data + AI" in water source protection zones, a multi-technology "sky-ground" intelligent monitoring network was established to provide 24/7 surveillance of illegal activities. This initiative has effectively maintained a record of zero pollution incidents in water source areas, enhanced risk resilience, and safeguarded the drinking water safety of urban residents in Ganzhou City.
In Hebei Supporting River and Lake Ecological Restoration	The Company assisted in the establishment of Hebei Province's river and lake monitoring platform by deploying 12,000 high-point cameras. These cameras provide comprehensive, round-the-clock, and intelligent monitoring across 1,386 rivers, 23 lakes, 1,027 reservoirs, 13 flood detention areas, and 15 dispatch hubs within the province. The system enables intelligent analysis, precise identification, and automated alerts for illegal sand mining, waste dumping, unauthorized construction, and floating debris. These digital management tools support water conservancy departments at all levels in effectively restoring the ecological environment of rivers and lakes.
In Guizhou Protecting River Ecology	By integrating 5G, IoT sensors, drones, and high-definition video surveillance with AI neural network-based video analysis, the Company enhanced intelligent behavioral analysis capabilities for environmental monitoring. The system identifies activities such as water pollution, illegal fishing, unauthorized electrofishing, prohibited angling, and illegal boating. Real-time alerts generated by front-end cameras and IoT monitoring devices improve law enforcement efficiency and reduce manual management costs.

## Joint Efforts to Preserve Forests and Grasslands

China's forests and grasslands are rich in biodiversity, home to many rare flora and fauna, and present significant challenges for ecological protection. China Tower leverages its site resources and unique height advantages by deploying dual-spectrum cameras, satellite-based wildfire early warning systems, and traditional patrol methods to establish an integrated air-ground-space monitoring system, enabling digital protection of forest and grassland resources.



In collaboration with the Department of Emergency Management of Guizhou Province, the Company developed a pilot project for emergency communications in forest fire prevention and control. By integrating high-altitude monitoring, drones, automated drone nests, AI, cloud computing, and big data technologies, an intelligent forest fire prevention system was established. Upon detecting a fire, the system can issue a flight task within three minutes, launching the nearest drone nest to assess an approximately 20-square-kilometer area around the fire site, forming a diversified, all-dimensional, and multi-tiered monitoring system.

In Guizhou

In Shandong



Intelligent forest fire prevention UAV on standby

The Company supported Tai'an City, Shandong Province, in launching the "Sky Eye Mountain Protection" project. By utilizing pole and tower resources within forest areas, 122 high-altitude monitoring points and 387 low-altitude checkpoint points were constructed, achieving full coverage of state-owned forests and key forest regions in Tai'an City. Since its deployment, the system has triggered 136 effective fire alerts, enabling timely response to fire incidents and significantly reducing fire hazards.



• "Sky Eye Mountain Protection" surveillance footage of Shandong Branch

## Joint Efforts to Preserve Biodiversity

China Tower actively responds to the national biodiversity conservation strategy by assisting in the establishment of a comprehensive and multidimensional monitoring system for wetlands and nature reserves. Through the deployment of high-altitude "Eagle Eye" panoramic video surveillance and low-altitude high-definition cameras, coupled with a wildlife protection and monitoring platform based on image recognition systems, the Company facilitates the sharing and interaction of information resources within nature reserves. This initiative enhances the ecological carrying capacity and overall ecological benefits of the reserves, fostering harmony between humans and nature.

As of the end of 2024, China Tower has collaborated with forestry and grassland authorities to implement digital monitoring, ecological surveillance of reserves, ancient and rare tree protection, and wildlife monitoring services in 74 nature reserves and 50 wetland reserves nationwide.

#### Protecting rare birds

In Yunnan	China Tower has engaged in extensive joint research and development with scientific institutions and nature reserves on artificial intelligence (AI) algorithms and wildlife specimen databases. The Company has established image sample databases and developed AI algorithm models for eight unique wildlife species, including the hornbill, green peafowl, Asian elephant, and black-necked crane. This innovation enables the efficient screening of massive wildlife surveillance footage and real-time online identification of wildlife protection activities.
In Hebei	China Tower supports intelligent monitoring for avian protection research. Leveraging 43 smart monitoring stations, the Company provides early warnings for boats and personnel entering bird habitats. Additionally, with big data technology, the system facilitates population counting, statistical analysis, and the discovery of new species, contributing to the transformation of Baiyangdian into a "paradise for birds."
In Jiangsu	China Tower has contributed to the establishment of an "integrated air-ground" monitoring network system at the Jiangsu Yancheng Wetland Rare Birds National Nature Reserve, providing scientific data for biodiversity conservation and monitoring the dynamic changes of key species populations.
In Jiangxi	China Tower has collaborated with the Wuyuan Forest Bird National Nature Reserve to create a high-altitude intelligent monitoring platform for the reserve. The platform features five high-altitude video monitoring points and one monitoring station strategically deployed across forested areas, lake surfaces, and wildlife habitats, enhancing the protection of the living environment for birds in Wuyuan.
In Liaoning	China Tower has established a comprehensive monitoring network for the Chinese merganser in areas where the species is most concentrated. By extending power and network transmission from base stations, the Company has set up eight additional low-altitude monitoring stations around the habitat. This multi-perspective video data collection supports the development of an ecological monitoring service platform.
In Qinghai	At Zhuonai Lake in Hoh Xil within the Sanjiangyuan National Park, China Tower, in collaboration with telecom operators, has deployed 5G base stations. By integrating "5G remote video inspection + on-site patrolling," the initiative has replaced traditional manual inspections, enhancing the management efficiency of ranger stations while significantly improving the safety of patrol personnel.



# Case: Video surveillance + AI recognition algorithm for biodiversity protection

In Tongbiguan Nature Reserve, Dehong, Yunnan, China Tower has integrated a hornbill AI recognition algorithm into video surveillance systems, successfully capturing invaluable footage of the hornbill's entire nesting and breeding process for two consecutive years. In Yuanjiang National Nature Reserve and Nanpeng River Nature Reserve, Lincang, Yunnan, the Company has collaborated with the Kunming Institute of Zoology, CAS, to develop a green peafowl AI recognition algorithm. This technology has identified green peafowl within vast historical surveillance footage and has enabled the real-time detection of over 300 wild sightings, providing valuable firsthand data for biologists studying their behavior and population dynamics.



The Company is committed to protecting nature and rare birds

#### Protecting aquatic organisms

The implementation of the fishery ban (hereinafter referred to as "ten-year fishery ban in the Yangtze River") in key waters in the Yangtze River is an important measure to promote the high-quality development of the Yangtze River Economic Belt and to restore the vigour and vitality of the mother river, Yangtze River. In order to enable "ten-year fishery ban in the Yangtze River" based on technology and support the implementation of "Yangtze River Protection" strategy, China Tower launched developed products applied for the key scenarios in the "intelligent protection for fishery management" industry through innovation and research and development, to achieve comprehensive data converging on the fishery ban platforms and improve the management efficiency of the "ten-year fishery ban" in the Yangtze River in all respects.

As of the end of 2024, the Company built 8,269 video monitoring points from high and low perspectives and 389 radar surveillance points on the shared telecommunication towers in 15 provinces and cities along the key waters in the Yangtze River, covering key waters in more than 500 districts and counties in the Yangtze River Basin, which achieved all-weather, fully covered perceptive monitoring in the fishery ban areas, enabled AI automotive recognition and warning, law enforcement and evidence collection against illegal ship invasion, river fishing, illegal use of explosives and electricity in fishing, illegal angling in the river bank, and efficiently helped the diversity of aquatic organisms in the Yangtze River and accelerated the ecological restoration of the water areas in the Yangtze River.

#### As of the end of 2024,

- in 15 provinces and cities along the key waters in the Yangtze River
- the Company built 8,269 video monitoring points from high and low perspectives on the shared telecommunication towers
- **389** radar surveillance points
- covering key waters in more than 500 districts and counties in the Yangtze River Basin



which achieved all-weather, fully covered perceptive monitoring in the fishery ban areas, enabled AI automotive recognition and warning, law enforcement and evidence collection against illegal ship invasion, river fishing, illegal use of explosives and electricity in fishing, illegal angling in the river bank, and efficiently helped the diversity of aquatic organisms in the Yangtze River and accelerated the ecological restoration of the water areas in the Yangtze River.



## Case: working together to protect the "smile" of the spirit of the Yangtze River

The Company assisted in building "an integrated monitoring platform for ecological conservation" in the Hubei Yangtze Xinluo Section Baiji National Nature Reserve to protect Yangtze finless porpoises. The platform made full use of 118 tower sites around the Taiping Reservoir in the reserve, utilized technological means such as laser radar and dual-spectrum tracker, and combined passive acoustics for finless porpoises, detecting instruments for small-sized fish and other devices deployed underwater, to support the data collection and reserve management. In June 2024, the Company participated in the building of "an online live-broadcasting platform for finless porpoises". Seven surveillance points were installed to record the living conditions, habitat and multiplicative process of finless porpoises, allowing more people to see the "smile" of finless porpoises.



"Smile angel" Baiji

## **Promoting Green Transformation and Development**

China Tower actively seized the development opportunities brought by the "Digital Economy" and the "Dual Carbon" goals. Relying on the advantages of resources, the Company further advanced the Action Plan for Carbon Dioxide Peaking of China Tower and the 14th Five-Year Plan for Energy Conservation and Ecological Environmental Protection of China Tower, continued to innovate energy-saving technologies and products, made steady progress on the innovation of the base station construction model, carried out the key tasks such as building green telecommunication infrastructure and strengthening the supply capacity of green empowerment, comprehensively improved green and low-carbon development level, and shared the bright future of low carbon with all parties.

## Co-build and Co-share to Build Green Telecommunication Infrastructure

China Tower "is born for sharing". Through coordinating resources and constructions as well as deepening our sharing philosophy and professional operation, the Company fully served and supported TSPs, continued to promote the sharing rate of resources and facilities such as towers, reduced redundant construction and resources waste, to save the site resources and enable co-share and energy-saving.

#### Co-build and co-share of 5G towers

Cumulative number of 5G tower related projects is

## 2,759,000,

**95%** of which was enabled through sharing existing resources, to reduce redundant construction to the greatest extent

## Co-build and co-share of indoor coverage

Accumulated indoor coverage area of important places such as airports and stations is over

12.6 billion square meters, and accumulated coverage of high-speed railway and subway mileage of distributed antenna systems is over
29,000 kilometers

#### Co-build and co-share of new towers

The site co-location rate

increased to **86.2**% at present from **14.3**% at the inception of the Company

## Co-build and co-share of social resource

Actively cooperating with fields such as municipal affairs, transportation and electricity, to promote the mutual sharing between the communication pole and tower resources and the social pole and tower resources



## Case: integrating towers into the landscape scenery to make the scenery in Lijiang more beautiful



Bionic beautification and transformation of towers in Guangxi Branch

To further promote the ecological city construction, and facilitate the integration between the architectures and the natural scenery, Guangxi branch worked together with local governmental departments and TSPs to initiate the "relocation and transformation of poles, towers and cables" construction project in the Lijiang Scenic Area. To guarantee the scenery viewing experience, Guangxi branch adopted the beautification and transformation plan based on the original locations, and completed the beautification of 48 towers in total for 37 base stations. Meanwhile, directional drilling method was adopted to complete the river-crossing pipeline construction, and 12 river-crossing optical cables were constructed in the form of buried piping, to reduce the interference to the natural landscape in Lijiang to the maximum extent and enable towers and transmission cables to integrated into the splendid landscape scenery.

# Integrating Intelligent and Green Elements to Innovate Green, Digital and Intelligent Solution

China Tower fully responded to the green development trend, tapped into key sectors, focused on typical scenarios while steadily promoting the development of energy business, fully leveraged big data, artificial intelligence, Internet of Things and other technologies and methods, developed smart energy butler products supporting the integration of multiple typical scenarios, built a comprehensive energy management platform enabled the visualization of multiple scenarios, provided users with "energy butler" comprehensive services which are holistic, intelligent and green, helped corporates to achieve the refined management of energy, and empowered the green, low-carbon and sustainable development of corporates.

## **Energy butler platform of China Tower**

Relying on the online and offline integrated technology and management system, the Company built an "energy+digital+dual-carbon" comprehensive intelligent energy system solution. By building a foundation of digital technology, the Company provided six services including full view monitoring, operation monitoring, settlement and payment based on calculation, intelligent operation and maintenance, energy efficiency management and zero carbon management, to achieve the efficient synergy of "supply-distribution-use-saving" of energy for comprehensive energy projects.





Energy butler platform of China Tower

Energy efficiency management	Set up multidimensional operation indicators for comprehensive energy, new energy stations, energy saving, charging station and other scenarios, conduct diagnosis and analysis of all parts during the process of energy investment, conversion, distribution and usage through establishing objective diagnosis and evaluation system for energy utilization.
Zero carbon management	Organize to formulate the calculation method and reporting guide for greenhouse gas emissions of corporates in key industries, build calculation system for scope 3 greenhouse gas emissions of countries, regions and corporates to provide data support for users to conduct carbon emission calculation, carbon quota forecasting, and help corporates to understand their carbon emission level.

# Targeting Green and Innovation to Strengthen the Promotion and Use of Green Energy

China Tower actively participated in the establishment of a national new energy system, strived to build a new power system with "Power generation source, Grid, Load and Storage" capabilities through promoting photovoltaic green infrastructure of base stations, deploying energy saving system on telecommunication base stations, steadily increased the application scale of the photovoltaic power generation and other clean energy on telecommunication base stations, increased the green electricity percentage of base stations by giving priority to the use of intelligent stacked light system on a case-by-case basis, joined in the demand-side response of electricity network and ancillary services of electricity, and helped the country and communications industry to save energy and reduce carbon emissions.

As of the end of 2024, the Company had completed the construction, delivery, operation and power generation of photovoltaic system for 45,000 sites, with 13,900 sites newly added in 2024. Throughout the year, the Company provided a total of 200 million kWh of green electricity and reduced 112,000 tons of carbon dioxide emissions.

		•
A	In Hebei Establishing green model on photovoltaic base stations	Conducted the photovoltaic project construction on base stations, made full use of solar resources through installing efficient photovoltaic panels, supplied power to DC load for base stations, achieved the mode of self-generation and self-consumption, which could efficiently relieve the pressure of electricity consumption of base stations. In 2024, the Company constructed a total of 2,000 photovoltaic base stations in Hebei Province, which is expected to achieve a power generation capacity of 24.7 million kWh in 2025, with an average reduction of approximately 19,500 tons of carbon dioxide emissions annually.
(	In Jiangsu Accelerating green energy of base stations	Adopted DC stacked light technology, leveraged the characteristics of wide distribution, complete supporting system, and full consumption of power generation capacity of telecommunication base stations to conduct distributed photovoltaic deployment. The Company completed the photovoltaic construction projects for nearly 5,000 sites across the province, with an average power generation capacity of approximately 14 million kWh per annum and an average reduction of approximately 7,840 tons of carbon dioxide emissions per annum.

Relying on the key laboratory of new energy, the Company continued to focus on new material batteries and battery management systems, new types of power products, energy Internet, green energy, energy conservation, energy storage and other important areas, actively promoted the breakthrough-making in technologies related to new energy and the commercialization of innovation outcomes. In 2024, the Company had conducted over 20 key R&D projects, with many issues and outcomes being recognized by domestic and international authorities.

Industry organization	Award or recognition
International Telecommunication Union (ITU)	• The project "Building Green Communications Networks" declared by the Company for ITU WSIS Prizes was shortlisted for the Top 20 Global Environment of ITU World Summit on the Information Society (ITU WSIS) 2024.
Ministry of Industry and Information Technology of the PRC	<ul> <li>The first soft issue project of "Research and Development and Application of Energy Technology for Base Station" undertaken by the Company from the MIIT was completed smoothly. The Company developed lithium-sulfur batteries, stacked light for base stations and other products, and prepared many research reports such as classification models of energy efficiency of base stations and calculation methods of carbon emission for base stations.</li> <li>The project outcomes of "Standardized Research and Application Cases Promotion of the Stacked Light Technology for Base Stations" and "Research and Application Cases Promotion of DC Air Conditioning Products for Photovoltaic Base Stations" were listed in "2023 Typical Example of Green Transformation for</li> </ul>



# Case: innovative power backup products based on hydrogen energy for base stations enabling smooth communications on islands

Shangchuan Island is the largest island along Guangdong coastal sea area, known as "Phuket Island of China". It has become a seaside holiday resort in recent years. To resolve problems like frequent disconnection of base stations resulting from the fact that islands are surrounded by the sea, remote in terms of geographical location and experience unstable power supply, the Company innovated and developed a hydrogen fuel battery technology plan applicable to islands, helping base stations on islands to operate in an efficient, environmental and long-term manner.





Real scene of Sanzhou Changdi Station



## **Practicing Green and Low-carbon Operation**

China Tower fully carried out "dual carbon"strategy, formulated and implemented the Action Plan for Carbon Dioxide Peaking of China Tower and the 14th Five-Year Plan for Energy Conservation and Ecological Environmental Protection of China Tower, continued to promote "green production" while assisting the industry and society with green development, and made solid progress on green upgradation through intelligent transformation of the operation and maintenance of base stations, innovative energy-saving and low-carbon technology and promoting resource recycling, to mitigate the environmental impact brought by its business activities.

## Deepening the Transformation of Energy-saving Technology

In combination with the major scenarios of energy usage during its business operation, the Company took the building of green and low-carbon network as the direction, positively innovated low-carbon energy technology, made full use of artificial intelligence, big data and other digital technologies to propel the green upgradation of infrastructures within the network, and comprehensively adopted new intelligent, efficient equipment and other means to increase the utilization rate of energy and reduce resource consumption, which could decrease carbon dioxide emissions from the source.

New efficient switching power	Promoting the use of new efficient switching power, which has advantages over traditional switching power in terms of conversation efficiency. In 2024, the Company completed the replacement of 97,000 switching powers in total, saving over 40 million kWh of electricity per annum and reducing 22,000 tons of carbon emissions.
Air conditioners dedicated to base stations	Air conditioners dedicated to base stations adopted the design ideas of high-speed wind and a wide range of temperature control, which could largely reduce the number of power on and power off of compressors, and gradually replace smart air conditioners with higher energy efficiency ratio, to increase the efficiency and intelligent level of air conditioner system. In 2024, the automatic energy-saving management and control rate of air conditioners in the Company's base stations reached 86.0%.
Al energy-saving algorithm for air conditioners	The Company promoted the integration of traditional energy and digital intelligent technology, developed and advanced AI energy-saving algorithms, and implemented refined management and control on energy consumption of air conditioners. As of the end of 2024, the Company achieved AI energy-saving control for 615,000 air conditioners based on shelters' environment, saving 330 million kWh of electricity per annum and reducing 184,000 tons of carbon emissions.
Intelligent maintenance system	Making use of the self-developed operation, maintenance and monitoring system, the Company built digital twin base stations and capacity of intelligent operation and maintenance, deployed intelligent maintenance systems for sites, and achieved the transformation of operation and maintenance from artificialization to automation, which comprehensively improved the efficiency of operation and maintenance and reduced the energy consumption during the operation and maintenance.



# Case: dual-cooling source energy-saving air conditioners supporting the green and low-carbon operation of base stations

Air conditioner system is the main part of the energy consumption of telecommunication base stations and shelters. In combination with the photovoltaic transformation of base stations, the Company formulated the application plan of "intelligent stacked light for base stations + 48V full DC heat pipe-based air conditioners", which not only efficiently utilized green electricity, but also cooled by making full use of nature cold source, so as to reduce the actual energy consumption of air conditioners. Based on the normal scenarios of base stations, the Company developed dual-cooling source air conditioners that allowed heat pipe to be independent from compressor system and enabled dual coil structure, which could efficiently improve energy efficiency ratio of air conditioners of base stations and expand the working temperature range of cooling, thereby decreasing the actual energy consumption of air conditioners.

-0

## **Promoting Resource Recycling**

Battery is the core component of telecommunication base stations, and its recycling and utilization are key to resource conversation and environmental protection. The Company persistently promoted battery recycling and substituted lead-acid batteries with cascade alternatives, curtailing the generation of waste batteries. It also gradually improved the cascade battery industrial chain by virtue of the demand for scale application of base stations, advanced the construction of the whole life cycle industrial chain of cascade batteries and established collaboration with upstream and downstream enterprises to advance the cascade utilization of these batteries.

Cascade utilization of battery exchange	The Company formulated the Management Practice for the Whole Life Cycle of Battery Exchange 2.0 《換電電池 全生命週期管理規範 2.0》 to conduct cascade utilization and recycling of retired batteries for new energy vehicles and battery exchange. The Company completed the first batch of centralized procurement of 12,000 sets of battery exchange products for cascade utilization, which could consume 108,000 sets of retired battery exchange.
Active equalization of lead-acid battery	By conducting a systematic comparative study and laboratory test of lead-acid battery restoration and lifecycle extension technology, the Company confirmed the technological feasibility and applicable scenarios of active equalization of lead-acid batteries. As of the end of 2024, active equalization technology was applied to 18,000 sets of lead-acid batteries for 1.1 telecommunication base stations across the country and passed the acceptance inspection. The average power backup hours increased to 211 minutes from 67 minutes before the life extension, with an average increase of 130 minutes per station, which sufficiently improved the entire lifecycle value of lead-acid battery.
Recycling disposal of batteries	The Company formulated the Notice about Issuing the Implementation Rules for the Retirement Management of Battery Exchange Assets 《關於下發換電電池資產退役管理實施細則的通知》) and other requirements, which regulated the disposition processing of retired batteries. The Company worked together with corporates with the relevant recycling qualifications to recycle scrapped batteries, to prevent any damage to the environment.
Recycling disposal of equipment	The Company enhanced the asset inventory, detection and identification, demolishing and transportation, renovation and maintenance, reusing, and the management and control over the key steps of scrap disposal to dig asset value. The Company built an idle asset management platform to replace procurement with reuse and extend material lifecycle. For idle assets without recycling value, the Company cooperated with external institutions to boost the benefit and efficiency enhancement of the asset operation.



## Case: assisting with the building of a waste battery recycling system

In Shanghai, the Company conducted a comprehensive assessment of batteries' health through high-precision equipment, to guarantee the accuracy and reliability of the assessment results. Also, the Company cooperated with the competent governmental departments to select battery recycling companies with the relevant qualifications and capacities, and set up regular recycling stations for waste lithium batteries at key locations such as the retail outlets of electric bicycles, repair shops and community service centers, ensuring the timely and efficient recycling disposal of batteries. The Company positively participated in actions such as "old for new service" and "clearing up abandoned vehicles" in Shanghai, and encouraged residents to give waste batteries to regular channels for health assessment and scrappage recycling, which decreased the situations that waste batteries were disposed of through irregular channels and supported environmental protection and resource recycling.

## **Creating Green Office Environment**

Adhering to the concept of green office, China Tower decreased the negative effect of daily working on the environment as much as possible. Aiming at the building of intelligent, green and safe parks, the Company actively conducted refined management of energy consumption, continuously focused on resource and energy conservation, resource recycling, the reduction of the generation and emission of pollutants, and encouraged employees to enhance the awareness of and engagement in environmental protection, to practice green and sustainable development together.

Energy management	<ul> <li>The Company established a standing book for equipment's energy consumption, strictly conducted energy consumption control, and regularly tracked and analyzed energy consumption data.</li> <li>The Company conducted energy-saving management against public facilities, lighting facilities and water facilities, and reasonably adjusted facility status according to the park operation and employees' habits.</li> </ul>
Water resource utilization	<ul> <li>The Company scientifically formulated a virescence irrigation plan, and achieved the refined management of water resources by leveraging the sprinkling and irrigation system.</li> <li>The Company encouraged employees to take away unfinished bottled water, and recycled residual water from abandoned bottled water for irrigation, which prompted the growth of green plants while saving water resources.</li> </ul>
Waste management	• The Company recycled beverage bottles and cartons at the industrial parks of China Tower, to reduce the environmental pollution caused by landfill and refuse burning.
Greening management of parks	<ul> <li>The Company strengthened the greening constructions of parks, with the outdoor green coverage percentage reaching over 30%.</li> <li>The Company reasonably conducted space allocation and placed green plants indoors to purify the air and beautify the environment, which provided the employees with green space.</li> </ul>

The Company positively transmitted the concept of green office to its employees, promoted the applications of online meeting, online office and information consumption, conducted multiple forms of publicities on energy saving and environmental protection, encouraged green transportation and green consumption, decreased the use of one-off products, and boycotted over-packaged products.



# Case: an intelligent and zero-carbon hanging garden and the building of a green and low-carbon working environment

In Jiangsu, the Company constructed an intelligent and zero-carbon hanging garden on the roof of the office building, with a gross area of approximately 2,000 square meters and a photovoltaic installed capacity of 135 kilowatts. The project adopted the mode of self-generation and self-consumption, the surplus electricity online, with an average power generation capacity of approximately 130,000 kWh per annum and a reduction of 98.8 tons of carbon dioxide emissions per annum.





ullet Jiangsu branch constructed an intelligent and zero-carbon hanging garden on the roof of the office building

## **Guaranteeing the Compliance of Environment Management**

China Tower strictly followed the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, Law of the People's Republic of China on Prevention and Control of Soil Pollution, Law of the People's Republic of China on Prevention and Control of Water Pollution and other laws and regulations. It strictly abided by relevant laws and regulations in all aspects such as storage, transportation and disposal, continuously strengthened the management of all kinds of soild waste, implemented the major responsibilities in environmental protection, actively fulfilled its obligations in environmental protection, and efficiently protected and improved the environment. The Company prohibited to introduce technologies, equipment, materials and products that did not satisfy the requirements of national environment protection, and forbade to tamper and counterfeit the monitoring data of environment protection, or to illegally discharge pollution in a way to avoid supervision.

In terms of engineering construction, the Company was committed to integrating the concept of environment-friendly construction ecology into the process of construction and production. The Company fully considered local municipal planning, key project planning, environmental protection requirements, and maintained close coordination and communication with relevant departments to ensure that site planning and operations comply with local environmental protection and sustainable development standards. The Company also paid great attention to the potential impact of the construction of towers and server rooms on the environment, making every effort to implement pollution prevention and control measures during the construction process, and achieved a harmonious integration of construction and ecological environment through the plan upgrade and technology advancement.

## **Actively Responding to Climate Change**

China Tower conformed to the trend of global low-carbon transformation, and actively adopted strategies to respond to climate change. The Company strictly complies with the Environmental Protection Law of the People's Republic of China《中華人民共和國環境保護法》 and other laws and regulations relating to environmental protection, improved its capacity of green operation with efficient climate change management system, pragmatic green development strategy, prudent analysis mechanism of climate risks and opportunities as well as explicit climate change goals, and supported the green development of the whole society.

#### Governance

To effectively implement the climate change concepts and strategies, the Company continues to improve climate change management system, of which the Board of Directors is responsible for overseeing the formulation of climate change strategies and goals, and each department is responsible for carrying out climate change risk management and response operations in its specialized field.

To effectively implement the management of "dual carbon", the Company has set up a leading group of carbon peaking and carbon neutrality, responsible for reviewing and promoting the implementation of various work measures of "dual carbon". An office under leading group is responsible for, among other things, formulating and implementing plans, following up the advancement of tasks and clarifying the division of responsibilities, to fully implement the Company's green development strategies and targets, and lead working practices related to climate change. All branches and subsidiaries actively perform tasks such as local climate change risk management and response operations under the guidance of the ESG working group and the leading group of carbon peaking and carbon neutrality.

#### Strategy

China Tower actively responds to the national strategy of "dual carbon", deeply implements the Company's philosophy of green development, formulates the "168" development plan of China Tower, incorporates the philosophy of sustainability into the Company's strategy and business operation and management, and comprehensively improves green and low-carbon development level.



The Company continued to improve green and low-carbon management mechanism, gathered big data about the consumption of all kinds of energies and resources such as electricity, water, oil and gas through building the monitoring platform of energy consumption and carbon emission to conduct intelligent analysis, management and control, docked with platforms of the industry and customers relating to green and low-carbon development and management, and supported the inventory of carbon assets in the industry and refined management of carbon emission. Meanwhile, the Company actively fostered the ability of carbon asset management, formulated a reward and punishment system for carbon emission monitoring, property rights of carbon assets and centralized management to carry out comprehensive and centralized management of the Company's carbon assets and to optimize the disclosure of carbon information, the reporting of greenhouse gases, nationally certified emission reduction, carbon fulfillment, carbon quota and carbon trading.

## **Risk and Opportunity**

China Tower has established an analysis and assessment mechanism for climate change risks and opportunities, integrated climate-related risk management into all aspects of the Company's risk management system, fully identified, monitored and assessed the risks and opportunities of climate change, and actively took countermeasures.

Types of Risks and Opportunities Descriptions of Risks and Opportunities		Response Measures	
	Extreme weather conditions (such as extreme heat/cold, strong winds, thunderstorms, tropical cyclones, etc.) may damage infrastructure such as tower sites, battery cabinets, and computer rooms, leading to equipment write-offs, asset losses, and environmental pollution in the surrounding areas.	Adopt weather-resistant design for infrastructure during the design stage. Based on the frequency and scale of natural disasters in the current year, promptly assess their impacts on asset losses and environmental pollution, and on this basis, set up special funds for facility reconstruction.	
Acute Risks	Extreme weather may lead to the interruption of the construction process, an extended construction period, and increased investment.	Fully consider local climate factors in the early stage of the project, and include the labor delay costs caused by extreme weather in the investment accounting during the cost- estimating stage.	
	Extreme weather can pose threats to the health and safety of construction, operation, and maintenance personnel.	Formulate emergency response plans for extreme weather in the construction plan and operation and maintenance procedure documents; clearly define the safety production operation specifications for communications construction projects; strictly prohibit tower-climbing operations when specific weather conditions like rain, thunderstorms, or freezing occur; provide the staff with comprehensive labor protection measures.	
Chronic Risks	Global warming will accelerate the wear-and- tear rate of equipment, which will affect the stable operation of communications infrastructure. Global warming will also increase the air-conditioning energy consumption in office spaces, leading to higher operating costs for the Company.	Regularly evaluate and monitor the energy-consumption cost- related indicators at station sites, computer rooms, and office spaces; also, assess the financial impact of the rising energy- consumption costs.	

Types of Risks and Opportunities	Descriptions of Risks and Opportunities	Response Measures
	In terms of technology, the deployment of 5G networks has led to an increase in the density and energy consumption of communications infrastructure. Enterprises are facing greater challenges in the research, development, and application of low-carbon technologies.	Track and monitor the Company's energy consumption and carbon emissions, continuously expand the construction of photovoltaic base-station projects to optimize the energy structure, and promptly phase out high-energy-consumption facilities. Collaborate with value-chain partners to research technologies for improving the energy efficiency of equipment hardware and achieving energy conservation and carbon reduction.
Transition Risks	In terms of law and regulation, relevant institutions will have higher requirements for energy consumption and environmental protection during the construction and operation periods.	Strictly comply with the requirements of pre-project procedures such as environmental impact assessment, energy conservation assessment, and water resources assessment, and continuously improve the enterprise's environmental and energy management systems.
	In terms of the market, the ever-increasing demand for computing power has led to a rapid increase in the energy consumption of base stations, computer rooms, etc., which will affect the Company's overall energy consumption and greenhouse gas emissions.	Regularly formulate and improve energy-consumption plans, step up research and innovation on energy-saving and carbon- reducing technologies, and carry out renovation projects for old equipment.
	In terms of goodwill, the capital market rating directly reflects the Company's management level regarding climate risks and opportunities. The rating results influence the investment decisions of stakeholders.	Integrate climate risks into the comprehensive risk management system, continuously improve the level of ESG information disclosure, and strengthen communication with stakeholders.
	As resource consumption increases, the market shows a more distinct preference for shared-service models, intelligent-operation models, and smart energy management solutions.	Fully leverage the positive impact of digital and intelligent technologies in reducing carbon emissions. Find comprehensive smart energy system solutions to assist industries of all kinds in enhancing their energy-use efficiency. Deploy battery-swapping networks nationwide to facilitate low-carbon travel for the public and achieve carbon-reduction benefits.
Product/Service Opportunities		Formulate relevant internal regulations to implement the cascade utilization and recycling of battery-swapping batteries; help communities establish waste-battery recycling and utilization systems to reduce waste emissions.
	As the greenhouse effect worsens and the costs of acquiring and using energy increase, the market favors products that utilize green, clean, and renewable energy.	Expand "photovoltaic-storage integration" projects to raise the proportion of green electricity; initiate "virtual power plant" and electricity-selling businesses to make full use of the existing electricity resources.
		Continuously promote the transition between new and old energy sources; utilize the renewable energy available at the site location to power the station, thereby reducing the consumption of grid-supplied electricity and indirectly decreasing greenhouse gas emissions.

## **Metrics and Targets**

China Tower has set environmental targets related to climate change and evaluates the progress of these targets annually.

Category	Targets for 2024	Targets Achieved in 2024	Targets for 2025
	In 2024, the Company plans to help the industry avoid the construction of 58,000 new base stations through co-construction and sharing initiatives, and achieve the following resource conservation targets:	As of the end of 2024, the Company helped the industry avoid the construction of 59,000 new base stations through co-construction and sharing initiatives, and achieved the following resource savings:	In 2025, the Company plans to help the industry avoid the construction of 50,000 new base stations through co-construction and sharing initiatives, and achieve the following resource conservation targets:
Resource conservation and greenhouse gas emission reduction targets	• 264,000 tons of steel used in towers	• 271,000 tons of steel used in towers	• 228,000 tons of steel used in towers
	• 2.1 million tons of concrete	• 2.17 million tons of concrete	• 1.817 million tons of concrete
	• 6.3 million A of switching power	<ul> <li>6.433 million A of switching power</li> </ul>	• 5.458 million A of switching power
	• Equivalent to a reduction of 1.48 million tons of carbon dioxide emissions	<ul> <li>Equivalent to a reduction of 1.56 million tons of carbon dioxide emissions</li> </ul>	<ul> <li>Equivalent to a reduction of 1.277 million tons of carbon dioxide emissions</li> </ul>

In addition, the Company sets annual goals for energy conservation, water conservation, and waste management according to its own actual situation. It also regularly evaluates and updates the progress of achieving these goals.

Category	Targets for 2024	Targets Achieved in 2024	Targets for 2025
	The automatic energy-saving management and control rate of air conditioners in the Company's base stations is to reach 86.0% by 2024.	In 2024, the automatic energy-saving management and control rate of air conditioners in the Company's base stations reached 86.0%.	The automatic energy-saving management and control rate of air conditioners in the Company's base stations is to reach 90.0% by 2025.
Energy saving targets	To reduce the energy consumption per capita of the Company by 1% by the end of 2024 compared with the level in 2023. To reduce the power consumption per capita of the Company by 1% by the end of 2024 compared with the level in 2023.	a of the Company by 1% by of 2024 compared with the 023.of the Company reduced by 2.1% by the end of 2024.per capita of the Company reduced by 2.1% by the end of 2025 compared with the of the Company reduced by 2.5% by the end of 2024.per capita of the Company reduced by 2.1% by the end of 2025 compared with thea of the Company by 1% by of 2024 compared with theof the Company reduced by 2.5% by the end of 2024.To reduce the power per capita of the Company reduced by 2.5% by the end of 2025 compared with the	To reduce the power consumption per capita of the Company by 2% by the end of 2025 compared with the
Water conservation targets	To reduce the water consumption per capita of the Company by 1% by the end of 2024 compared with the level in 2023.	The water consumption per capita of the Company reduced by 1.5% by the end of 2024.	To reduce the water consumption per capita of the Company by 2% by the end of 2025 compared with the level in 2024.
Waste management goals	In the future, the Company will continue to ensure 100% compliant disposal of waste.	In 2024, the Company achieved 100% compliant disposal of hazardous waste.	In the future, the Company will continue to ensure 100% compliant disposal of hazardous waste.

# Innovating and Advancing Together to Cultivate New-quality Momentum

Developing new-quality productive forces is an inherent requirement and an important focus for promoting high-quality development. China Tower has fully implemented the innovation-driven development strategy. It keeps its focus on the world's scientific and technological frontiers and adheres to the "Four Orientations". The Company continuously improves its scientific and technological innovation systems and mechanisms, and builds an innovation ecosystem that integrates industry, academia, and research. It also ramps up efforts to tackle original and key technologies and accelerates the cultivation and development of new-quality productive forces.

> Optimizing the Scientific and Technological Innovation System

60

63

65

Strategic Deployment in Frontier Innovation Domains

Deepening Digital Transformation and Upgrading

Strengthening the Network Security Defense Line

## Highlights in 2024

- R&D investment increased by 40%
- Number of R&D personnel increased by 60%
- Number of invention patent applications increased by 58%
- Number of authorized invention patents increased by 68%
- Number of widely-promoted scientific and technological achievements increased by 113%

United Nations' Sustainable Development Goals (SDGs)

0

0

000



and application of cutting-edge technologies in fields such as" distributed

It cooperated with Xi'an University of Posts and Telecommunications to

technological breakthroughs in low-altitude application scenarios.

Strengthening the in-depth integration of

industry, academia and research

antenna systems + Beidou", data security and disaster recovery technology.

establish a joint innovation center for the low-altitude economy and carried out

# III. Innovating and Advancing Together to Cultivate New-quality Momentum

## **Optimizing the Scientific and Technological Innovation System**

China Tower takes scientific and technological innovation as the guiding force. It continuously refines the scientific and technological innovation system and mechanism, strengthens the overall planning of the scientific and technological innovation system, redoubles efforts to overcome key and core technologies, and speeds up the efficient transformation and application of scientific and technological achievements. The Company adheres to the development strategy of being open-minded, inclusive, mutually beneficial and sharing. It actively cooperates with all parties to build an innovation ecosystem, promotes various innovation entities in the industrial chain to work in the same direction and collaborate, and enhances its own scientific and technological innovation capabilities through open cooperation.

# Optimizing the Framework of the Scientific and Technological Innovation System



organizations such as the ITU (International Telecommunication Union), WBBA (World Broadband Association), and IETF (Internet Engineering Task Force), and contributed to the development of 4 ITU international standards and 1 IETF international standard.

> Taking part in international industry dialogues on cutting-edge fields

# Optimizing the Institutional Mechanisms for Scientific and Technological Innovation

#### Strengthening the working mechanism of ' four lists"

The Company thoroughly implemented the working mechanism of " four lists", namely the list of capabilities and levels, the list of tasks and projects, the list of resource allocation, and the list of achievement transformation. Furthermore, the Company continuously increased R&D investment and the efficiency of outputting achievements, thereby enhancing the overall effectiveness of scientific and technological innovation.

In 2024, compared with 2023, the R&D investment grew by 40%, and the number of R&D personnel increased by 60%. Meanwhile, the number of applied-for invention patents and authorized invention patents rose by 58% and 68% respectively compared with 2023.

The working mechanism of four lists was awarded the first prize for outstanding achievements in the modernization and innovation of enterprise management in the information communications industry at the 21st session, and the second prize for national enterprise management modernization and innovation achievements at the 31st session.

# Continuously improving institutional management

The Company continuously optimized and improved the scientific and technological innovation institutional system consisting of ' two management measures + six implementing rules". The Company improved the implementation rules for scientific and technological innovation incentives and awards, optimized the award evaluation criteria, and innovated the " calculation-based with evaluation combined" award-evaluation model. This model emphasizes the promotion value of achievements and strengthens the role of scientific and technological innovation in supporting business development.

## Speeding up the Pace of Achievement Transformation

New achievements have been made in the promotion and transformation of scientific and technological achievements	Following the "2456" classified management model for achievement promotion, a total of 1,412 scientific and technological achievements have been coordinately promoted and transformed. Among them, 302 innovative achievements have been widely promoted on a large scale, representing a 113% increase compared to the end of 2023.
The matching of supply and demand for scientific and technological achievements has been continuously strengthened	The "List of China Tower's Scientific and Technological Achievements" and the "Compilation of China Tower's Scientific and Technological Achievements" have been issued to help accelerate the implementation and application of scientific and technological innovation achievements.
The motivation to promote scientific and technological achievements has been effectively stimulated	In 2024, the Company organized the selection of scientific and technological innovation awards and released the "Collection of Excellent Scientific and Technological Achievements in 2024". This collection showcases the Company's scientific and technological innovation achievements that have led the way in reform and development. Moreover, it further promotes the Company's technological innovation efforts and the dissemination of these achievements.
The construction of pilot test platforms has been accelerated	The Company initiated the construction of pilot test platforms and set the goal of building a "unified pilot-testing network". Construction plans were formulated for seven pilot test platforms, which cover low-altitude AI perception, edge computing power networks, tower technology, 5G/6G technology, new energy technology, information technology, and intelligent terminals. These platforms will support the pilot testing, application, and demonstration of new technologies, new businesses, and new products.

## Enhancing the Scientific and Technological Talent Pool

Continuously expanding the pool of scientific and technological talent and experts	The expert database of the Company's Science and Technology Committee consists of professional groups covering areas like mobile communications, perception and intelligent computing, new energy, digitalization, and network and information security. The Company has selected 77 internal experts and invited 10 academicians and renowned experts to serve as special advisors. These advisors participate in the Company's scientific and technological innovation planning, annual R&D project evaluations, appraisals of scientific and technological experts and talent, and the selection of science and technology progress awards. A total of 28 internal experts from the Company have been included in the expert databases of government departments or industry organizations such as the Ministry of Industry and Information Technology, the State-owned Assets Supervision and Administration Commission of the State Council, the China Communications Standards Association, and the China Association of Communication Enterprises.
Vigorously and steadily promoting the development of the project chief engineer team	The Company implemented personalized and checklist-based management for project chief engineers. There is a total of 354 chief engineers, and we have created a profile for each of them, which showcases their project experience, technical capabilities, and innovation achievements.



Case: "Striving for Innovation and Quality for a Shared Future" - Inauguration Ceremony of China Tower Science and Technology Association and Science and Technology Innovation Conference

On 22 November 2024, the Company held the Inauguration Ceremony of China Tower Science and Technology Association and the 2024 Science and Technology Innovation Conference in Beijing. With the theme of "Striving for Innovation and Quality for a Shared Future", the conference featured events such as the inauguration ceremony of China Tower Science and Technology Association, the appointment ceremony for special advisors of the Science and Technology Committee, the signing ceremony for strategic cooperation, and the ceremony for releasing achievements.

The China Tower Science and Technology Association serves as a bridge and link among science and technology workers, a platform for integrating scientific and technological strength and innovative resources, a catalyst



 The China Tower Science and Technology Association was inaugurated with a plague-unveiling ceremony

for promoting the growth of scientific and technological talents and unleashing innovation vitality, and a key driver of scientific and technological progress and innovation. Focused on enhancing original and cutting-edge scientific and technological research, it will take the lead and set a good example in promoting high-level scientific and technological self-reliance, building a modern industrial system, and developing new productive forces.

At the Science and Technology Innovation Conference, the Company unveiled an industry-specific large-scale model, the Collection of Outstanding Scientific and Technological Achievements of China Tower in 2024, the Blue Book on Edge Computing Power, and the White Paper on Low-altitude Economy Infrastructure. These releases have further enhanced the Company's brand image and its influence in the field of scientific and technological innovation.



#### Case: The "Innovation for All, Sharing for All: Wisdom Pooled, Tower Tall" Micro-course competition project

In 2024, the Company jointly launched the "Innovation for All, Sharing for All: Wisdom Pooled, Tower Tall" micro-course competition project with multiple departments. This project adheres to the concept of "Everyone is a latent talent, and everyone can actualize their talent" and is divided into two stages: mass innovation and mass sharing. A total of 1,159 new micro-courses were developed, and 430 of them were incorporated into the Company-wide shared courses. There were 10,700 instances of employees participating in learning these courses, accumulating a total learning duration of 28,500 hours. Additionally, there were 9,655 interactive comments. These achievements have effectively fostered a vibrant atmosphere of extensive sharing and learning throughout the Company. The micro-course competition project, an innovative practice in the Company's training domain, won the "Best Digital and Intelligent Learning Practice" award at the 16th Boao Awards.

# Strategic Deployment in Frontier Innovation Domains

China Tower is committed to leveraging technological innovation to cultivate new strengths for high-quality development. It zeroes in on strategic domains including 5G/6G, green and low-carbon development, edge computing power networks, artificial intelligence, and the low-altitude economy. The Company has been ramping up investment and redoubling efforts in technological innovation, accelerating the development of new productive forces and steadily elevating its technological innovation endeavors to a new height.

Innovation Fields	Progress in Practice
5G/6G Technology	The Company focuses on the new generation of information network fields such as 6G and satellite Internet, tracks the trend of industrial development and technology evolution, and carries out research and innovation breakthroughs in key technology fields. Actively research and develop new technologies of leaky cables, launch vertical polarization leaky cables and horizontal polarization leaky cables, and significantly improve the performance of tunnel 5G network through cross polarization networking.
Artificial Intelligence	The full-stack capabilities of the AI mid-end have reached the leading level in China. Focusing on the four application implementation directions, namely "Magical Pen for Eloquent Creation", "Masterful Artisan for Meticulous Work", "Unforgettable Memory for Vast Knowledge", and "Keen Eyes for Subtle Detection", the AI mid-end applies multi-modality in various areas such as intelligent operation and maintenance, financial auditing, legal affairs control, automated auditing, and R&D office work. This empowers the enterprise's digital and intelligent transformation. Research and development efforts have been carried out in areas such as 3D digital space and inference large models to comprehensively upgrade operational efficiency and risk control capabilities.
	Focusing on the video surveillance business scenarios at medium and high-altitude points, a large model for the spatial governance industry has been developed, and lightweight compression and engineering application promotion have been carried out.
New-generation Battery Technology	The Company developed lithium-sulfur battery products for base-station backup power. These products feature a lightweight and miniaturized design. This design not only saves space but also facilitates installation and maintenance. Moreover, it enhances the intrinsic safety and environmental adaptability of the batteries, enabling them to meet the requirements of complex environments such as cabinet stations and alpine regions.



### Case: Promoted innovation and research in the field of future networks

As a member unit of the IMT-2030 (6G) Promotion Group, the Company joined forces with industry players, academia, research institutions, and application entities, including communications operators, equipment manufacturers, universities, and research institutions. It joined in the compilation of white papers and research reports, including White Paper on Intelligent Metasurface Technology, Research on Requirements and Application Scenarios of 6G Sensing, Challenges and Key Technologies of Typical Applications of Intelligent Metasurfaces, and Research Report on Intelligent Metasurface Technology for 6G.



# Case: Universalization of drone payload bays, flexible adaptation of multiple payloads for versatile use of a single drone

The Company upgraded and optimized the drone supporting system and mounting terminal equipment. Through the modular design of the general payload compartment, customized design of multi-source data collection equipment, and fusion processing of multi-source remote sensing data, the Company achieved the transformation from single-task operation to multisource remote sensing support, enabling "one drone for multiple uses". This significantly enhanced the operational efficiency of drones. The drones can simultaneously support the replacement of payload equipment like hyperspectral cameras, visible-light cameras, temperature-measuring thermal infrared cameras, dual-optical pods, and small-sized laser radar, thus meeting the integrated application requirements of multiple industries. In 2024, the upgraded drones have been successively piloted in Chengdu Longquan Mountain Nature Reserve, Sichuan Ruoergai Nature Reserve, Xianning in Hubei Province and other places.



 Deployment test of our automated drone airport in Ruoergai, Sichuan



# Case: Upgrade of our leaky cable technology to promote signal enhancement

In high-speed railway and subway tunnel scenarios, there are problems like poor network performance and difficult transformation. To tackle these issues, the Company redesigned the outer-conductor slotting scheme of leaky cables and developed two new types of leaky cable products. As a result, the signal polarization purity has been improved. Laboratory test results show that the network speed of the communications system using the new products has increased by approximately 25%, and it is convenient to switch with existing equipment. As of the end of 2024, this technology has been applied in the subway and high-speed railway lines of eight cities, including Suzhou and Chengdu, effectively enhancing the in-depth coverage of 5G networks in tunnel scenarios.

## **Deepening Digital Transformation and Upgrading**

China Tower deeply promotes the construction of a digital enterprise. It strengthens the innovative application of digital and intelligent technologies, deepens the intelligent upgrading of production and operation, builds up a robust enterprise data mid-end and big-data system, and enhances digital empowerment. Furthermore, it integrates digitalization throughout the Company's high-quality development process.

## Building an Enterprise-level Data Mid-end

The Company has established an enterprise-level data mid-end that covers all businesses and all levels, achieving unified data integration, management, storage, processing, and services. This eliminates the barriers between data sources, provides data support for the Company's production and operation, and offers data services to 43 business systems such as the operational data display and data sharing and open platform.

The Company has been committed to building a big data platform. Taking business digitalization and data capitalization as the starting points, the Company continuously accumulates and operates its core data assets, improves and innovates the enterprise-level "big data" support and application capabilities, realizes the collection, storage, management, and application of metadata, and conducts in-depth exploration and utilization of data value.

The Research and Application of Key Technologies for Cross-Cloud Intelligent Data Lakehouse in a Hybrid Cloud Environment won the Outstanding Case of ICT China Cases (2024), an award presented by the China Association of Communication Enterprises. Meanwhile, the Lakehouse Integrated Data Midend based on Hybrid Cloud Environment was honored as a Potential Case in the Data Intelligence Base Special Category of the 2024 "Galaxy" Cases, presented by the Big Data Technology and Standard Committee of the China Communications Standards Association.

## Promoting the Digital and Intelligent Upgrade of Production and Operation

The Company is accelerating the implementation of the "AI +" enabling action, actively promoting the in-depth integration of cutting-edge technologies with the Company's digital application scenarios. This empowers the improvement of production and operation efficiency, risk prevention and control, as well as the enhancement of products and user experiences. As a result, the Company has basically achieved the refined management of "visibility, manageability, and controllability" throughout the entire life cycle of assets.

The Company utilizes digital technology to implement a "one-code-for-all service" management approach. By establishing a unified material coding system that covers procurement, warehousing, engineering construction, resource management, asset management, and other disciplines, it achieves "one-code-for-all service" application across all materials, projects, and processes. This ensures end-to-end digital, lean, and efficient asset operation management.





A worker is using the "one-code-for-all service" equipment for inspection



# Case: The implementation and external dissemination of the atomic capability achievement of "One-code-for-all Order Management"

.....

The Company actively shares its digital capabilities to support the digital transformation and upgrading of enterprises. Within the year, it successfully developed the "One-code-for-all Order Management" product, which can support customers in realizing the digital and systematic management of the procurement process. It helps customers achieve digital and refined management of the entire procurement process, including material management, procurement sourcing, share management, order execution, and supplier collaboration, effectively promoting the comprehensive digital upgrade of enterprises.

## Strengthening the Network Security Defense Line

China Tower pays high attention to network and information security. It has established a "Three-Body and Six-Dimension" (a framework featuring three core bodies and six aspects of digital security governance) digital security governance system, made further efforts in the distributed hybrid-cloud network security defense architecture centered on zero-trust, steadily promoted the security management across the entire domain of cloud, network, edge, terminal, data, and management, and continuously consolidated the foundation of digital infrastructure.

#### **Information Security Assurance**

China Tower strictly adheres to the requirements of relevant laws and regulations on information security and privacy protection, such as the Cybersecurity Law of the People's Republic of China, the Data Security Law of the People's Republic of China, and the Personal Information Protection Law of the People's Republic of China. It has established a scientific, rigorous, and effective compliance management system for network security and data security. Relying on an efficient and secure technical platform, the Company continuously promotes the systematization and standardization of information security management, the full-scale implementation and self-controllability of security technologies, as well as the standardization and normalization of security operations.

The Company continuously benchmarks against the requirements of the ISMS (Information Security Management System) and keeps strengthening the top-level design of the network security and data security systems. It has passed the ISO27001 international standard certification for information security management system for two consecutive years. In 2024, the Company did not experience any major network security incidents, nor was it involved in any major disputes regarding information security or privacy leakage.

Information Security Management Regulations	The Company has formulated and issued institutional regulations in areas such as network security operations, data security compliance, information system management, and cloud resource management. These regulations cover aspects including organizational structure, technical protection, operational processes, emergency response, and the closed-loop management of information assets throughout their entire life cycle. They enable comprehensive and full-process control, spanning from the planning and construction of information systems to their operation and maintenance, and from daily security management to the handling of emergency incidents.
Information Security Audits and Inspections	The audits and inspections cover various aspects, including organizational structure, technical protection, operational processes, emergency response, and the closed-loop management of information assets throughout their entire life cycle. They enable comprehensive and full-process control, spanning from the planning and construction of information systems to their operation and maintenance, and from daily security management to the handling of emergency incidents. From 2023 to 2024, the Company completed information security inspections of the headquarters and all 31 provincial branches.
Vulnerability Assessment and Governance	The Company conducts vulnerability scanning and penetration testing on a quarterly basis. It has established a hierarchical and classified management mechanism for security vulnerabilities, setting corresponding time limits for handling different levels of vulnerabilities, and continuously and efficiently carrying out the rectification of security vulnerabilities.
Application of Security Protection Technologies	The Company deploys a Zero-Trust SASE architecture. It enhances access control technology capabilities such as multi-factor authentication and dynamic access control. By doing so, it reduces the chances of external exposure of information systems and mitigates the risk of cyberattacks. Furthermore, the Company continuously optimizes the network architecture and formulates disaster-recovery technical solutions for important systems. This lays a solid foundation for the stable operation of systems at all times. It also conducts continuous special rectifications on data desensitization and data interface management, strengthening the foundation of data security control.
Cyber-security Practical Drills	The Company organizes cyber-security offensive and defensive practical drills covering all its online systems. These drills comprehensively investigate potential network vulnerabilities and security hazards, promptly handle and rectify issues, improve the Company's security protection system, strengthen cyber-security responsibilities, enhance the security awareness of all employees, and improve the practical capabilities of the teams.

## **Protecting Customer Privacy**

China Tower regards respecting others and privacy as important business principles and ethical standards. It has formulated and released the China Tower Privacy Policy, which clarifies the Company's privacy principles and provides guidance for the Company's privacy practices.

#### **China Tower's Privacy Principles**

ŧ,

- We only collect personal data that we consider relevant and necessary for our business.
- Unless we obtain your consent or are required by law, China Tower will not disclose your personal data to external parties.
- We maintain appropriate security measures to prevent unauthorized access to your personal data.

The Company has established certain procedures and taken appropriate measures to safeguard personal data from unauthorized or accidental access, processing, deletion, or other improper uses. It makes every effort to maintain the accuracy, completeness, and relevance of personal data at a reasonable level to align with the purposes for which the data is collected. The Company clearly stipulates that personal data shall not be retained for longer than necessary to achieve the purposes (or any directly related purposes) for which the data is collected, and this is subject to the relevant legal, statutory, and regulatory requirements regarding data retention.

# Joining Hands for Win-win Results and Striving for a Better Life

China Tower always keeps its mission in mind and deepens the practice of joint construction and sharing. It demonstrates its sense of mission and responsibility in the building of a strong country. The Company continuously fulfills its commitments in customer service, safety production, employee development, industry growth, and community investment, integrating social responsibility into its production, operation, and management. China Tower was founded on the principle of sharing. In the future, it will continue to uphold the concept of sharing for mutual benefit and join hands with all parties to strive for a better life.

70	Providing High-quality Customer Service
72	Strengthening Work Safet Management
74	Growing Together with Employees
80	Jointly Promoting Industry Development
81	Supporting Social Welfare

## Highlights in 2024

- In the customer satisfaction survey, 530,000
   customers participated, and the customer satisfaction
   score reached 90.8 points
- More than 22,000 safety production responsibility agreements were signed to strengthen safety management responsibilities

0

- The" China Tower e-Learning" platform has a reserve of 2,810 online courses, and the total learning hours on the platform have reached 1.606 million hours
- Campaigns to care for workers have been carried out, and more than 600 Riders' Homes have been built across the country

United Nations' Sustainable Development Goals (SDGs)



# IV. Joining Hands for Win-win Results and Striving for a Better Life

## **Providing High-quality Customer Service**

China Tower regards benefiting customers as the foundation for the Company's survival and development. Focusing on customers' experience, the Company consistently enhances its customer-service awareness. It strictly monitors service quality, optimizes the customer-service system, and spares no effort in providing high-quality and reliable services.

## **Promoting Comprehensive Quality Management**

China Tower complies with laws and regulations such as the Standardization Law of the People's Republic of China and the Regulations on Quality Management of Construction Projects. It has formulated a series of management systems for quality management and brand management, and has been strictly and meticulously handling product quality management and brand management work. The Company is committed to creating excellent and reliable products and establishing a first-class brand in the industry.

In 2024, the Company focused on implementing the "Three-Horizontal and Three-Vertical" quality management model. Specifically, it concentrated on three main lines, namely "project quality, product quality, and service quality", and based on three directions, namely "quality standards, quality assurance, and quality supervision", continuously optimizing the matrix-style quality management model of "full-scope, full-process, and full-staff participation" within the "Three-Horizontal and Three-Vertical" structure. Meanwhile, through carrying out the national project and product quality improvement campaign in 2024 and the national "re-supervision" inspection of project quality, the Company continuously consolidates the foundation for quality management improvement.

#### Awards in Quality Management within the Year:



The Network Monitoring Group of China Tower Zhejiang Branch, the Business Support Department of China Tower Zhangzhou Branch, and the Property Center of China Tower Dalian Branch won the honorary title of National Trustworthy Work Team in the National Trustworthy Group for Quality campaign hosted by the China Association for Quality.

In the selection of user-satisfied service providers in the information communications industry held by China Association of Communication Enterprises, the Jinzhou Branch in Liaoning won the title of AAA-level user-satisfied service provider in the information and communication industry. The Zhangzhou Branch in Fujian won the title of AAlevel user-satisfied service provider in the information and communication industry. The energy & battery-swapping service teams of the Nanchong Branch in Sichuan, the Qingyuan Branch in Guangdong, the Hechuan Branch in Chongqing, and the Luohe Branch in Henan won the honorary title of A-level user-satisfied service provider in the information and communication industry.



The project Improving the Accuracy of Al-Enabled Tower Asset Identification by the Henan Branch won the first prize in the "7th QC Team Achievement Presentation Contest of Central Enterprises" hosted by the China Association for Quality.



The Company won two second-class awards and five third-class awards under the Quality Technology Award presented by the China Association for Quality in 2024.

The project Reducing the Off-line Rate of Environmental Monitoring Equipment in Communications Base Stations by the Zhejiang Branch won the second prize in the "7th QC Team Achievement Presentation Contest of Central Enterprises" hosted by the China Association for Quality.


# Case: Social supervisors worked together to drive the improvement of service quality

In November 2024, the Shanghai Branch held the inauguration ceremony for the first-batch of social supervisors for service quality. The first batch of 10 social supervisors for service quality were appointed for a term of two years. They came from ten institutions in six industries, namely communications, emergency management, meteorology, ecological environment, aerospace, and postal services. The social supervisors supervised and evaluated the service work and quality through on-site visits, field surveys, and business inspections. They promoted regular interaction and timely and effective communication between the two sides, continuously optimized the service process, and improved the service quality.

## **Providing High-quality Customer Service**

China Tower continuously improves the relevant management measures for customer service and strengthens the full-process management of customer service and complaints, aiming to provide high-quality customer service. In 2024, the Company carried out a customer satisfaction survey through the 10096 hotline. Throughout the year, 530,000 customers participated in the survey, and the customer satisfaction score reached 90.8 points.

Comprehensively Expanding Service Channels	In line with the goal of building a "service-oriented" enterprise, the Company continuously strengthens the all-around management of customer feedback. It keeps listening to the voices of customers through various channels, such as the WeChat official account "China Tower online service", the China Tower 10096 hotline, product applications, regular service meetings, and daily communications. For battery-swapping customers, the Company also provides the China Tower Battery-swapping APP and the Riders' Home Mini-Program to offer online Q&A services for customers.
Making Every Effort to Improve Service Quality	The Company launched a special campaign to improve service quality and established a special team for service quality improvement to comprehensively promote the rectification of issues related to customer satisfaction. By the end of 2024, all issues affecting customer satisfaction had been completely resolved. Compared with the situation before the rectification, the complaint ratio per ten thousand customers decreased by 4.34 percentage points. Throughout the year, there were no major disputes regarding product safety and services within the Company.
Strengthening the Handling of Customer Complaints	The Company consistently expands the channels through which customers can submit complaints. It also improves the response rate to customer complaints. Moreover, it centralizes the management of complaint work-orders. After that, it conducts spot-checks and follow-up calls on the completed work-orders. For work-orders with low customer satisfaction, the Company initiates secondary supervision to guarantee the effective resolution of complaints. In 2024, the Company received 2,148 customer complaints through the China Tower 10096 hotline, a decrease of 16.68% compared with the previous year.

According to the characteristics of different businesses and service scenarios, the Company provides personalized and differentiated services for customers, striving to bring a better service experience for them.

	Personalized Customer Service	
Corporate customers	omers The Company makes every effort to create a companion-style service. On the basis of providing standardized product offers differentiated and scenario-based services through iterative development and in-depth customization.	
Individual customers	<ul> <li>Services such as consultation, repair requests, and complaints are provided through multiple online channels, including the official website, the WeChat official account "China Tower Battery-swapping", the WeChat service account "China Tower Charging", the China Tower Battery-swapping APP, and the China Tower Charging APP.</li> </ul>	
	• For customers with offline service needs, they can also get assistance at the "Riders' Home".	

# **Strengthening Work Safety Management**

In 2024, the Company made a unified arrangement across the entire system to launch a three-year initiative to tackle the root causes of work safety problems. A leading group for the three-year initiative was established, and a work promotion mechanism of "weekly consultations, ten-day inspections, monthly scheduling, and quarterly reports" was put in place to further consolidate the foundation of work safety management.

## Deepening the Construction of the Safety System

China Tower continues to promote the "0361" work safety responsibility system based on the Tower Captain System. In 2024, the Company enhanced safety management for key positions. It identified and recorded 15,280 "tower captains" at different levels. For each "tower," a unique "QR code" was created, which documented information about various facilities and the corresponding tower captain. Through the platform's connection with different business systems, specific individuals were assigned responsibilities. This ensured that safety risks in all situations were "under someone's management and supervision." The Company also made sure that every employee's responsibilities were clearly defined and firmly implemented. It sorted out the job duties of all employees. Additionally, it established a special mechanism for promoting work-safety initiatives across the entire system. At all levels, the main leaders of branch companies regularly hold monthly work-safety meetings. In 2024, more than 22,000 safety production responsibility agreements were signed.

The Company placed great emphasis on building a strong safety personnel team. Throughout the year, it successively provided safety-production certification training for communications construction enterprises within its provincial branch companies. A total of 763 individuals obtained safety officer certificates. Moreover, the Company took part in the work-safety assessment organized by the Communications Administration, and 109 people passed the certification. Some branch companies also organized and participated in the training and certification program for safety management personnel organized by the provincial department of emergency management, with 588 people successfully passing the certification.



## **Development of Safety Production Culture**

China Tower incorporated safety production into its mandatory training curriculum, effectively improving the professional qualifications and practical abilities of production management personnel at all levels in safety production. It continued to promote safety production propaganda and education by organizing activities such as "Safety Production Month" and "Fire Safety Awareness Month", carried out various engaging safety propaganda activities in various forms including posters, short videos, and audio reminder messages, and integrated these activities in daily safety production management work to continuously enhance the safety production awareness of all staff.

# Safety production training

- The headquarters of the Company organized 54 safety production training sessions, including practical safety production training and "double check-in" system training, covering a total of 67,347 employees.
- Provincial branches conducted a total of 627 safety production training sessions, covering 84,107 employees.
- In the 2024 onboarding training camp for new employees, thousands of new employees received training on safety production laws, regulations, and basic requirements, marking their essential "Safety First" induction.
- Through the "Soldier General (士兵將軍)" training camp for improving the competency, specialized safety production training was conducted for 2,072 regional managers, improving the safety production awareness and management capability of frontline management staff.
- Six sessions of practical safety production training were held during the year, training a total of 978 staff in safety production management from the headquarters, and the provincial, municipal, and regional branches.

- A total of **2,524** sessions of safety production activities such as "Let's Talk Safety", "Pre-shift Meetings" and "Case Studies" were organized, covering **30,500** participants.
- A total of 2,147 activities were organized to watch themed promotional videos for "Safety Production Month" and the warning education film "Safety Production Responsibilities at Hand", with 63,800 participants.
- 364 on-site "Safety Propaganda and Consultation Day" events were held, with 16,400 participants.
- A total of 515 emergency evacuation drills were organized, with 19,700 participants.
- 652 fire safety lessons were conducted, with 20,400 employee participants.
- 219 expansion activities were held at venues such as fire science education bases and fire rescue stations, with a total of 8,887 participants.

Safety production drills



The Company conducted practical safety production training in several areas across the country

## Safety Hazard Management

China Tower further carried out hazard investigation and rectification, effectively implemented various tasks under the 2024 "Year of Hazard Combat", adhered to the principles of "progressing step by step, addressing both symptoms and root causes, and striving for practical results", aiming for "zero accidents and zero casualties". Based on the main framework of the "0361" safety management system for tower captain system, the Company continuously strengthened comprehensive risk management, and intensified the inspection and management of partner units through "normalized and institutionalized" hazard management, effectively improving the capability for hazard investigation and rectification. Moreover, in accordance with relevant national industry standards, the Company developed six specialized criteria for identifying major accidents and hazards, and fully integrated the standards into the hazard investigation and rectification mechanism. A database for major accident hazards were continuously reduced to zero, facilitating the Company's high-quality development through high-level safety.

In 2024, the Company normalized and institutionalized various hazard investigation and rectification efforts, achieving a rectification completion rate of 99.9% within the year.

## Safety Assurance for Partners

In 2024, the Company strengthened safety education and training for maintenance personnel, contractors, and other partners. It adopted a combined approach of "online education platform + local offline training" to normalize safety education, hazard identification, hazard rectification, equipment and facility maintenance, and other training for all partners, enhancing the capability to prevent various safety incidents.



The Company conducted emergency drill training for partners

# **Growing Together with Employees**

Adhering to the "Talents Make Business Strong" strategy, China Tower regards talent as the first resource of driven innovation and assured development, created a favorable environment for excellent talents through the formulation of a comprehensive talent development plan, talent training and incentive mechanism, and the strengthening of staff communication and care and other measures to promote the growth of employees with the Company.

## Protecting the Rights and Interests of Employees

China Tower strictly followed the Labor Law of the People's Republic of China, Labor Contract Law of the People's Republic of China, Social Insurance Law of the People's Republic of China, Provisions on the Prohibition of Using Child Labor and other laws and regulations. It has continuously improved the relevant systems of employee recruitment, training, attendance, etc., and optimized and improved the management in staff recruitment and dismissal, remuneration and welfare, attendance and performance, working hours and vacation, protecting the legitimate rights and interests of employees. The Company tolerates no child labor or forced and compulsory labor. If any illegal employment is found, the Company will immediately report to the relevant authorities and terminate the employment relationship with such personnel, and will review and improve its internal management processes. The Company ensures the effective implementation of policies and regulations through audits and internal supervision. No cases of using child labor or forced labor or corcurred in the Company for the year.

### **Diversity and equal opportunity**

The Company strictly implements the relevant provisions of the Law of the People's Republic of China on the Protection of Disabled Persons and the Regulation on the Employment of the Disabled and fulfills its responsibilities and obligations to support the employment of people with disabilities. The Company is committed to promoting fair employment and providing equal employment opportunities to employees without being affected by factors such as race, age, gender, ethnicity, religious belief, etc. in the recruitment process. The Company insists on treating everyone in the Company in the same way, treating employees fairly and equally, does not distinguish remuneration based on gender, and creates a workplace environment of equal opportunity, anti-discrimination and diversity.

#### Attracting and gathering talents accurately

The Company continuously expands channels to attract talents and increases efforts to attract outstanding talents. During the 2024 campus recruitment period, the Company combined campus presentations with job fairs, and thoughtfully designed customized mystery boxes related to current hotspots, allowing graduates to better understand and recognize the Company in a fun and practical way. Through in-depth communication with graduates, we shared the Company's comprehensive strength, talent development plans, and philosophy of humanistic care, further enhancing graduates' sense of identification with the Company. In 2024, the Company carried out online campus recruitment promotions in 70 universities, covering over 400,000 individuals, and held large campus presentations and job fairs at several universities to effectively enhance interaction with students.



The Company conducted campus presentations at universities

The Company was awarded the "Award for Best Employer of the Year in China" (中國年度最佳僱主獎) and "Award for Campus Recruitment Case" (校招 案例獎) by Zhaopin for six consecutive years from 2019 to 2024, and was awarded the "China Model Employer Award" (中國典範僱主獎) by 51job, Inc. for five consecutive years from 2020 to 2024.

### Optimizing the remuneration incentive system

The Company adhered to the principle of market-oriented remuneration and performance as the orientation, continuously improved the remuneration incentive and welfare system, and established a sound performance-based variable remuneration structure. In strict accordance with the standards of relevant national laws and regulations, the Company enriched and improved its multi-level medical insurance system, which includes basic medical insurance, enterprise supplementary medical insurance, and commercial health insurance, to provide employees with more comprehensive medical coverage and solid support for their health, thereby enhancing employees' sense of belonging and happiness. The Company maintained a principle of salary distribution that leans towards frontline workers in challenging areas. This year, in accordance with national policies, the Company further increased income support for employees in high-altitude regions, and remote and difficult provinces, and enhanced care and concern for cadres and employees in these challenging areas.

#### Performance evaluation and communication

The Company adhered to systematic thinking and, based on practical realities, built a positive and dynamic incentive and constraint mechanism. It implemented a whole-process closed-loop performance management that covers all employees, including planning, process control, performance evaluation, feedback, and result application, to promote mutual growth between employees and the Company. The Company continuously improved the employee promotion and development mechanism, evaluated employees' contributions from multiple dimensions, and encouraged outstanding employees to stand out.

### **Deepening democratic management**

The Company deeply implemented the value concept of "employee-oriented", regularly held employee representative conferences, dealt with all proposals in a closed loop in accordance with the principle of "division of responsibilities by level with centralized management", widely conducted research forums, earnestly protected the employees' rights to know, to participate, to express and to supervise. In 2024, the Company successfully completed the transition of the employee representative assembly, with a total of 123 employee representatives in the second term, further optimizing the number and structure of representatives.

In 2024, the Company launched a reasonable suggestion solicitation activity titled "I Contribute Suggestions for High-Quality Development" for all employees, collecting a total of 156 reasonable suggestions, of which 15 were rated as "Excellent Reasonable Suggestions".

### **Practicing Humanistic Care**

China Tower attaches great importance to the physical and mental health of its employees and provides them with comprehensive benefits and a safe working environment, which enhances employees' sense of belonging and security.

### Strengthening targeted support

The Company actively promotes collaborative cooperation and resource sharing between regions, constantly improves its work mechanism, and continuously strengthens support for the Xinjiang and Xizang branches by sending cadres and talents and other methods. In 2024, the headquarters and various branches of the Company dispatched a total of 35 aid workers to Xizang and received 32 personnel from the supported units for exchanges and learning in the mainland, injecting new vitality for coordinated development through talent mobility.

### Enhancing employee welfare

By organizing and carrying out a variety of cultural and sports activities for employees, the Company continues to provide humanistic services such as employee assistance, regional small homes, and caring for women, so as to effectively create a working environment with a balance between work and life.



In the year, the Company organized large-scale employee sports events such as the second China Tower Badminton Competition and the First Balloon Volleyball Competition, as well as a series of cultural activities themed on "Chinese Dream • The Beauty of Labor". The Company hosted the "Tower Cup" Employee Badminton Competition of the 2024 Communication Industry and actively participated in industry events including table tennis, badminton, balloon volleyball, football, and aerobics.



The second China Tower Badminton Competition



"Ten Years of Vigorous Growth, Embarking on a New Journey with Strides" walking activity

Health care	The Company adhered to the principle of "Inclusive + Special Benefits", placing the well-being of employees at the forefront. It systematically carried out care and support activities and regularly implemented initiatives such as "five must-visits and six must-discussions", summer cooling programs, and winter warmth distribution. In 2024, the Company held a total of 203 lectures on mental health and health education under the theme "Co-Building and Sharing a Healthy China Tower", safeguarding the physical and mental health of employees.		
Employee assistance		irdships, the Company promptly initiated support actions for employees ansu, Shandong, and other regions have established "Mutual Aid Funds" to d.	
Caring for women	The Company focused on protecting the rights and interests of female workers, providing facilities such as "Mummy Rooms" for them, and organizing parent-child activities and health seminars for female workers to help improve their physical and mental health.	• he the Branch or ganized parent-child activities	
Library for employees	The Company adhered to the principle of getting close to the grassroots, the reality, and the employees, and widely promoted the "Book Fragrance China Tower" cultural construction. In particular, the Shandong Branch has invested over RMB200,000 to build a digital, open, and shared library for employees, which contains more than 3,000 books. By integrating activities such as classic recitations, reading forums, themed lectures, and good book sharing sessions, it created a cultural haven for employees. In December 2024, the employee Library of the Shandong Branch was awarded the honor of "Key Construction Employee Library by the All-China Federation of Trade Unions" of 2024.	Image: the	
Staff home	The Company focused on addressing the urgent and difficult needs of frontline employees and meeting their expectations. In the year, it launched the "Five Small" construction project for regional staff home to concentrate on meeting the needs for small kitchens, small nap beds, small water bars, small cultural and sports corners, and small first aid kits, continuously improving and ensuring the living and working conditions of grassroots employees.	Character and sports corner in Yongding, Longyan, Eujia	

## **Strengthening Talent Development**

China Tower adheres to the concept that "talent is the company's foremost resource and strategic resource", continually deepening the construction of a comprehensive, multi-form, and hierarchical training system to provide strong talent support and intellectual assurance for the Company's high-quality development.

### Enriching the training system

The Company implemented the "Sunflower Program", a special training initiative aimed at enhancing the quality of all employees. By soliciting and showcasing quality video courses, it vividly communicated the pursuit of positive and benevolent values through compelling stories, lively language, and well-developed characters, effectively telling the "China Tower" story and gathering momentum for progress.

Management talent training	For newly appointed second-level and third-level managers, the Company implemented a specialized training program named the "Transformation Plan" to develop a high-quality and professional management talent pool. Moreover, it conducted demonstration classes for fourth-level managerial training to help fourth-level grassroots managers optimize their knowledge structures.
Professional talent training	The Company placed a comprehensive focus on strengthening the training and development of business and technical personnel, continuously enhancing the overall quality of its workforce. Special training sessions of "Soldier General" were conducted for regional managers to help enhance their capabilities and competencies.
New employee training	For new employees recruited through campus and social channels, the Company organized the "Set-Sail Program" and the "Sailing Program" onboarding training camps, helping employees integrate into the Company and adapt to their job roles. The training covered over 1,200 participants.



The "Set-Sail Program" orientation training camp for new employees



## Case: Launching the "Soldier General" training camp for improving the competency

In 2024, the Company held the first round of the "Soldier General (士兵將軍)" training camp for improving the competency of regional managers. Through multi-dimensional and comprehensive capability development, the program aimed to help employees transition from "soldiers" to "generals". A total of 11 sessions of the training camps were conducted in the year and 2,072 regional managers from branches in 31 provinces across the country participated in the training. The training content covered various modules including political quality, professional ability, management capacity, and operational capacity. A combination of on-site teaching and interactive discussions was adopted to systematically empower the regional managers.



# Case: Building digital learning platform to collect high-quality learning resources

To adapt to the trend of the times of digital transformation and lifelong learning, the Company continuously promoted digital learning and built and optimized the "Tower e-Learning" online learning platform to collect high-quality learning resources and help employees improve their capabilities and skills and foster a habit of lifelong learning, so as to empower talent team building and high-quality development of the Company.

In 2024, the Company leveraged the "Tower e-Learning" platform to conduct digital learning, offering a total of 2,810 online courses. In the year, the number of employee logins for learning reached 1.679 million times, the total online learning time amounted to 1.606 million hours, and the per capita online training time was 67.3 hours.

# Jointly Promoting Industry Development

China Tower consistently adhered to innovation-driven practices, and collaborated and developed synergistically with the industry. In conjunction with the industry chain, it focused on addressing various challenges encountered in 5G construction, effectively empowering the leapfrog development of digital infrastructure such as 5G, and continuously strengthening the foundation of China's digital economy.

2	Supporting the development of industry standards	<ul> <li>The Company actively participated in the relevant standard and technical research work of industry standard organizations such as the China Communications Standards Association (CCSA) and the International Telecommunication Union (ITU). As the leading organization, the Company successfully launched two international standards which are Carbon Emission Calculation and Allocation Methods for Shared Communication Base Stations and Intelligent Control Methods for Photovoltaic Systems in Base Stations. As a co-leading organization, the Company successfully initiated an international standard titled Functional Architecture of IoT Based Smart Underground Parking Services. It also co-led the initiation of an IETF international standard named Data Model for Virtual Router Redundancy Protocol.</li> <li>The Company participated in the standard-setting work of technical working committees such as the Communication Power Supply and Communication Equipment Working Environment (TC4), Wireless Communication (TC5), Satellite and Microwave Communications Standards Association, leading the development of industry standards such as the 48V DC Metering and Control Unit for Communication Base Stations, technical requirements for Wall-Mounted Antennas in Mobile Communications, and Smart Tower standards.</li> </ul>
	Actively participating in industry communications	<ul> <li>The Company participated in the China International Digital Economy Expo (CIDEE) for the sixth consecutive year, attracting numerous visitors and media attention with highlights such as low-altitude economy, county-level comprehensive governance, slow live streaming of China tower, artificial intelligence, and green energy.</li> <li>The Company appeared at "The Light of Internet" Expo of the World Internet Conference with the theme "Building a Solid Digital Foundation for a Shared New Future", showcasing the new achievements of China Tower in supporting Cyberpower, contributing to Digital China, and serving the "dual carbon" strategic goals.</li> </ul>



China Tower made a stunning appearance at the 2024 World Internet Conference

# **Supporting Social Welfare Undertakings**

China Tower takes it upon itself to support social welfare undertakings, continuously engaging in paired assistance efforts and employing multiple measures to aid in the comprehensive revitalization of rural areas. The Company is also promoting the establishment of "Riders' Homes" across the country to provide care and assistance to new labor forces and actively advocates for employee volunteer services, leveraging the power of youth volunteers to support disadvantaged groups.

## **Deepening the Rural Revitalization Efforts**

In 2024, China Tower formulated key points for paired assistance work and a support project plan. The Company continued to invest in areas such as educational support, medical assistance, and housing security in paired assistance counties, further consolidating the achievements of the rural areas in "Two Assurances and Three Guarantees" (assurances of adequate food and clothing, and guaranteed access to compulsory education, basic medical services and safe housing). The Company also undertook paired assistance tasks in 102 counties, towns, and villages across 21 provinces nationwide. Through these assistance efforts, it continuously enhanced the sense of happiness and fulfillment of local residents.

#### Achievements of China Tower's Assistance Work in 2024

- China Tower is rated as "good" in the evaluation of the effectiveness of the targeted assistance work of the central unit in 2023
- A total of RMB86.1 million was invested in assistance, including RMB33.5 million in non-repayable aid, an increase of 10.6% from the previous year, which facilitated the implementation of 49 projects such as mushroom and vegetable greenhouses, tea garden expansions, and fruit planting industry bases;
- Repayable assistance amounted to RMB**52.6** million, an increase of **16.2**% from the previous year, which was used to improve local communication infrastructure, support local backbone enterprises, and implement smart city construction projects;
- Through investment attraction efforts, RMB33 million was introduced to support multiple local leading enterprises and cultivate the development of new industries and business models in rural areas.



## Case: Building an accessible elevator for the Disabled Care Service Center



Baojing County in Hunan Province is a paired assistance county for China Tower. The county's Disabled Care Service Center currently accommodates 33 individuals with disabilities, who are often troubled by difficulties in moving between floors. In 2024, the Company invested RMB500,000 in assistance to support the building of an accessible elevator for the service center to improve the facility environment and help individuals with disabilities navigate between different floors more conveniently, thereby enhancing their quality of life.

The Hunan Branch built an accessible elevator for the Disabled Care Service Center.



## Case: Establishing a long-term medical delivery mechanism for assistance villages

Geyang Village in Wenzhou, Zhejiang Province, is located in a remote area with winding and rugged mountain roads, making it very inconvenient for residents to seek medical care. To promote high-quality medical services in rural areas and address the difficulties that elderly residents face in accessing routine healthcare, the village officials from the Zhejiang Branch actively coordinated with the First Affiliated Hospital of Wenzhou Medical University to carry out the "Delivering Medical Experts, Delivering Warmth, Delivering Health" free clinic initiative in Geyang Village. Clinical experts from the hospital provided regular joint medical consultations in the village, promoted health knowledge related to common diseases and assisted villagers in acquiring practical health tips and disease prevention information.



• The Zhejiang Branch conducted a medical outreach program in Geyang Village

### Activating a "New Engine" for Industrial Revitalization

The Company practices its corporate responsibility and mission by taking industrial support projects as a focal point. It is committed to properly initiating and conducting feasibility studies for support projects, effectively supporting rural development and cultivating new industries.





### Case: Leading a new chapter in rural revitalization through the apiculture industry

In Mawang Village, Hefeng County, Hubei Province, the work team of China Tower took various measures to mobilize the community to participate in the beekeeping industry. With the technical support provided by the Apiculture Society of Hubei Province, the Company has helped cultivate many local talents such as "native experts" and "field scholars" in Mawang Village. To further strengthen the unique cliff honey industry of Mawang Village, the Company invested special funds in Mawang Village for technology innovation, equipment upgrades, and brand development, as well as supported the village in co-establishing an apiculture base with various partners, attracting surrounding villages to "develop together" and expand the scale of beekeeping. As of the end of 2024, the village had over 800 beehives, with an annual production value of about RMB900,000, successfully driving the participation of 13 low-income households.



 Hubei Branch supported the beekeeping project in Hefeng County, Hubei



### Case: Assisting Chiliq Village in Hotan, Xinjiang, in resolving the issue of unsold peaches



Xinjiang Branch helped Chiliq Village resolve the unsold peach issue

Fresh peaches are the main product of the forestry and fruit industry in Chiliq Village, Hotan County, Xinjiang, but they face challenges such as a single sales channel and inconvenient transportation. The village work team organized the "Qixi Festival Group Purchase: I Have a Connection with Peaches" event to address the unsold product issue, using online platforms to help farmers promote their peaches. In Xinjiang, the Company mobilized its branches across the region to conduct a week-long "Central Enterprise Consumer Support for Agricultural Development Campaign", helping the local "Siyuan Industry Park" sell 600 kilograms of agricultural products.

### Weaving a "new cradle" for talent revitalization

In accordance with the talent cultivation plans of the assistance regions, the Company continuously increased the efforts in talent education and training. It actively mobilized local elites to return home and encouraged college students to start businesses in their hometowns, promoting a "mutual advancement" between rural revitalization and talent development. In 2024, the participants in special talent education training reached 4,310 person-times, including 1,986 person-times for trained cadres, 1,458 person-times for revitalization leaders, and 866 person-times for technical personnel.

## Case: "Golden Autumn Scholarship" charity donation activity for assistance villages in Hainan

In Hainan, in response to the call of the government of the paired assistance regions, the Company actively participated in the "Charity Scholarship and Dream Fulfillment Action" donation event held in Fulon Township, Baisha Li Autonomous County, Hainan. The Company donated RMB20,000 as a charity scholarship for new college students enrolling in the fall of 2024, helping aspiring students achieve their dreams in this golden autumn.



Scene of the "Golden Autumn Scholarship" charity donation activity

### Deepening cultural revitalization in a "new fertile ground"

The Company aims to deeply excavate, inherit, and innovate excellent traditional culture, injecting inexhaustible energy into rural revitalization. In 2024, the Company collaborated with local governments and residents to host popular events such as "Village Night Party", "Dragon Boat Festival Party", the "Navel Orange Cup for Unity" basketball game, and "Chinese Village Chef and Art Showcase" in areas like Xuan'en County in Hubei Province and Baojing County in Hunan Province, jointly enriching the cultural lives of local residents. Besides, a summit forum on world wild tea valley was held in Mawang Village, Hefeng County, Hubei Province, to promote the local popularization of the "World Wild Tea Valley" brand.

## Case: Creating cultural IP to boost rural cultural tourism

The Company established the "Village BA+" mechanism in Qingshuiping Town, Baojing County, Hunan, to promote the development of the rural tourism industry by creating a signature IP for the region. It innovatively held the "Basketball Showcase, Attractive Oranges Awaiting You" Youshui Orange BA basketball tournament in Qingshuiping Town, leveraging the influence of the event to promote local specialty agricultural products to the outside world, thereby enhancing agricultural product sales and achieving a deep integration of leisure tourism and e-commerce industries.



"Village BA+" activity in Baojing County, Hunan

### Drawing a "new blueprint" for ecological revitalization

Promoting rural ecological revitalization is inseparable from the improvement of living environments. The Company leveraged its business and technological advantages to assist paired assistance areas in accelerating digital transformation and enhancing social governance capabilities.

Case: Supporting rural ecological revitalization in Baojing County, Hunan through comprehensive video network project

In 2024, China Tower deeply implemented an ecological revitalization project in Baojing County, Hunan, focusing on building a comprehensive video network to achieve all-around monitoring and management of the rural ecological environment. The Company established a robust ecological environment monitoring network, including water quality monitoring stations and air monitoring stations, which plays a significant role in forest fire prevention, water quality monitoring, and air quality monitoring. It also automatically monitors illegal sand mining and fishing activities, providing strong support for timely responses to ecological safety incidents.

Since the implementation of the project, the incidence of forest fires in Baojing County has decreased by 30%, the water quality compliance rate has increased to 95%, and illegal fishing activities have reduced by 40%, effectively protecting the ecological environment and enhancing residents' quality of life.

## Warmly Building "The Riders' Home"

The Company actively engages in workers' care and support activities and has established over 600 "The Riders' Homes" across the country. "The Riders' Homes" are equipped with comfortable resting areas, as well as charging stations, drinking facilities, first aid kits, rain gear, and other daily necessities. In 2024, the Company continued to work with the All-China Federation of Trade Unions to launch a service for battery swapping at union stations, and launched cooperation in developing outdoor worker service sites, promoting the installation of battery swapping cabinets and charging piles at service sites, jointly hosting care service activities, and enriching the functions of outdoor worker resting stations in several provinces and cities nationwide, so as to deliver care to more outdoor workers.



Case: Supporting new forms of employment and working together to build a workers' harbor

In Jiangxi, to better serve workers in new employment forms, the Company partnered with the Jiangxi Provincial Federation of Trade Unions in building 15 demonstration "Riders' Homes". During key times such as the Spring Festival, Lantern Festival, summer holidays, Riders' Day, and year end, a total of 12 care activities were held to bring warmth and care to workers in new employment forms, helping riders and couriers relieve work-related stress and enhance their sense of happiness and belonging.



### Case: Heartwarming efforts and law publicity

In Jiangsu, to actively fulfill its social responsibility and further increase public awareness of laws and regulations, the Company set up caring rest stations for delivery workers and couriers and other workers in new employment forms, and initiated law publicity activities. Professional lawyers were invited to provide explanations of the Civil Code and legal assistance services centering on the practical issues faced by workers in new employment forms. Through on-site explanations, the initiative further enhanced the legal awareness and safety consciousness of workers in new employment forms, fostering a positive atmosphere of respecting, studying, abiding by and applying the law.



The caring rest station of Jiangsu Branch conducted legal aid activities



• Fujian Branch sent cool to the riders on the "July 17" Rider's Day



 Zhejiang Branch organized a caring activity for the Dragon Boat Festival at The Riders' Home

### **Engaging in Volunteer Services**

Volunteer service is the most distinctive marker of social civilization and progress. China Tower, with the mission of serving the people, vigorously promotes the volunteer spirit of dedication, love, mutual assistance, and progress, and continually strives on the path of volunteer service. As of the end of December 2024, the Company had a total of 396 youth volunteer organizations, with 3,489 youth volunteers, and conducted 730 youth volunteer service activities, with the number of participants reaching 5,612.

## Case: "Youths of China Tower" write a new chapter in volunteer service



Liaoning Branch's youth volunteers visited elderly veterans living alone

In Liaoning, China Tower's Liaoning Branch, centered on young employees, continually organized a series of activities including the flag presentation ceremony for youth volunteer teams and the "Learning from Lei Feng" initiative, striving to be good youth representatives of China Tower. The Company set up 15 youth volunteer teams within Liaoning Province. Youth volunteers have left their mark in various fields, from caring for riders to rural revitalization and from supporting digital development in Liaoning to embracing intelligent manufacturing for a strong province.



# Case: Gathering the power of spark volunteers to carry forward the volunteer spirit

Founded in 2014, the Spark Youth Volunteer Service Team of China Tower's branch in Lu'an is an outstanding volunteer team that has "an enormous capacity for hard work, fight and dedication". Over the past ten years, the Spark Youth Volunteer Service Team has carried out more than 1,200 volunteer activities such as science popularization and community service, receiving over 12,000 consultations from citizens and helping solve more than 300 practical problems, which contributed to the creation of a civilized city, served people's livelihood needs and was praised by the municipal party committee, the municipal government, and all sectors of society.



Spark Youth Volunteer Service Team of Lu'an Branch

# Joint Governance Based on Integrity to Build a Solid Development Foundation

China Tower continuously improves its corporate governance methods, standardizes corporate governance practices, adheres to lawful and compliant operations, enhances risk prevention capabilities, and strengthens supply chain management, thereby solidifying the foundation for the Company's highquality development through excellent governance.

92	Improving Corporate
CE IR	Governance
94	Ensuring Integrity and
91110	Compliance in Operations
98	Implementing
40180	Comprehensive Risk
	Management
99	Strengthening Supply Chain
01101	Management

## Highlights in 2024

Number of board meetings held: 5, number of written resolutions passed: 5, with a 100% attendance rate

1

- Number of integrity warning educations conducted
   3,840, covering a total of 119,500 employees
- Public procurement rate: 95.98%
- Total number of Integrity Assurance Contracts and Integrity
   Commitment Letters signed with suppliers: 225,077

United Nations Sustainable Development Goals (SDGs)





Concerning and the



 $\mathbf{n}$  1



# V. Joint Governance Based on Integrity to Build a Solid Development Foundation

## **Improving Corporate Governance**

China Tower continuously optimizes its corporate governance mechanism, ensuring legal authority and responsibility, transparency of rights and responsibilities, coordinated operations, and effective checks and balances, thus constantly enhancing the level of governance. In 2024, the Company's general meeting, Board of Directors, and Supervisory Committee operated in a standardized and effective manner, and the independent directors diligently fulfilled their responsibilities, with a constantly improved corporate governance structure.



Corporate Governance Structure Diagram

## Strengthening the Construction of the Board of Directors

As of the end of 2024, the Company's Board of Directors consisted of 9 members, including 2 executive directors, 3 non-executive directors, and 4 independent non-executive directors. The Board of Directors has set up five special committees: the Strategy Committee, the Remuneration and Appraisal Committee, the Nomination Committee, the Audit Committee and the Connected Transaction Committee, all of which were responsible for the supervision of the overall affairs of the Company in various areas and assistance of discharging its responsibilities. All the five Board committees have formulated their own terms of reference with clear power and responsibilities. In 2024, the Company's Board of Directors and all the special committees actively fulfilled their responsibilities, held five meetings and passed five written resolutions and considered 35 proposals throughout the year. All directors actively participated in meetings and diligently performed their duties, with a 100% attendance rate at Board meetings.

The Company encouraged and supported all directors in their professional development, and regularly conducted professional training for all directors to ensure they can continue to contribute to the Board with comprehensive information and relevant expertise. In 2024, the Company organized one focused training session for Board members, primarily covering topics such as risk compliance, connected transactions, and Board operations, and provided specialized pre-job training for directors newly appointed during the year.

### **Board Independence**

The composition of the Company's Board of Directors complies with the independence requirements outlined in the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (Listing Rules). One third of the Board members are independent non-executive directors, and each independent non-executive director is required to confirm their personal independence and issue an annual independence confirmation letter.

The Company encourages all directors to freely express their independent opinions at Board meetings and Board committee meetings. It also arranges irregular site visits to enhance independent non-executive directors' understanding of the Company's projects and establishes corresponding policies and procedures to avoid any potential conflicts of interest. The Company requires that directors with significant interests in contracts, transactions, or arrangements be prohibited from voting on Board resolutions regarding approval of those contracts, transactions, or arrangements and should not be counted in the quorum for such meetings. As of the end of 2024, there were no financial, business, familial, or other significant relationships among the Board members, ensuring that they can freely make independent judgments.

## Professionalism of the Board of Directors

When selecting directors, the Company places a strong emphasis on their professional backgrounds, management experience, and ethical qualities to ensure that they are capable of fulfilling their roles in the Board. For the special committees, the Company also considers the relevant expertise and experience that directors should possess in order to provide valuable advice and decision-making support to the Company. As of the end of 2024, the Company's directors had diverse and extensive professional experience in fields such as telecommunications, energy, aviation, finance and accounting, auditing, management, finance, investment, and asset management.

## **Board Diversity**

To achieve sustainable and balanced development, the Company placed great emphasis on the impact of board diversity in attaining strategic objectives and ensuring sustainable development. Accordingly, the Company formulated a board diversity policy that established clear principles for board composition, taking into account various diversity factors, including but not limited to gender, age, cultural and educational background, professional experience, skills, expertise, and tenure. The Company also considered its business model and specific needs, ensuring a balanced composition between executive and non-executive directors.

The nomination committee of the Board reviewed the board structure at least once a year and was responsible for identifying and selecting qualified candidates for directorship. In the selection process, the committee gave due consideration to the board diversity policy. The appointment of board members was made with full regard to the benefits of board diversity and was based on objective criteria that assessed the strengths of each candidate. In 2024, the Company appointed one additional female director, further advancing gender diversity within the Board.

# **Ensuring Integrity and Compliance in Operations**

China Tower upheld the principles of integrity and compliance in its business operations, strictly adhering to national laws and regulations, regulatory requirements, the company's articles of association, and relevant rules and regulations. The Company comprehensively strengthened compliance management, advanced business ethics and anti-corruption initiatives, enhanced intellectual property protection, and continuously improved its level of compliant operations.

### **Development of Compliance Management System**

The Company was unwavering in advancing the construction of rule-of-law compliance, fully embracing the compliance philosophy of "Everyone, every matter and every time with compliance." It continuously refined its compliance management system, introduced compliance management measures, reinforced the primary responsibility for compliance management, and established "three lists", which are the list of compliance risk identification, list of position-specific compliance duties, and list of business process control. The Company also enhanced specialized compliance guidelines, constantly strengthening the "three lines of defense" in compliance management – preventive measures, in-process control, and post-event supervision – to support the Company's high-quality development.

------

Strengthening Organizational Leadership	<ul> <li>The Company, along with its provincial branches, smart connectivity company, and energy company, established leading groups for rule-of-law compliance (compliance committees), each appointed with a chief compliance officer. Compliance officers were also designated within each department of the Company headquarters and its provincial branches.</li> </ul>	
Enhancing the Regulatory Framework	<ul> <li>The Company developed compliance management measures and issued a compliance handbook, while compiling eleven specialized compliance guidelines focusing on key areas. The compliance management framework was embedded into all aspects of operations.</li> <li>Furthermore, it formulated the Measures for the Administration of Rules and Regulations (Trial) 《規章制度管理辦法(試行)》) and reviewed over 450 existing company regulations. To improve the compliance system, it introduced the Legal and Compliance Review Management Measures (法律合規審查管理辦法》) and revised the Administrative Measures for Legal Disputes (《法律糾紛案件管理辦法》).</li> </ul>	
Reinforcing Risk Identification	<ul> <li>The Company compiled "three lists" for compliance management: the compliance risk identification list, job-specific compliance responsibilities list, and business process control list, covering eight critical areas of operation.</li> <li>Over the past year, it identified more than 200 compliance risk behaviors, providing a foundation for refining and optimizing compliance risk management strategies.</li> </ul>	
Strengthening the Development of Foreign- Related Legal and Compliance Framework	<ul> <li>The Company organized Southeast Asia subsidiaries and the Hong Kong representative office to conduct self-assessments focusing on overseas criminal cases related to integrity and compliance, unfair competition, violations of tax, labor, and environmental regulations, as well as cross-border intellectual property and trade secret protection, thereby strengthening compliance management in key areas.</li> <li>Building on a clear identification of overseas compliance risk points, the Company compiled a detailed list of compliance management matters for the Southeast Asia subsidiaries and the Hong Kong representative office.</li> <li>It coordinated the preparation of overseas compliance risk assessment reports and export control violation investigation reports, which were submitted to regulatory authorities.</li> </ul>	

## **Business Ethics and Anti-Corruption**

The Company steadfastly upheld business ethics and continuously promoted embedded integrity risk prevention and control, transforming risk points into opportunities for management enhancement. It enforced a "zero-tolerance" policy toward all forms of corruption, establishing a long-term mechanism to foster integrity and combat corruption.

### Deepening oversight mechanisms

The Company continually refined its "comprehensive oversight" system by establishing a supervisory committee, integrating oversight responsibilities across all levels, and consolidating resources from various lines of supervision. It built a digitalized oversight platform to conduct joint inspections, issue supervision notices, and promote coordinated oversight efforts, effectively leveraging collective oversight strength to prevent and mitigate integrity risks.



### Fortifying integrity defenses

The Company focused on full-cycle management, advancing anti-corruption efforts in depth, and urging the improvement of management regulations. In 2024, the Company revised the Disciplinary Recommendation Work Procedures 《紀檢建議工作辦法》) to strengthen case analysis based on identified risks, driving relevant departments to address management loopholes and steadily improve institutional frameworks. Additionally, it continued to implement the Guidance on Strengthening Regional Integrity Risk Prevention and Control 《關於加強區域廉潔風險防控的指導意見》), urging institutions at all levels to refine prevention measures based on their specific contexts and enhance mechanisms for supervising and constraining micro-level authority.

In 2024, the Company concluded one embezzlement litigation case, and the individuals involved have been transferred to the judiciary authorities for handling in accordance with national laws and regulations.

### **Employee conduct management**

The Company further advanced the investigation and rectification of specific related-party relationships, consistently implemented its Prohibited Transaction Entities List《禁止交易企業名單》 system, and revised and improved the Regulations on Prohibiting Business Transactions with Enterprises Established by Specific Related Parties of Leadership and Key Position Employees 《關於禁止與領導人員和關鍵崗位員工特定關係人所辦企業發生業務往來 的規定》. These measures aimed to standardize employee conduct, guide and urge employees to comply with regulations, and operate in accordance with laws and rules. Additionally, the Company analyzed and identified high-risk areas and positions based on specialized rectification efforts and disciplinary reviews, continuously deepening integrity development and anti-corruption initiatives.

#### Anti-corruption management in the supply chain

To strengthen integrity and work discipline in external collaborations and prevent non-compliant behaviors such as corruption and bribery between employees and suppliers or partners at the source, the Company revised the Management Measures for the Integrity Commitment Letter (Trial) (《<保廉 承諾書>管理辦法(試行)》) within the year. Suppliers and partners were required to sign Integrity Assurance Contracts and Integrity Commitment Letters, pledging to adhere to integrity regulations during the cooperation period. Violations of these commitments would be addressed in accordance with relevant supplier misconduct management regulations. By the end of 2024, the Company had signed a total of 225,077 Integrity Assurance Contracts and Integrity Commitment Letters with suppliers, effectively ensuring transparency and fairness in procurement and external collaborations.

### Integrity culture development

The Company continued to strengthen integrity warning education and enhance the development of an integrity culture. It formulated the Implementation Opinions on Strengthening the Company's Integrity Culture Development 《關於加強公司廉潔文化建設的實施意見》 and regularly updated integrity development progress, issued holiday integrity reminders, held case analysis meetings, and conducted integrity training sessions. These efforts aimed to cultivate and reinforce employees' integrity awareness. During the year, the Company convened a corporate integrity warning education conference and established a categorized warning case database to guide employees to respect boundaries, maintain vigilance, and uphold ethical standards. In 2024, the Company conducted 3,840 integrity warning education sessions, covering 119,500 employee participations. It also delivered over 20 integrity training courses for newly promoted executives, regional managers, new hires, and maintenance partners, reaching more than 2,000 participants.



### Whistleblower protection

The Company strictly adhered to the Supervision Law of the People's Republic of China 《中華人民共和國監察法》 and the Criminal Law of the People's Republic of China 《中華人民共和國刑法》. It formulated and improved the implementation measures for disciplinary inspection and whistleblowing complaints, established diverse reporting channels, and created a fair and transparent complaint handling process. The Company also clearly defined whistleblower protection mechanisms, fully leveraging the critical role of whistleblowing in supervising and preventing violations of regulations and discipline.

Reporting Channels	The Company established multiple public reporting channels, including written letters, emails, phone calls, and in-person visits. Designated personnel were responsible for meticulously recording letters, visits, and calls from employees and the public.
Reporting Management Process	Each reported incident of the Company was assigned a unique number and registered in the "Case Supervision Management System," with real-time updates based on the handling progress. Every report was analyzed and assessed based on the nature of the issue, its severity, and its investigability, followed by timely submission for review and categorized handling. Meanwhile, the Company strictly managed the handling process, requiring that handling opinions and plans be issued and approved within one month of receiving the report.
Whistleblower Protection	The Company explicitly allowed anonymous reporting and required personnel handling whistleblowing complaints to strictly adhere to work discipline and confidentiality regulations. They were prohibited from destroying or withholding complaint materials and from disclosing or forwarding such materials or related information to irrelevant parties, especially the individuals being reported. No unit or individual was permitted, under any pretext, to obstruct, suppress, or retaliate against whistleblowers who reported, accused, or appealed in accordance with laws and regulations. Any infringement on the legitimate rights and interests of whistleblowers, their relatives, relevant witnesses, or personnel assisting in case handling was treated as retaliation and addressed accordingly.

## **Intellectual Property Protection**

The Company strictly adhered to the Advertising Law of the People's Republic of China, the Trademark Law of the People's Republic of China, and the regulations of relevant regulatory authorities, and formulated regulations such as the Identification System Manual to regulate the use of trademarks and brand images, establishing a normalized prevention and control mechanism.

The Company also strictly adhered to the Patent Law of the People's Republic of China, the Copyright Law of the People's Republic of China, the Trademark Law of the People's Republic of China, and other relevant laws and regulations. It formulated rules and regulations such as the Notice on the Lawful and Compliance Use of Others' Copyright Works, Measures for Implementation of Patent Management, and Intellectual Property Compliance Guidelines. It actively engaged in patent application and maintenance work, protected proprietary technological innovation achievements, promoted the compliance construction of the entire life cycle of intellectual property rights, and guarded against the risk of intellectual property rights violations.

In 2024, the Company obtained 368 new authorized invention patents, representing a 58% increase compared to the previous year. During the year, it secured 143 authorized invention patents, marking a 68% increase compared to 2023.

## Implementing Comprehensive Risk Management

China Tower fully leveraged its risk and internal control systems to establish a trinity of collaborative and efficient risk prevention and control management. This system effectively strengthened the foundation of risk management, enhanced the capability to identify and assess legal risks, and ensured the relevance and effectiveness of risk response measures. In 2024, the Board of the Company reviewed the Report on Risk Management and Internal Control Effectiveness and the Internal Audit Work Plan 《風險管理與內控有效性的匯報及內審工作計劃》, integrating risk management, internal control, and compliance supervision into a unified management framework. This integration fully utilized the internal control system as a critical safeguard for the Company's risk prevention and high-quality development.

## **Optimizing the Risk Governance System**

The Board of the Company placed great emphasis on the establishment and enhancement of the risk management and internal control systems. It was responsible for assessing and determining the nature and level of risk the Company was willing to accept in achieving its strategic objectives, ensuring the implementation and maintenance of appropriate and effective risk management and internal control systems. Additionally, the Board bore responsibility for these systems and was obligated to review their effectiveness. The internal audit department of the Company played a vital role in supporting the Board, the management, and the risk management and internal control systems. It actively conducted various internal control and risk management audits and regularly reported audit results to the audit committee and the Board. Each department performed daily monitoring of risks within its respective areas, maintained high sensitivity to high-risk fields, conducted continuous assessments, and tracked the status of significant risks and the implementation of their control plans.

### **Enhancing Internal Control and Risk Management**

In 2024, the Company continued to deepen superior audit and inspection efforts, integrating the rectification of issues identified through internal audits. It conducted re-identification, re-assessment, and re-response to risks in key processes and critical nodes across various business areas. During the year, the Company compiled the 2024 Manual of Risk and Internal Control Management, introducing optimized control measures and clarifying corresponding control positions. This strengthened the targeted measures for risk point controls, enhanced technical prevention and control capabilities, and ensured that personnel responsible for control points fulfilled their duties effectively.

### Strengthening key risk prevention and control

Based on the realities of risk management, the Company conducted timely risk assessments, with a focus on in-depth analysis of key risk points. It effectively strengthened risk response and risk management evaluation efforts. In 2024, the Company conducted risk monitoring, early warning, response, and reporting for the top five major risk areas. It identified and analyzed over 160 significant risk items, effectively enhancing its ability to anticipate, assess, and mitigate major operational risks while ensuring the implementation of risk control responsibilities.

### Cultivating a strong risk and internal control culture

The Company conducted internal control self-assessments and carried out independent internal control evaluations in selected provincial subsidiaries to enhance the implementation of internal control measures at all levels. By refining procedural frameworks, defining responsibilities, and enforcing corrective measures, the Company ensured effective risk management. Additionally, it organized compliance culture promotion sessions and risk and internal control training programs, engaging over 4,000 participants to further strengthen risk awareness of all employees.

# Strengthening Supply Chain Management

China Tower remained committed to building a supplier management system that fosters win-win cooperation and fair competition. The Company continuously improved its supplier assessment, admission, supervision, and evaluation mechanisms while reinforcing environmental and social risk management within the supply chain. By collaborating with industry peers and broader society, it contributed to sustainable development and worked toward a mutually beneficial supply chain ecosystem.

## Supplier Risk Management

Dedicated to establishing a responsible supply chain, the Company advanced sustainable supply chain management by enhancing risk identification and management efforts while continuously refining its supply chain management system. It extended its sustainability requirements to upstream and downstream partners.



### Supplier selection and bidding

The Company consistently adhered to the principles of fairness, impartiality, and transparency in procurement. In compliance with the Tendering and Bidding Law of the People's Republic of China 《中華人民共和國招標投標法》 and the Measures for the Administration of Bidding and Tendering for Communications Engineering Construction Projects 《通信工程建設項目招標投標管理辦法》 issued by the Ministry of Industry and Information Technology, the Company formulated and refined procurement management policies and implementation guidelines. It continuously optimized supplier selection and bidding management processes to foster a healthy and collaborative supplier ecosystem. In 2024, a total of 7,174 suppliers underwent the prescribed selection procedures.

\_\_\_\_\_

Qualification Review	<ul> <li>For major centralized procurement projects involving critical materials, the Company incorporated quality assurance system evaluations. Service-related projects required suppliers to provide documentation on labor rights (labor contracts and social security certificates).</li> <li>All procurement projects mandated that suppliers sign the Integrity Commitment Letter. If suppliers violated integrity or safety production requirements during contract execution, the Company handled such breaches in accordance with the Measures for Negative Behavior Management of Suppliers.</li> </ul>
Open Bidding	<ul> <li>Except for cases involving confidentiality or other special circumstances, procurement operations were required to be conducted through the Company's electronic procurement platform. The IT system managed procurement data, and all procurement results were publicly disclosed.</li> </ul>
Bidding Management	<ul> <li>The Company integrated risk identification and early warning mechanisms into its procurement IT processes. It strengthened automatic auditing and risk alerts for procurement data reporting under state-owned asset supervision, enabling full-scale, end-to-end system oversight of procurement projects.</li> <li>The Company enhanced the functionality of the electronic bidding platform by improving the comparative analysis of bid document similarities. It integrated with corporate credit websites to conduct joint checks on bidder information, effectively preventing bid-rigging and collusive bidding.</li> </ul>
Supervision and Inspection	• The Company conducted regular online inspections and carried out on-site business supervision and checks at headquarters and across 31 provincial subsidiaries. It cooperated with higher-level regulatory authorities in conducting compliance inspections and procurement-specific audits. These efforts strengthened both symptom treatment and root cause resolution, addressing systemic loopholes and weaknesses through institutional and procedural improvements.

By supplier registration location	Total suppliers (2023)	Total suppliers (2024)
Mainland China	216,499	248,874
Hong Kong, Macau, Taiwan & Overseas	39	37

### Supplier evaluation and management

The Company placed great importance on supplier evaluation, systematically assessing and monitoring supplier performance to enhance supplier management, regulate suppliers' contract compliance, mitigate procurement and execution risks, and ensure product and service quality as well as compliance. In 2024, the Company conducted supplier evaluations for 1,323 suppliers across 378 centralized procurement projects.

The Company formulated the Measures for Negative Behavior Management of Suppliers (Trial), under which suppliers found to have violated integrity commitments were placed on a blacklist. During the blacklist's validity period, these suppliers were prohibited from participating in procurement activities for the relevant products within the designated regions. For construction projects, the Company required suppliers to strictly implement safety production requirements, such as the "double check-in" system, during the construction process, making every effort to prevent safety production liability accidents.

### **Green Supply Chain Development**

The Company incorporated environmental protection and energy-saving criteria into the procurement evaluation process, carefully assessing suppliers' environmental management systems and reviewing their certifications for energy-efficient products to build a sustainable supply chain. In 2024, the Company mandated compliance with ISO 14000 environmental management system certification and ISO 18000 occupational health and safety management system certification for key material procurement projects, achieving 100% supplier evaluation coverage.

Air Conditioning Products	The Company prioritized components that were ozone-friendly and had low environmental impact. It favored products with eco-labels, waste recycling instructions, and clear environmental usage lifespan markings, strengthening green procurement and guiding suppliers to improve key energy efficiency indicators of products.
Battery Products	The Company introduced assessments of green, low-carbon, and environmentally responsible enterprises in battery procurement projects. It established carbon footprint certification as an evaluation criterion, focusing on corporate carbon footprint and emissions. Bidders were encouraged to provide valid third-party-issued carbon footprint certification for battery products.



# **Demonstration of ESG Performance**

## **Greenhouse Gas Emissions**

Indicators	Unit	Data in 2024
Direct greenhouse gas emissions (Scope 1)	Tons	50,748.06
Gasoline	Tons	44,120.40
Diesel	Tons	4,515.81
Natural gas	Tons	2,111.85
Indirect greenhouse gas emissions (Scope 2)	Tons	2,964,988.10
Externally sourced electricity	Tons	2,953,761.86
Externally sourced heat	Tons	11,226.24
Greenhouse gas emissions (Scope 1 & Scope 2)	Tons	3,015,736.15
Greenhouse gas emissions per unit of operating income	Tons/RMB million	224.75

Notes:

- The Company continuously improved the green level of its energy structure, promoting the clean replacement of fuels and raw materials across all business
  operations under the "one core and two wings" strategy. It prioritized the use of clean energy sources such as green electricity, reduced the consumption
  of primary fossil fuels like coal, and favored efficient energy sources such as electricity and natural gas over secondary energy sources like coal gas, liquefied
  petroleum gas, kerosene, and fuel oil. These efforts aimed to enhance the green level of the energy structure and increase the proportion of electricity in
  energy consumption.
- As dictated by the types of businesses operated by the Company, greenhouse gas emissions are mainly from carbon dioxide generated by the use of externally sourced electricity and fuel.
- The statistical scope of greenhouse gas emission data includes the headquarters, provincial branches and municipal branches of China Tower Corporation Limited.
- Greenhouse gas emission data is presented by carbon dioxide equivalent, calculated based on the 2019 Refinement to the IPCC 2006 Guidelines for National Greenhouse Gas Inventory published by the Intergovernmental Panel on Climate Change (IPCC), China Energy Statistical Yearbook 2012 published by the National Bureau of Statistics, the 2005 Study on China's Greenhouse Gas Inventory and Provincial Greenhouse Gas Inventory Guidelines (Trial) published by the National Development and Reform Commission, the Letter on soliciting Opinions on the Guidelines for Compiling Carbon Peaking Action Plans for Central Enterprises (draft for comment) issued by SASAC and Guidelines for Accounting and Reporting of Greenhouse Gas Emissions (Trial) published by the Ministry of Ecology and Environment.
- Due to the further development of the Company's business during this year, total energy consumption and greenhouse gas emissions increased.

# **Use of Energies and Resources**

Indicators	Unit	Data in 2024
Direct energy consumption	MWh	192,655.28
Gasoline	MWh	166,828.71
Diesel	MWh	16,357.85
Natural gas	MWh	9,468.72
Indirect energy consumption	MWh	5,532,936.97
Externally sourced electricity	MWh	5,504,587.89
Externally sourced heat	MWh	28,349.08
Renewable energy	MWh	55,229.95
Externally sourced green electricity	MWh	55,229.95
Total energy consumption	MWh	5,780,822.20
Energy consumption per unit of operating income	MWh/RMB million	430.82
Water consumption	Tons	968,667.91
Water consumption per unit of operating income	Tons/RMB million	72.19

Notes:

• The statistical caliber of energy consumption is the consumption in offices and for operational purposes in all operating units of the Company.

• The statistical scope of energy consumption data includes the Headquarters, provincial branches and municipal branches of China Tower Corporation Limited.

The energy consumption data is based on the consumption of electricity and fuel and the relevant conversion coefficient provided by the General Principles
on Calculation of Comprehensive Energy Consumption (GB/T 2589 – 2020) published by the General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China and the Standardization Administration of the People's Republic of China for calculation.

The Company continuously improved the green level of its energy structure, promoting the clean replacement of fuels and raw materials across all business
operations. It prioritized the use of clean energy sources such as green electricity, reduced the consumption of primary fossil fuels like coal, and favored
efficient energy sources such as electricity and natural gas over secondary energy sources like coal gas, liquefied petroleum gas, kerosene, and fuel oil. These
efforts aimed to enhance the green level of the energy structure and increase the proportion of electricity in energy consumption.

In 2024, the Company has no significant problems in obtaining suitable water sources.

## Waste Emissions

Indicators	Unit	Data in 2024
Total hazardous waste	Tons	6,995.38
Discarded nickel-cadmium batteries	Tons	0
Discarded mercury oxide batteries	Tons	0
Discarded lead (acid) batteries (packs)	Tons	6,995.38
Hazardous waste per unit of operating income	Tons/RMB million	0.52
Total non-hazardous waste	Tons	10,128.78
Discarded air conditioners from the server room	Tons	2,948.16
Waste switching power supply in the server room	Tons	6,960.62
Office paper	Tons	98.00
Discarded electronic products	Tons	117.05
Office supplies consumption	Tons	4.95
Non-hazardous waste per unit of operating income	Tons/RMB million	0.75

Notes:

- As dictated by the types of businesses operated by the Company, the main hazardous wastes are lead-acid batteries (packs) and nickel-cadmium batteries used in the server rooms at the station sites. The weight of the batteries is estimated based on the equipment model.
- Regarding disposal and use of discarded batteries, the Company strictly complies with the Environmental Protection Law of the People's Republic of China (《中華人民共和國環境保護法》), Law of the People's Republic of China on the Prevention and Containment of Solid Waste Pollution 《中華人民共和國固體廢物污染環境防治法》 and the Technical Specifications of Pollution Control for Treatment of Waste Lead-acid Battery (HJ 519-2020) 《廢鉛蓄電池處理污染控制技術規範(HJ 519-2020)》) and other laws and regulations, and disposes of batteries accordingly.
- The main non-hazardous waste includes office paper, office supplies, electronic products and discarded air conditioners and switching power supply from the server room.
- The statistical counts of discarded office paper and other office supplies include the data of purchase of paper, rollerball pens and paper clips by the Company's Headquarters, provincial branches and municipal branches, and the weight of such office supplies is estimated based on their models.
- Discarded electronic products include the scrapped desktops, laptops and printers from the Company's Headquarters, provincial branches and municipal branches and the weight of such supplies is estimated based on their models.
- As dictated by the types of businesses operated by the Company, it does not include use of packaging materials.

# **Employee Hiring and Turnover**

Indicators		Unit	Data in 2024
Total number of employees		person	24,107
Number of employees by nationality	Ethnic minorities	person	2,487
	Ethnic Han	person	21,621
Number of employees by gender	Male	person	17,386
	Female	person	6,721
Number of employees by category	Managers	person	4,461
	Non-managers	person	19,646
Number of employees by age	29 and below	person	5,248
	30-39	person	10,275
	40-49	person	6,554
	50 and above	person	2,030
Number of employees by region	East China	person	5,990
	Central China	person	2,836
	North China	person	3,949
	South China	person	2,523
	Northwest China	person	2,724
	Northeast China	person	2,026
	Southwest China	person	4,048
	Hong Kong, Macau and Taiwan	person	4
	Overseas regions (except Hong Kong, Macau and Taiwan)	person	7

Indicators		Unit	Data in 2024
Employee overall turnover rate		%	1.1
Employee turnover rate by gender	Male	%	0.9
	Female	%	1.6
Employee turnover rate by age	29 and below	%	3.4
	30-39	%	0.7
	40-49	%	0.3
	50 and above	%	0.0
Employee turnover rate by region	East China	%	1.1
	Central China	%	0.7
	North China	%	1.1
	South China	%	1.5
	Northwest China	%	1.0
	Northeast China	%	0.8
	Southwest China	%	1.2
	Hong Kong, Macau and Taiwan	%	0.0
	Overseas regions (except Hong Kong, Macau and Taiwan)	%	0.0

Notes:

• The employee's statistic data for this year covers formal employees who entered into employment agreements with the Company.

• The employee turnover rates in each category = total number of employee turnover in the category/total number of employees in the category.
### **Employee Training**

Indicators		Unit	Data in 2024
The number and percentage of employees trained by gender	Number of male employees trained	person	17,205
	Number of female employees trained	person	6,659
	Percentage of male employees trained	%	99.0%
	Percentage of female employees trained	%	99.1%
The number and percentage of employees trained by employee category	Number of managers trained	person	4,451
	Number of non-managers trained	person	19,413
	Percentage of managers trained	%	99.8%
	Percentage of non-managers trained	%	98.8%
The average training hours by gender	Average training hours per male employee	hours/person	143.8
	Average training hours per female employee	hours/person	133.4
The average training hours by employee category	Average training hours of managers	hours/person	166.0
	Average training hours of non-managers	hours/person	135.2
The average training hours of all employees		hours/person	140.9

# **Employee Work Injury and Fatality**

Indicators		Data in 2024
Number of work-related fatalities	Number of work-related fatalities in 2022	0
	Number of work-related fatalities in 2023	0
	Number of work-related fatalities in 2024	0
Rate of work-related fatalities	Rate of work-related fatalities in 2022	0%
	Rate of work-related fatalities in 2023	0%
	Rate of work-related fatalities in 2024	0%
Lost days due to work injury	Lost days due to work injury in 2024	1,175

Note:

• The employees' work-related fatality and injury data are subject to the official written documents such as the decision of the local social insurance administrative department on the acceptance of the application for work-related injury identification.



# Appendix

## United Nations Sustainable Development Goals Practices

SDGs	Practice of China Tower	Pages
1 <sup>№</sup> <b>№ ФФФФ</b>	<ul> <li>Serve the comprehensive revitalization of rural areas, take multiple measures to promote alleviation jobs</li> <li>Devote to the social welfare undertakings, actively carry out employee volunteer services</li> <li>Focus on the disasters and emergency events, spare no effort to provide loving assistance</li> </ul>	<ul> <li>81-87</li> <li>88-89</li> <li>25-28</li> </ul>
	<ul> <li>Strengthen workplace safety management to protect employees' health</li> <li>Provide employees with a comprehensive medical security system</li> <li>Support free health consultation activities to enhance the accessibility of medical and health services</li> </ul>	<ul> <li>72-74</li> <li>75</li> <li>82</li> </ul>
4 duality	<ul> <li>Strengthen talent development and cultivation to support employees' career growth</li> <li>Provide specialized training for talents in rural areas to support rural talent revitalization</li> </ul>	• 78-79 • 85
5 center T	Ensuring gender equality in employee recruitment, promotion, salary, training and other     aspects	• 75
6 CLEAN MATTER AND CANENDAR	<ul> <li>Support water authorities in intelligent regulatory for river and lake management, sewage discharge and water source protection, ensure the safety of flood, water supply, drinking water and water ecology</li> </ul>	• 41
7 AFFORMATION	<ul> <li>Optimize the energy structure, and continue to increase the green electricity application percentage of base stations</li> <li>Actively promoted the breakthrough-making in technologies related to new energy and the commercialization of innovation outcomes</li> </ul>	• 48-49
8 DEEDIT WORK AND ECONUME GROWTH	<ul> <li>Emphasize talent attraction and retention, safeguarding employees' legal rights and interests</li> <li>Provide comprehensive benefits and a safe working environment</li> <li>Continuously improve compensation and benefits, as well as training and development systems</li> </ul>	• 74-79
9 NULTER, INCULTOR AND INFRASERUCTURE	<ul> <li>Continuously advance the construction of 5G networks, advance comprehensive coverage of networks, and improve network quality</li> <li>Empower the digital intelligence governance for thousands of industries, serving new scenarios and businesses</li> </ul>	• 16-21 • 21-25

SDGs	Practice of China Tower	Pages
10 HERCED INCOLLERS	Continuously improve telecommunications infrastructure in remote and rural areas to help bridge the digital divide	• 19-21
	<ul> <li>Thoroughly implement signal upgrade to enhance network coverage in public welfare settings and aid the digital transformation of key industries</li> <li>Expand diversified new energy application services by deploying battery swapping and charging stations nationwide, facilitating green travel for the public</li> </ul>	• 18-19 • 31-35
12 ESPENSIELE CREASEPTION CONCILION	<ul> <li>Establish a customer-centric service quality management system and carry out targeted initiatives to enhance service quality</li> <li>Build a "service-oriented" enterprise by expanding the channels through which customers can submit complaints, and striving to resolve issues efficiently and effectively</li> </ul>	• 70-71
13 ICHANTE	<ul> <li>Focus on climate change risks and assess how climate – related risks and opportunities potentially impact the Company's business development</li> <li>Formulate the "168" development plan of China Tower to comprehensively enhance its green and low-carbon development standards</li> <li>Deepen sharing to reduce carbon emissions at the source, use innovative technologies to improve energy efficiency of base stations, and promote the use of green energy by applying new energy</li> </ul>	<ul> <li>55-56</li> <li>54</li> <li>48-49</li> </ul>
14 EECH WATER	<ul> <li>Deploy video surveillance systems in rivers, lakes, and other water areas to build a protective barrier for aquatic life habitats</li> <li>Innovatively develop scenario applications such as those in the "intelligent protection for fishery management" industry to support the implementation of the "Yangtze River Protection" strategy</li> </ul>	• 45
15 tille	<ul> <li>Assist with the building of an integrated air-ground-space monitoring system, enabling digital protection of forest and grassland resources</li> <li>Leverage the panoramic video surveillance and wildlife protection and monitoring platform, helping protection of biological habitat</li> </ul>	• 42 • 43-44
16 PLACE, AUSTRON AND STRONG NOTIFICATION NO	<ul> <li>Improve the working mechanism of internal supervision and disciplinary inspection and whistleblowing complaints</li> <li>Enhance transparency and fairness in procurement and external collaborations</li> <li>Guide and urge employees to comply with regulations, and operate in accordance with laws and rules</li> </ul>	• 95-97
17 PATINESSIPS IGH THE CAULS	<ul> <li>Build a supplier management system that fosters win-win cooperation and fair competition</li> <li>Actively participate in the development of industry standards and the cooperation of industry communications</li> </ul>	• 99-101 • 80

#### HKEX Environmental, Social and Governance Reporting Code

Subject Areas, Aspects, General Disclosures and KPIs			Pages
Part B: Mandatory Di	sclosure Requiren	nents	
Statement from the Board			5
Reporting Principles			About the report
Reporting Boundary			About the report
Part C: "Comply or e	xplain" Provisions		L
A. Environmental			
Aspect A1: Emissions	(b) complia	: cies; and ince with relevant laws and regulations that have a significant impact on the issuer emissions, discharges into water and land, and generation of hazardous and non-	50-53
	KPI A1.1	The types of emissions and respective emissions data	104
	KPI A1.2	Total hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	104
	KPI A1.3	Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	104
	KPI A1.4	Description of emissions target(s) set and steps taken to achieve them	50-53, 57
	KPI A1.5	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them	50-53
Aspect A2: Use of Resources	General Disclosure Policies on the efficient use of resources, including energy, water, and other raw materials		50-53
	KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas, or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility)	103
	KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility)	103
	KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them	50-53, 57
	KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them	50-53, 57, 103
	KPI A2.5	Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced	Not applicable
Aspect A3: The Environment and	General Disclo Policies on mir	usure nimizing the issuer's significant impacts on the environment and natural resources	40-45
Natural Resources	KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	40-45

	Subject Areas, Aspects, General Disclosures and KPIs		
B. Social			
Employment and Lab	oour Practices		
Aspect B1: Employment	relating to comp		74-79
	KPI B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region	105-107
	KPI B1.2	Employee turnover rate by gender, age group and geographical region	105-107
Aspect B2: Health and Safety			72-74
	KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year	105-107
	KPI B2.2	Lost days due to work injury	105-107
	KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored	72-74
Aspect B3: Development and Training	General Disclosu Policies on impro of training activit	oving employees' knowledge and skills for discharging duties at work. Description	78-79
	KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management)	105-107
	KPI B3.2	The average training hours completed per employee by gender and employee category	105-107
Aspect B4: Labor Standards			74
	KPI B4.1	Description of measures to review employment practices to avoid child and forced labor	74
	KPI B4.2	Description of steps taken to eliminate such practices when discovered	74

Subject Areas, Aspects, General Disclosures and KPIs			Pages	
Operating Practices				
Aspect B5: Supply Chain Management	General Disclos Policies on man	ure aging environmental and social risks of the supply chain	99-101	
	KPI B5.1	Number of suppliers by geographical region	100	
	KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored	99-101	
	KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored	99-101	
	KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored	99-101	
Aspect B6: Product Responsibility	relating to healt		66-67, 70-71	
	KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	Not applicable	
	KPI B6.2	Number of products and service related complaints received and how they are dealt with	70-71	
	KPI B6.3	Description of practices relating to observing and protecting intellectual property rights	97	
	KPI B6.4	Description of quality assurance process and recall procedures	70-71	
	KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored	66-67	
Aspect B7: Anti- corruption			95-97	
	KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases	95-97	
	KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored	95-97	
	KPI B7.3	Description of anti-corruption training provided to directors and staff	95-97	

Subject Areas, A	spects, General Disclo	sures and KPIs	Pages	
Community				
Aspect B8: Community Investment	Policies on comm	General Disclosure Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests		
	KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport)	81-89	
	KPI B8.2	Resources contributed (e.g. money or time) to the focus area	81-89	
Part D: Climate-re	lated Disclosures	•		
Aspect D-I	the governance b	oody(s) responsible for oversight of climate-related risks and opportunities	54	
Governance	-	le in the governance processes, controls and procedures used to monitor, rsee climate-related risks and opportunities	54	
Aspect D-II Strategy	Climate-related risks and opportunities	Describe climate-related risks and opportunities that could reasonably be expected to affect the issuer's cash flows, its access to finance or cost of capital over the short, medium or long term	54-57	
		Explain, for each climate-related risk the issuer has identified, whether the issuer considers the risk to be a climate-related physical risk or climate-related transition risk	54-57	
			Specify, for each climate-related risk and opportunity the issuer has identified, over which time horizons – short, medium or long term – the effects of each climate-related risk and opportunity could reasonably be expected to occur	54-57
		Explain how the issuer defines 'short term', 'medium term' and 'long term' and how these definitions are linked to the planning horizons used by the issuer for strategic decision-making	54-57	
	Business model and value chain	A description of the current and anticipated effects of climate-related risks and opportunities on the issuer's business model and value chain	54-57	
		A description of where in the issuer's business model and value chain climate- related risks and opportunities are concentrated (for example, geographical areas, facilities and types of assets)	54-57	
	Strategy and decision- making	Information about how the issuer has responded to, and plans to respond to, material climate risks and opportunities in its strategy and decision-making, including how the issuer plans to achieve any climate-related targets it has set and any targets it is required to meet by law or regulation	54-57	
		Information about how the issuer is resourcing, and plans to resource, the activities, which have responded to, and plan to respond, material climate risks and opportunities in its strategies and decision-making	54-57	

Subject Areas, Aspe	bject Areas, Aspects, General Disclosures and KPIs		
	Financial positior		
	Current financial effect	How climate-related risks and opportunities have affected its financial position, financial performance and cash flows for the reporting period	/
		The climate-related risks and opportunities identified in how climate- related risks and opportunities have affected its financial position, financial performance and cash flows for the reporting period for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements	/
	Anticipated financial effect	How the issuer expects its financial position to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities, taking into consideration	/
		How the issuer expects its financial performance and cash flows to change over the short, medium and long term, given its strategy to manage climate- related risks and opportunities	/
	Climate	The issuer's assessment of its climate resilience as at the reporting date	/
	resilience	How and when the climate-related scenario analysis was carried out	1
Aspect D-III Risk Management	The processes and related policies it uses to identify, assess, prioritise and monitor climate- related risks		54-57
	opportunities (inc	e issuer uses to identify, assess, prioritise and monitor climate-related Iuding information about whether and how the issuer uses climate-related to inform its identification of climate-related opportunities)	54-57
		ich, and how, the processes for identifying, assessing, prioritising and monitoring sks and opportunities are integrated into and inform the issuer's overall risk cess	54-57
Aspect D-IV	Greenhouse gas emissions		54-57
Metrics and Targets	Climate-related transition risks		54-57
	Climate-related physical risks		54-57
	Climate-related opportunities		54-57
	Capital deployment		/
	Internal carbon p	rices	/
	Remuneration		/
	Climate-related t	argets	54-57

Note: Since the amendments to the Listing Rules and the Code (the "2024 Amendments") adopted in the Consultation Paper on Enhancement of Climate-related Disclosures Under the Environmental, Social and Governance Framework by the Hong Kong Stock Exchange will become effective for the financial years beginning on or after 1 January 2025, the Company will pay attention to the phased approach to meet the new climate-related disclosure provisions set out in Part D of Appendix C2, and appropriate disclosure in the future years.

#### Global Reporting Initiative (GRI) Standards Content Index

Statement of use China Tower Corporation Limited has reported in accordance with the GRI Standards for the period from 1 January 2024 to 31 December 2024.

#### GRI 1 used GRI 1: Foundation 2021

GRI Indicators	Interpretations	Pages
General Disclosures		
GRI 2 General Disclosures 2021	2-1 Organizational details	6
	2-2 Entities included in the organization's sustainability reporting	About the report
	2-3 Reporting period, frequency and contact point	About the report
	2-4 Restatements of information	102-107
	2-5 External assurance	/
	2-6 Activities, value chain and other business relationships	6
	2-7 Employees	105-107
	2-8 Workers who are not employees	105-107
	2-9 Governance structure and composition	92-93
	2-10 Nomination and selection of the highest governance body	92-93
	2-11 Chair of the highest governance body	2
	2-12 Role of the highest governance body in overseeing the management of impacts	92-93
	2-13 Delegation of responsibility for managing impacts	92-93
	2-14 Role of the highest governance body in sustainability reporting	9
	2-15 Conflicts of interest	1
	2-16 Communication of critical concerns	10-13
	2-17 Collective knowledge of the highest governance body	92-93
	2-18 Evaluation of the performance of the highest governance body	9
	2-19 Remuneration policies	75
	2-20 Process to determine remuneration	75
	2-22 Statement on sustainable development strategy	8-9
	2-23 Policy commitments	53-54, 70, 74, 97
	2-24 Embedding policy commitments	94
	2-25 Processes to remediate negative impacts	74
	2-26 Mechanisms for seeking advice and raising concerns	76
	2-27 Compliance with laws and regulations	94-97
	2-28 Membership associations	60, 80
	2-29 Approach to stakeholder engagement	12-13

GRI Indicators	Interpretations	Pages
Material Topics		
GRI 3 Material Topics 2021	3-1 Process to determine material topics	10-11
	3-2 List of material topics	10-11
Economic Performance		•
GRI 3 Material Topics 2021	3-3 Management of material topics	15
GRI 201 Economic Performance 2016	201-1 Direct economic value generated and distributed	See annual report for details
	201-2 Financial implications and other risks and opportunities due to climate change	54-57
	201-3 Defined benefit plan obligations and other retirement plans	74
Market Presence		•
GRI 3 Material Topics 2021	3-3 Management of material topics	6
Indirect Economic Impacts		
GRI 3 Material Topics 2021	3-3 Management of material topics	14-37
GRI 203 Indirect Economic Impacts	203-1 Infrastructure investments and services supported	14-37
2016	203-2 Significant indirect economic impacts	14-37
Procurement Practices		
GRI 3 Material Topics 2021	3-3 Management of material topics	99-101
Anti-corruption		
GRI 3 Material Topics 2021	3-3 Management of material topics	95-97
GRI 205 Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	95-97
	205-2 Communication and training about anti-corruption policies and procedures	95-97
	205-3 Confirmed incidents of corruption and actions taken	95-97

GRI Indicators	Interpretations	Pages
Anti-competitive Behavior		
GRI 3 Material Topics 2021	3-3 Management of material topics	94
GRI 206 Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	/
Тах		
GRI 3 Material Topics 2021	3-3 Management of material topics	94
GRI 207 Tax 2019	207-1 Approach to tax	/
	207-2 Tax governance, control, and risk management	/
	207-3 Stakeholder engagement and management of concerns related to tax	12-13
Materials		
GRI 3 Material Topics 2021	3-3 Management of material topics	Not applicable
GRI 301 Materials 2016	301-3 Reclaimed products and their packaging materials	Not applicable
Energy		
GRI 3 Material Topics 2021	3-3 Management of material topics	103
GRI 302 Energy 2016	302-1 Energy consumption within the organization	103
	302-2 Energy consumption outside of the organization	103
	302-3 Energy intensity	103
	302-4 Reduction of energy consumption	57
	302-5 Reductions in energy requirements of products and services	57

GRI Indicators	Interpretations	Pages
Water and Effluents		
GRI 3 Material Topics 2021	3-3 Management of material topics	103
GRI 303 Water and Effluents 2018	303-1 Interactions with water as a shared resource	52
	303-2 Management of water discharge-related impacts	52
	303-3 Water withdrawal	103
	303-5 Water consumption	103
Biodiversity		•
GRI 3 Material Topics 2021	3-3 Management of material topics	43-45
GRI 304 Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	43-45
	304-2 Significant impacts of activities, products and services on biodiversity	43-45
	304-3 Habitats protected or restored	43-45
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	43-45
Emissions		•
GRI 3 Material Topics 2021	3-3 Management of material topics	102
GRI 305 Emissions 2016	305-1 Direct (Scope 1) GHG emissions	102
	305-2 Energy indirect (Scope 2) GHG emissions	102
	305-3 Other indirect (Scope 3) GHG emissions	102
	305-4 GHG emissions intensity	102
	305-5 Reduction of GHG emissions	57

GRI Indicators	Interpretations	Pages
Waste		, 
GRI 3 Material Topics 2021	3-3 Management of material topics	104
GRI 306 Waste 2020	306-1 Waste generation and significant waste-related impacts	104
	306-2 Management of significant waste-related impacts	52
	306-3 Waste generated	104
	306-4 Waste diverted from disposal	57
	306-5 Waste directed to disposal	57
Supplier Environmental Assessme	nt	·
GRI 3 Material Topics 2021	GRI 3 Material Topics 2021 3-3 Management of material topics	
GRI 308 Supplier Environmental	308-1 New suppliers that were screened using environmental criteria	101
Assessment 2016	308-2 Negative environmental impacts in the supply chain and actions taken	101
Employment		·
GRI 3 Material Topics 2021	3-3 Management of material topics	105-107
GRI 401 Employment 2016	401-1 New employee hires and employee turnover	105-107
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	74-77
	401-3 Parental leave	74-77
Occupational Health and Safety	in the second	•
GRI 3 Material Topics 2021	3-3 Management of material topics	107
GRI 403 Occupational Health and	403-5 Worker training on occupational health and safety	72-74
Safety 2018	403-6 Promotion of worker health	72-74
	403-9 Work-related injuries	107

GRI Indicators	Interpretations	Pages
Training and Education		
GRI 3 Material Topics 2021	3-3 Management of material topics	107
GRI 404 Training and Education	404-1 Average hours of training per year per employee	107
2016	404-2 Programs for upgrading employee skills and transition assistance programs	78-79
	404-3 Percentage of employees receiving regular performance and career development reviews	107
Diversity and Equal Opportunity		
GRI 3 Material Topics 2021	3-3 Management of material topics	75, 93
GRI 405 Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	75, 93
Non-discrimination		
GRI 3 Material Topics 2021	3 Material Topics 2021 3-3 Management of material topics	
GRI 406 Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	75
Freedom of Association and Colle	ective Bargaining	
GRI 3 Material Topics 2021 3-3 Management of material topics		76
Child Labor		
GRI 3 Material Topics 2021	3-3 Management of material topics	74
GRI 408 Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	74
Forced or Compulsory Labor		•
GRI 3 Material Topics 2021	3-3 Management of material topics	74
GRI 409 Forced or Compulsory Labor 2016		

GRI Indicators	Interpretations	Pages
Local Communities		
GRI 3 Material Topics 2021	3-3 Management of material topics	81-89
GRI 413 Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	81-89
Supplier Social Assessment		
GRI 3 Material Topics 2021	3-3 Management of material topics	99-101
GRI 414 Supplier Social	414-1 New suppliers that were screened using social criteria	99-101
Assessment 2016	414-2 Negative social impacts in the supply chain and actions taken	99-101
Customer Health and Safety		•
GRI 3 Material Topics 2021	3-3 Management of material topics	70-71
GRI 416 Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	70-71
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	70-71
Marketing and Labeling	•	•
GRI 3 Material Topics 2021 3-3 Management of material topics		97
GRI 417 Marketing and Labeling	417-1 Requirements for product and service information and labeling	97
2016	417-2 Incidents of non-compliance concerning product and service information and labeling	/
	417-3 Incidents of non-compliance concerning marketing communications	/
Customer Privacy	•	·
GRI 3 Material Topics 2021	3-3 Management of material topics	67
GRI 418 Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	/

#### Content Index of the Reference Indicator System for ESG Reporting of Centrally-Administered Listed Companies (SASAC)

Primary index	Secondary index	Third-level index	Reporting content/note
Environment scope			
E.1 resource consumption	E.1.1 water resources	E.1.1.1 amount of fresh water in use	103
		E.1.1.2 amount of recycled water in use	/
		E.1.1.3 proportion of recycled water in use	/
		E.1.1.4 water resource consumption intensity	103
	E.1.2 materials	E.1.2.1 consumption of non-renewable materials	Not applicable
		E.1.2.2 consumption of toxic and hazardous materials	Not applicable
		E.1.2.3 material consumption intensity	Not applicable
	E.1.3 energies	E.1.3.1 consumption of fossil fuel	103
		E.1.3.2 consumption of non-fossil fuel	103
		E.1.3.3 proportion of non-fossil fuel in use	103
		E.1.3.4 total energy consumption	103
		E.1.3.5 energy consumption intensity	103
	E.1.4 packaging materials	E.1.4.1 amount of materials used in packaging	Not applicable
		E.1.4.2 environmentally friendly packaging	Not applicable
E.2 pollution prevention	E.2.1 wastewater	E.2.1.1 up-to-standard wastewater discharge or not	Not applicable
and treatment		E.2.1.2 measures for wastewater management and reduction	Not applicable
		E.2.1.3 amount of wastewater discharged	Not applicable
		E.2.1.4 amount of wastewater and pollutant discharged	Not applicable
		E.2.1.5 concentration of wastewater and pollutant discharged	Not applicable
	E.2.2 exhaust gas	E.2.2.1 up-to-standard exhaust gas emissions or not	Not applicable
		E.2.2.2 emissions of exhaust gas and pollutant	Not applicable
		E.2.2.3 concentration of exhaust gas and pollutant emissions	Not applicable

Primary index	Secondary index	Third-level index	Reporting content/note
E.2 pollution prevention and treatment	E.2.3 solid waste	E.2.3.1 up-to-standard solid waste treatment or not	57
		E.2.3.2 management of general industrial solid waste	52
		E.2.3.3 general industrial solid waste treated	104
		E.2.3.4 management of hazardous waste	Not applicable
		E.2.3.5 hazardous waste treated	Not applicable
E.3 climate change	E.3.1 GHG emissions	E.3.1.1 sources and types of GHG	102
		E.3.1.2 management of GHG emissions	102
		E.3.1.3 emissions of scope 1	102
		E.3.1.4 Emissions of scope 2	102
		E.3.1.5 emissions of scope 3	102
		E.3.1.6 GHG emission intensity	102
	E.3.2 emission reduction management	E.3.2.1 management of GHG emission reduction	57
		E.3.2.2 GHG emissions reduced	57
	E.3.3 trading of environmental rights	E.3.3.1 trading of carbon emission rights	/
		E.3.3.2 trading of energy use rights, water use rights and wastewater discharge rights	/
		E.3.3.3 trading of green power	/
	E.3.4 management of climate risks	E.3.4.1 management of climate risks	54-57
E.4 biodiversity	E.4.1 impact of production, services and products on biodiversity	E.4.1.1 impact of production, services and products on biodiversity	43-45

Primary index	Secondary index	Third-level index	Reporting content/note
E.5 resources and environmental management system	E.5.1 making of low- carbon development goals and strategies	E.5.1.1 making of low-carbon development goals and strategies	57
measures	E.5.2 measures for	E.5.2.1 management of water use	52
	resource management	E.5.2.2 management of material use	Not applicable
		E.5.2.3 management of energy use and energy saving	52
	E.5.3 accounting and monitoring of energy conservation and carbon reduction and system for evaluation, awarding and punishing	E.5.3.1 monitoring, accounting, and reporting of energy conservation and carbon reduction and evaluation system	57
	E.5.4 environmental	E.5.4.1 clean production	48-49
	protection action and measures	E.5.4.2 green technology upgrading and recycling	48-53
		E.5.4.3 green architecture renovation	52-53
		E.5.4.4 green office and operation	52-53
		E.5.4.5 green procurement and supply chain management	101
		E.5.4.6 charitable events for environmental protection	87
	E.5.5 green and low-	E.5.5.1 environment management certificate	/
	carbon certification	E.5.5.2 green and low-carbon enterprise certificate	/
		E.5.5.3 green and low-carbon products and services certificate	/
	E.5.6 environmental	E.5.6.1 plan for environmental emergency response	1
	compliance	E.5.6.2 violations of laws and regulations in the environmental field	1

Primary index	Secondary index	Third-level index	Reporting content/note
Social scope			
S1 employee rights and interests	S1.1 recruitment and employment	S1.1.1 recruitment policy and execution	74-75
		S1.1.2 headcount structure	105
		\$1.1.3 avoidance of child labor or forced labor	74
	S1.2 employee	\$1.2.1 guidelines and policies for remuneration	75
	remuneration and benefits	S1.2.2 work hours, break, leave and holiday	74
		\$1.2.3 guarantee for remuneration and benefits	75
		S1.2.4 employee democracy	76
	S1.3 employee health and safety	S1.3.1 management of employee occupational health and safety	72-74
		\$1.3.2 prevention and control of employee safety risks	74
		\$1.3.3 handling of safety accidents and injuries	107
		S1.3.4 caring for employees	76-77
	S1.4 employee development and training	S1.4.1 employee incentives and promotion policies	75
		S1.4.2 employee education and training	78-79
		\$1.4.3 support for employees' career planning and job transfer	75
	S1.5 employee satisfaction	S1.5.1 employee satisfaction survey	/
		S1.5.2 labor disputes	/
		S1.5.3 employee turnover	106

Primary index	Secondary index	Third-level index	Reporting content/note
S2 management of products and services	S2.1 product safety and	S2.1.1 policies and measures for production standardization	72-74
	quality	S2.1.2 quality management	70-71
		S2.1.3 product recall and withdrawal	Not applicable
		S2.1.4 negative events regarding products and services	1
	S2.2 customer services	S2.2.1 customer satisfaction	71
	and rights and interests	S2.2.2 customer complaints and handling	71
		S2.2.3 customer information and privacy protection	66-67
	S2.3 innovation-driven development	S2.3.1 management system for R&D and innovation	60-61
		S2.3.2 R&D input	61
		S2.3.3 innovation achievements	61-65
		S2.3.4 intellectual property rights protection	97
S3 supply chain safety	S3.1 management of suppliers	S3.1.1 selection and management of suppliers	100-101
and management		S3.1.2 number and distribution of suppliers	100
	S3.2 management of	\$3.2.1 policies and measures for supply chain management	101
	supply chain	S3.2.2 supply chain safety and emergency response	74, 99, 101
		S3.2.3 major risks and impacts (supply chain)	99

Primary index	Secondary index	Third-level index	Reporting content/note
S4 social contribution	S4.1 tax contribution	S4.1.1 tax contribution	See annual report for details
	S4.2 community building	\$4.2.1 policies and measures for community building	31-33, 81-88
		\$4.2.2 contribution to and influence on local community	31-34, 81-89
	S4.3 social activities	\$4.3.1 policies and measures for participating in social activities	87-88
		\$4.3.2 inputs and achievements in charitable events	87-89
		S4.3.3 accessibility building	81
	S4.4 responding to	S4.4.1 industrial transformation	16-25, 46-49
	national strategies	S4.4.2 rural revitalization and coordinated regional development	81-87
		S4.4.3 Belt and Road cooperation and CSR performance in overseas markets	17
		\$4.4.4 industry characteristics and other CSR performance	80
Governance scope	1	•	•
G1 governance strategy	G1.1 governance strategy and procedure	G1.1.1 making of governance strategies	9
and organizational structure		G1.1.2 supervision procedure for governance strategies	9
		G1.1.3 procedure for approval of governance strategies	9
		G1.1.4 Party building	8
	G1.2 organizational structure and functions	G1.2.1 ownership responsibilities	92
		G1.2.2 organizational structure and functions of the Board of Directors, Board of Supervisors and Management	92-93
		G1.2.3 appointment procedure and composition of the Board of Directors, Board of Supervisors and Management	92-93
	G1.3 remuneration management	G1.3.1 remuneration plan for directors and supervisors	See annual report for details
		G1.3.2 remuneration transparency for Board of Directors	See annual report for details
		G1.3.3 Reasonable remuneration for the management	See annual report for details

Primary index	Secondary index	Third-level index	Reporting content/note
G2 governance compliance	G2.1 internal control	G2.1.1 internal audit	98
	G2.2 clean and honest business operation	G2.2.1 mechanisms and regulations on clean and honest business operation	95-96
		G2.2.2 results of measures for clean and honest business operation	95-96
	G2.3 fair competition	G2.3.1 regulations for fair competition	94, 99-101
		G2.3.2 results of measures for fair competition	94, 99-101
G3 investor relations	G3.1 investor relations	G3.1.1 strategy for investor relations management	8-9
management and shareholders' rights and	management	G3.1.2 communication with investors	9-13
interests		G3.1.3 organizational building for investor relations management	9-13
	G3.2 shareholders' rights and interests	G3.2.1 meeting of shareholders	See annual report for details
		G3.2.2 communication with shareholders	9-13
		G3.2.3 shareholders' right to know and participate in decision making	9-13
	G3.3 debtors' rights and interests	G3.3.1 company credit	Not applicable
		G3.3.2 performance in bond market	Not applicable
G4 information disclosure and	G4.1 informational disclosure system	G4.1.1 disclosure of financial information	See annual report for details
transparency		G4.1.2 disclosure of non-financial information	104-107
	G4.2 quality of information disclosure	G4.2.1 regular supervision, audit and assessment of all disclosed information	5, 9
G5 business compliance	G5.1 business	G5.1.1 business compliance system	94
and risk management	compliance	G5.1.2 building of compliance system	94
		G5.1.3 procedure for compliance review	95
	G5.2 risk management	G5.2.1 risk identification and early warning	98
		G5.2.2 risk control and tracking	98
		G5.2.3 risk reporting and management	98





Room 3401, 34/F China Resources Building, 26 Harbour Road, Wanchai, Hong Kong Tel : (852) 2811 4566 Fax : (852) 2897 1266

www.china-tower.com

